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INFLUENCE OF CROP PRICE CHANGES ON CROP AND LIVESTOCK PRODUCTION IN KANSAS USING A LINEAR PROGRAMMING MODEL

by

GUSTAVE HEINRICH EGLI

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Orlan Bullen

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ABSTRACT

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CHAPTER I

INTRODUCTION

The Kansas Water Resources Board in cooperation with the Kansas Agricultural Experiment Station funded a study of the "comprehensive study of the effects of altering the precipitation pattern on the economy and environment of Kansas." (Project 5-425) A eight region LP-Model of Kansas Agriculture (KAM) is one part of this project. The formulation of KAM (Appendix 1) shows the structure and interdependences of agricultural production among eight regions, its goal is to maximize the net farm income for Kansas.

Testing and primary studies with KAM have been done[1]. The first part of this paper is an application of KAM to test the influence of changes in crop prices on crop and livestock production in the eight regions of Kansas. The underlying LP-problem matrix, to start with, is assumed to be feasible. The general model structure and the changed crop prices will be described, but it is not the scope of this paper to describe the underlying data.

Second part of this report is a description of two computer programs; the Mathematical Programming System Report Generator (MPSRG) and a Program to print MPS-Formal equations. The latter was developed at the Swiss Federal Institute of Technology and both have to be briefly described to enable further use by researchers at Kansas State.

The general outline of this paper is as follows:

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[1]Buller, O. Unpublished work Kansas State University, Department of Economics.

a) Chapter two gives a general model description of KAM. The complete equation listing will be found in Appendix I.

b) Chapter three shows the selection process for the underlying crop prices in this report.

c) Chapter four describes and interprets model results. The reports with the complete listing of the model results are given in Appendix III through VII.

d) Appendix II and VIII explain the two computer programs.

CHAPTER II

MODEL DESCRIPTION

GENERAL MODEL DESCRIPTION

Figure 1 shows the general structure of the model. There are five major model parts within each region, they are as follows:

1) resources available for land, labor, field-work days, and feedlot capacity
2) production of crops and livestock products
3) land, labor, field-work day, feed and capital required
4) transportation of feed and livestock among regions
5) objective function

For each of the eight regions the hours of labor available is specified for each of the six, 2-month periods. Labor hours available is used for either crop or livestock activities. Another set of 4 equations specify field work hours available during May, June, September and October. Equations for field work hours do not include labor for livestock activities as it is assumed that livestock activities do not compete with crops for field work time.

Crops considered are wheat, grain sorghum, corn, soybeans, alfalfa, silage, and native hay; in the western regions wheat is considered as continuous cropped, fallow or irrigated, grain sorghum is dryland or irrigated; corn, alfalfa and silage are irrigated.

Crop production is either sold for cash or fed to livestock which are sold. The transportation activities allow alfalfa, native hay, corn and grain sorghum to be sold and transported to any region.

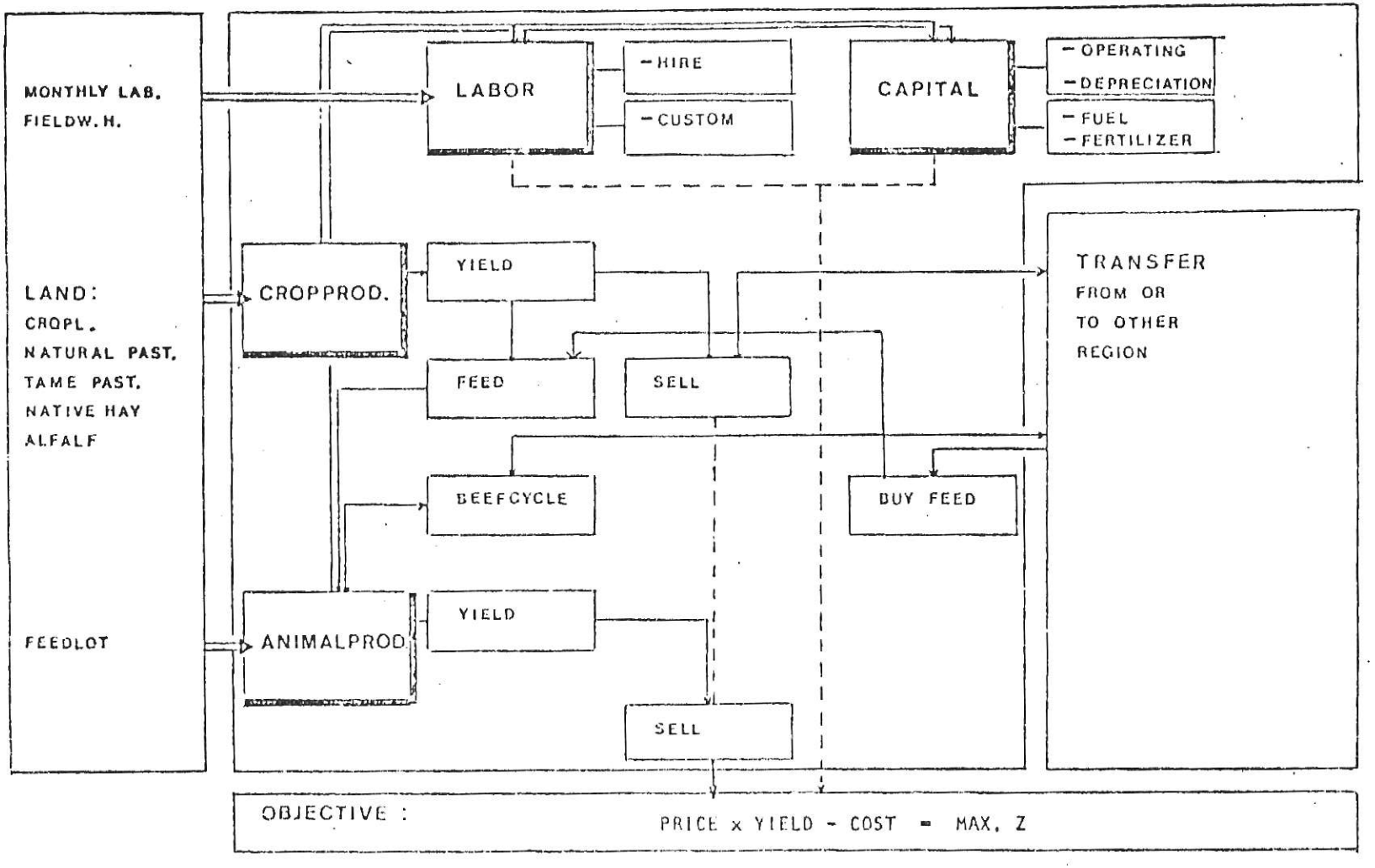

Fig. 1 General Model Structure of KAM for one Region

Livestock production activities are for the systems of beef cow and calf, wintered steer, summer-grazed steer, feeder steers, dairy and hogs. Wintered, grazed and feeder steers can be shipped from any region to all other regions if profitable.

Land, labor hours, field work hours, feed, fuel, fertilizer, depreciation and capital are specified for each crop and livestock activity. In western regions, wheat on fallow requires 2 acres cropland.

The land resource is divided into cropland, native pasture, tame pasture, alfalfa, and native hay. Tame pasture and alfalfa can be planted on cropland, or plowed back into cropland. In western regions, cropland is divided into dryland and irrigated. Irrigation can be developed from dryland cropland.

Operating capital requirements are specified for each crop and livestock enterprise. Livestock capital requirements are specified for each livestock enterprise that involves the purchase of steers. It is assumed that capital required is borrowed and the loan is for six months.

Annual per unit costs of fuel, fertilizer and depreciation are subtracted from income in the objective row by using accounting rows and a transfer column. One common objective function maximizes farm income for all regions.

NOMENCLATURE OF ACTIVITIES

All names within a region start with a number referring to the region to which it belongs. For example: 4PHOG means, production of hogs in region four. Transportation activity codes have two numbers, the first refers to the region the activity comes from and the second number refers to the region to which the activity is transfered to. For example:

TABLE 1: ACTIVITY NAMES FOR LIVESTOCK IN DESIGNATED REGION

CODE	DESCRIPTION	IN REGION	UNITS
iPCALF	Beef cow and calf	1, 2, 3, 4, 5, 6, 7, 8	No
iSCALF	Weaning calf sold	1, 2, 3, 4, 5, 6, 7, 8	No
iTWSTR	Weaning calf kept	1, 2, 3, 4, 5, 6, 7, 8	No
iPWSTR	Calves kept thru winter	1, 2, 3, 4, 5, 6, 7, 8	No
iSWSTR	Winter calves sold	1, 2, 3, 4, 5, 6, 7, 8	No
iTGSTR	Winter calves to grass	1, 2, 3, 4, 5, 6, 7, 8	No
iPGSTR	Steers on grass 3 mo.	1, 2, 3, 4, 5, 6, 7, 8	No
iPGSTRFS	Steers on grass 5 mo.	1, 2, 3, 4, 5, 6, 7, 8	No
iSGSTR	Grazing steers sold	1, 2, 3, 4, 5, 6, 7, 8	No
iTFSTR	Grazed steers to feedlot	1, 2, 3, 4, 5, 6, 7, 8	No
iPWFSTR	Wintered calf to feedlot	1, 2, 3, 4, 5, 6, 7, 8	No
iPWGFSTR	Feeder steer	1, 2, 3, 4, 5, 6, 7, 8	No
iBFDSTRA	Feeder steer purchase Nov.	1, 2, 3, 4, 5, 6, 7, 8	No
iBFDSTRB	Feeder steer purchase May	1, 2, 3, 4, 5, 6, 7, 8	No
iPSMILK	Dairy cow	1, 2, 3, 4, 5, 6, 7, 8	No
iPHOG	Sow and two litter	1, 2, 3, 4, 5, 6, 7, 8	No
iFDLOTDE	Develop feedlot	1, 2, 3, 4, 5, 6, 7, 8	No

TABLE 2: ACTIVITY NAMES FOR CROPS IN DESIGNATED REGION

CODE	DESCRIPTION	IN REGION	UNITS
iPWHT	Wheat acres, continuous	3, 4, 6	ac
iPWHTFAL	Wheat acres, fallow	3, 4, 6	ac
iPWHTIRR	Wheat acres, irrigated	3, 4, 6	ac
iSWHT	Wheat bushel sold	1, 2, 3, 4, 5, 6, 7, 8	bu
iPCORN	Corn acres	1, 2, 3, 4, 5, 6, 7, 8	ac
iSCORN	Corn, bushel sold	1, 2, 3, 4, 5, 6, 7, 8	bu
iFCORN	Corn, bushel fed	1, 2, 3, 4, 5, 6, 7, 8	bu
iPGRSOR	Grain sorg., ac dryland	1, 2, 3, 4, 5, 6, 7, 8	ac
iPGSIRR	Grain sorg., ac irrigated	3, 6	ac
iGSIRR	Grain sorg., ac irrigated	4	ac
iSGRSO	Grain sorg., bu sold	1, 2, 3, 4, 5, 6, 7, 8	bu
iFGRSO	Grain sorg., bu fed	1, 2, 3, 4, 5, 6, 7, 8	bu
iPSOY	Soybean, acres	1, 5, 7, 8	ac
iPSIL	Silage, acres dryland	1, 2, 4, 5, 6, 7, 8	ac
iPSILIR	Silage, acres irrigated	3, 4, 6	ac
iPALFH	Alfalf, acres	1, 2, 3, 4, 5, 6, 7, 8	ac
iSALFH	Alfalf, tons sold	1, 2, 3, 4, 5, 6, 7, 8	t
iFALFH	Alfalf, tons fed	1, 2, 3, 4, 5, 6, 7, 8	t
iPNATH	Native hay, acres	1, 2, 5, 7, 8	ac
iFNATH	Native hay, tons fed	1, 2, 5, 7, 8	t
iSNATH	Native hay, tons sold	1, 2, 5, 7, 8	t

TABLE 3: ACTIVITY NAMES FOR OTHER EXPENSES IN DESIGNATED REGION

CODE	DESCRIPTION	IN REGION	UNITS
iHLABFT	Hire full time labor	1, 2, 3, 4, 5, 6, 7, 8	hr
iHLABSU	Hire summer labor	1, 2, 3, 4, 5, 6, 7, 8	hr
iFUELCST	Fuel cost	1, 2, 3, 4, 5, 6, 7, 8	$
iFERTCST	Fertilizer cost	1, 2, 3, 4, 5, 6, 7, 8	$
iDEPR	Depreciation	1, 2, 3, 4, 5, 6, 7, 8	$
iOPCAPR	Operating capital reg.	1, 2, 3, 4, 5, 6, 7, 8	$
iLSKCAPR	Livestock capital reg.	1, 2, 3, 4, 5, 6, 7, 8	$
iCHVWHT	Custom harvest wheat	1, 2, 3, 4, 5, 6, 7, 8	hr
iCHVCORN	Custom harvest corn	1, 2, 3, 4, 5, 6, 7, 8	hr
iCHVGRSO	Custom harvest gr. sorg.	1, 2, 3, 4, 5, 6, 7, 8	hr
iCHVSOY	Custom harvest soybean	1, 5, 7, 8	hr
iBUYFDGR	Feed grains purchased	1, 2, 3, 4, 5, 6, 7, 8	$
iPFORAGE	Forage acres for feed	3, 4, 6	ac
iIDLECPL	Cropland not used	1, 2, 3, 4, 5, 6, 7, 8	ac
iPLTALF	Plant alfalfa	1, 2, 3, 4, 5, 6, 7, 8	ac
iPLTTPAS	Plant tame pasture	1, 2, 3, 4, 5, 6, 7, 8	ac
iDEVIRR	Develop irrigation	2, 3, 4, 6	ac

TABLE 4: ACTIVITY NAMES FOR TRANSFER ACTIVITIES IN DESIGNATED REGION

CODE	DESCRIPTION	IN REGION	UNITS
iTPAST	Tame past. sub. for natural pasture	1, 2, 3, 4, 5, 6, 7, 8	ac
iALF>FOR	Alfalfa used as forage	1, 2, 3, 4, 5, 6, 7, 8	t
iTNH>FOR	Native hay used as forage	1, 2, 5, 7, 8	t
iTNH>WPU	Native hay as winter past.	1, 2, 5, 7, 8	ac
iTFWHM>J	May work delayed to June	1, 2, 3, 4, 5, 6, 7, 8	hr
iTFWHJ>M	June work done in May	1, 2, 3, 4, 5, 6, 7, 8	hr

TABLE 5: ACTIVITY NAMES FOR TRANSPORTATION ACTIVITIES IN DESIGNATED REGION

CODE	DESCRIPTION	IN REGION	UNITS
ALFHk-i	Ship alfalfa from k to i	1, 2, 3, 4, 5, 6, 7, 8	t
FDGRk-i	Ship feed grain from k to i	k and i run	bu
kCALFi	Ship calf from k to i	always from	no
kGSTRi	Ship steer to grass from k to i	one through eight except	no
kFDSTi	Ship wintered steer from k to feedlot in region i	for k = i	no
kFSTRi	Ship grassland steer from k to feedlot in region i		no

ABBREVIATIONS USED FOR HIRE LABOR ACTIVITIES:

HIRELAB1 Hire full time labor

HIRELAB2 Hire summer labor

7 CALF 3, means 'ship a calf from region 7 to region 3,' correspondingly, the same holds for alfalfa hay: ALFH 7>3.

GENERAL EQUATIONS

A basic knowledge of the general structure of the KAM (Fig. 1) and the generalized equations is sufficient for an understanding of the following two chapters.

The following is a very general outlay of the model equations. They should give an overview, but the complete list of equations is given in Appendix I. It is always assumed:

i = Subscript for i-th crop or Subscript for i-th livestock
j = Subscript for region $j = 1, 2, \ldots 8$

The integers for i can be found in the equation listing of Appendix I. To find which activities for a certain region have zero value, refer to the table "Nomenclature of the Activities" or see also Appendix I.

The following letters are coefficients of the general equations and defined as:

a_i Yield of activity i per unit
b_i Cost of activity i per unit
c_i Acreage use for one head of livestock i on native pasture
d_j Acreage use for dairy cow on tame pasture
e_i Labor hours needed for one unit of livestock i
f_j Hired labor available for two month periods
g_i Hired laobr needed per acre of crop i
h_i Field work hours needed per acre of crop i
k_j Hired field work hours and/or custom work for two month periods
l_i Required feed amount per livestock
m_i Operating capital per unit of crops i
n_i Operating capital per unit of livestock i
o_i Price per unit of livestock i
p_i Depreciation per unit livestock i for buildings and equipment
q_i Depreciation per unit crop i for equipment
r_i Gain in depreciation for custom work for crop i
s_i Required fuel cost per unit of livestock i
t_i Required fuel cost per unit of crop i
u_i Fertilizer cost per unit of crop i
y_i Yield of crop i
z_i Percentages used

A) OBJECTIVE

1. z : Objective

$$\text{Maximize } Z = \Sigma_{ij}(A_{ij} \cdot \text{Price}_{ij} - b_{ij})\ \text{Units}_{ij} - \Sigma_{ij}(p_{ij} - \text{LIVESTOCK}_j$$

$$q_{ij} \cdot \text{Acres}_{ij} + \Delta_{ij} - \text{LIVESTOCK}_j + t_{ij} \cdot \text{Acres}_{ij} + u_{ij} \cdot \text{Acres}_{ij}$$

B) CAPACITIES

2. jCPLD : Cropland-Total

$$\Sigma_i\ 1 * \text{CROPAREA}_{ij} \leq \text{jCPLD}$$

3. jPASTNAT : Natural-Pasture-Area

$$\Sigma_i\ c_i * \text{LIVEST}_{ij} - \Sigma_i\ 1. * \text{TAMEPASTURE}_{ij} \leq \text{jPASTNAT}$$

4. jPASTTAM : Tame-Pasture-Area

$$d_j * \text{D.COW}_j + .4 * \text{TAMEPAST}_j + 1 * \text{PLTTPAS}_j \leq \text{jPASTTAM}$$

5. jNATHAY : Native-Hay-Area

$$1 * \text{NATIVE HAY}_j \leq \text{jNATHAY}$$

6. jALFHAY : Alfalfa-Hay-Area

$$1 * \text{ALF.AREA}_j - 1 * \text{PLANTALF.AREA}_j \leq \text{jALFHAY}$$

C) LABOR

7. jLAB-J,F: Labor hours-January, February

$$\Sigma_i \cdot e_{ij} * \text{LIVEST}_{ij} - f_{ij} * \text{HIRELABOR1}_{ij} \leq \text{jLAB-J,F}$$

8. jLAB-M,A: Labor hours-March, April

$$\Sigma_i \cdot e_{ij} * \text{LIVEST}_{ij} + \Sigma_i g_{ij} * \text{CROP}_{ij} - f_j * \text{HIRELAB1}_j - f_j'$$

$$* \text{HIRELAB2}_j - f_j'' * \text{CUSTOMLAB}_j \leq \text{jLAB-M,A}$$

9. jLAB-J,F: Labor hours-May, June

$$\Sigma_i \cdot e_{ij} * \text{LIVEST}_i + \Sigma_i g_{ij} * \text{CROP}_i - f_j * \text{HIRELAB1}_j - f_j'$$

$$* \text{HIRELAB2}_j - f_j'' * \text{CUSTOMLAB}_j \leq \text{jLAB-M,J}$$

10. jLAB-J,A: Labor-July, August

$$\Sigma_i e_{ij} * LIVEST_i + \Sigma_i g_{ij} * CROP_{ij} - f_j * HIRELAB1_j - f_j' * HIRELAB2_j - f_j'' * CUSTOMLAB_j \leq jLAB\text{-}M,J$$

11. jLAB-S,O: Labor hours-September, October

$$\Sigma i\ e_{ij} * LIVEST_{ij} + \Sigma_i g_{ij} * CROP_{ij} - f_j * HIRELAB1_{ij} - \Sigma_i f_{ij}'' * CUSTOMLAB\text{-}FOR\text{-}CROP_{ij} \leq jLAB\text{-}S,O$$

12. jLAB-N,D: Labor hours-November, December

$$\Sigma_i e_{ij} * LIVEST_{ij} + \Sigma_i g_{ij} * CROP_{ij} - f_j * HIRELAB_{ij} - \Sigma_i f_{ij} * CUSTOMLAB\text{-}FOR\text{-}CROP_{ij} \leq jLAB\text{-}N,D$$

13. jFWH-MAY: Fieldwork hours-May

$$\Sigma_i h_{ij} * CROP_{ij} - k_j * HIRELAB1_j + 1 * TRANSFWH>J_j - 1 * TRANSFWHJ>M \leq jFWH\text{-}MAY$$

14. jFWH-JUN: Fieldwork hours-June

$$\Sigma_i h_{ij} * CROP_{ij} - k_j * HIRELAB1_j - k_j' * HIRELAB2_j - k_j'' * CUSTOMLAB_j - 1 * TRANSFWFM>J + 1 * TRANSFWHJ>M \leq jFWH\text{-}JUN$$

15. jFWH-SEP: Fieldwork hours-September

$$\Sigma_i h_{ij} * CROP_{ij} - k_j * HIRELAB1_j \leq jFWH\text{-}SEP$$

16. jFWH-OCT: Fieldwork hours-October

$$\Sigma_i h_{ij} * CROP_{ij} - k_j * HIRELAB1_j - \Sigma_i k_{ij}'' * CUSTOMLAB\text{-}FOR\text{-}CROP_{ij} \leq jFWH\text{-}OCT$$

D) CROP PRODUCTION

17. jWHTPD: Wheat Production

$$-y_j * CROP\text{-}WHEAT_j + 1 * WHEATSALE_j \leq 0$$

18. jCORNPD: Corn Production

$$-y_j \cdot \text{CROP-CORN}_j + 1 * \text{CORNSALE}_j + 1 * \text{FEEDCORN}_j \leq 0$$

19. jGRSOPD: Grain Sorghum Production

$$-y_j \cdot \text{CROP-GR.S}_j + 1 * \text{GR.S.SALE}_j + 1 * \text{FEEDGR.S.}_j \leq 0$$

20. jALFPD: Alfalfa Production

$$-y_j \cdot \text{CROP-ALF.}_j + 1 * \text{ALF.SALE}_j + 1 * \text{FEEDALF.}_j \leq 0$$

21. jNATHPD: Natural Hay Production

$$-y_j \cdot \text{CROP-NATH}_j + 1 * \text{NATH.SALE}_j + 1 * \text{FEED.NATH}_j + 1 * \text{THN>FOR}_j \leq 0$$

E) ANIMAL PRODUCTION AND TRANSFER

22. jB&SCALF: Buy and Sell Weaned Calf

$$-j * \text{SCALF}_j + \Sigma_i 1 * \text{CALF}_{ij} \leq 0$$

23. jB&SWSTR: Buy and Sell Wintered Calf

$$-1 * \text{SWSTR}_j + \Sigma_i 1 * \text{GSTR}_{ij} + \Sigma_i 1 * \text{FDST}_{ij} \leq 0$$

24. jB&SGSTR: Buy and Sell Grazing Steer

$$-1 * \text{SGSTR}_j + \Sigma_i 1 * \text{FSTR}_{ij} \leq 0$$

25. jTCALF: Transfer Calf

$$-z_j \cdot \text{CALF}_j + 1 * \text{SELLCALF}_j + 1 * \text{KEEP WEANING CALF}_j \leq 0$$

26. jTWSTR: Transfer Weaning Calf to Wintering System (STR = Steers)

$$1 * \text{WINTER-STR.}_j - z_j * \text{KEEP WEANING CALF}_j - \Sigma_{ij} z'_{ij} \cdot \text{CALF}_{ij} \leq 0$$

27. jWSTR Winter-steer to Grazing

$$-z_j \cdot \text{WINTER-STR}_j + 1 * \text{SELL-WINTER-STR}_j + 1 * \text{TGSTR}_j \leq 0$$

28. jTGSTR: Transfer Graze Steers to Feedlot

$$-z_j \cdot TGSTR_j - \Sigma_i z'_{ij} \cdot GSTR_{ij} + 1 \ * \ PGFSTRFS_j + 1 \cdot PGSTR_j \leq 0$$

29. jGSTR:Transfer Graze Steers to Feeder Steers

$$1 \ * \ SGSTR_j + 1 \ * \ TFSTR_j - z_j \cdot PGSTR_j \leq 0$$

30. jTFSTR: Transfer Feeder Steer to Feedlot

$$1 \ * \ PWGFSTR_j - z_{ij} \cdot TFSTR_j - \Sigma_i z_{ij}' \cdot FSTR_{ij} - \Sigma_i z_{ij}'' \cdot FDST_{ij} \leq 0$$

31. jRCORN: Corn Required by Livestock

$$\Sigma_i l_i \cdot LIVEST_j - 1 \ * \text{FEED-GRAIN } \Sigma_i 1 \text{ TRANSFER-GRAIN} \leq 0$$

32. jRALFH: Alfalfa Required by Livestock

$$\Sigma_i l_i \ LIVEST_j - 1 \ * FEEDALFA_{ij} - \Sigma_i \text{lTRANSFER-ALFA}_{ij} \leq 0$$

33. jREFORREQ: Forage Required by Beef Cows

$$l_j \cdot PCALF_j + l_j \cdot PWSTR - 1 \ * \ ALF>FOR \leq 0$$

34. jRWPASTU: Winter Pasture Required by Beef Cow

$$z_j \cdot PCALF_j + z_j \cdot PWSTR_j - \Sigma_i l_j \cdot \text{FEED-CROP}_{ij} \leq 0$$

(Equation 35-37 belong to CAPITAL)

35. jOPCAP: Operating Capital Required

$$\Sigma_i m_i \cdot CROP_{ij} + \Sigma_i n_i \cdot LIVEST_j - 1 \ * \ OPCAP_j \leq 0$$

36. jLSKCAP: Capital Required to Purchase Livestock

$$\Sigma_i o_i \cdot LIVEST_{ij} - 1 \ * \ LSKCAP \leq 0$$

37. jDEPREC: Depreciation of Building and Equipment

$$\Sigma_i p_i \cdot LIVEST_{ij} + \Sigma_i g_i \cdot CROP_{ij} - 1 \ * \ DEPR - \Sigma_i r_i \cdot CUSTOMLAB_{ij} \leq 0$$

38. jSFDGRAI: Sell Feed Grain, Transfer Row

$-\Sigma_i\ 1\ *\ \text{SELL-CROP}_{ij} - \Sigma_i\ 1\ *\ \text{FEED.GRAIN}_{ij} + 1\ *\ \text{BUY-FEED-GRAIN}_j + \Sigma_i\ 1.\ *\ \text{FEED-GRAIN}_{i1} \leq 0.$

39. jSALFH: Sell Alfalfa Hay, Transfer Row

$-1\ *\ \text{SELL-ALFA}_j - z_j \cdot \text{SELL-NAT-HAY} + \Sigma_i 1\ *\ \text{ALFH}_{i1} = 0$

F) CAPITAL (See also 35, 36, 37)

40. jFDLOTCP: Feedlot Capacity (development)

$\Sigma_i\ 1\ *\ \text{LIVEST}_{ij} - 1\ *\ \text{FEEDLOTDEV}_i \leq \text{jFDLOTCP}$

41. jFUEL: Required Fuel

$\Sigma_i s_i \cdot \text{LIVEST}_{ij} + \Sigma_i t_i \cdot \text{CROP}_{ij} - 1.\ *\ \text{FUELCOST} \leq 0$

42. jFERT: Required Fertilizer

$\Sigma_i u_i \cdot \text{CROP}_{ij} - 1\ *\ \text{FERT.COST} \leq 0$

KAM REGIONS

Figure 2 shows the eight regions of KAM. Three factors determined the pattern for the regions, rainfall, general soil differences and county lines. Wherever these three borders came close to each other a certain region was established. The following is an abbreviated item list of characteristics for each region.

Region 1: Cherokee Prairies
(general crop and livestock farming)

Region 2: Central Kansas Sandstone Hills and
Central Loess Plains and
Central Rolling Red Prairies
(little wheat on fallow)

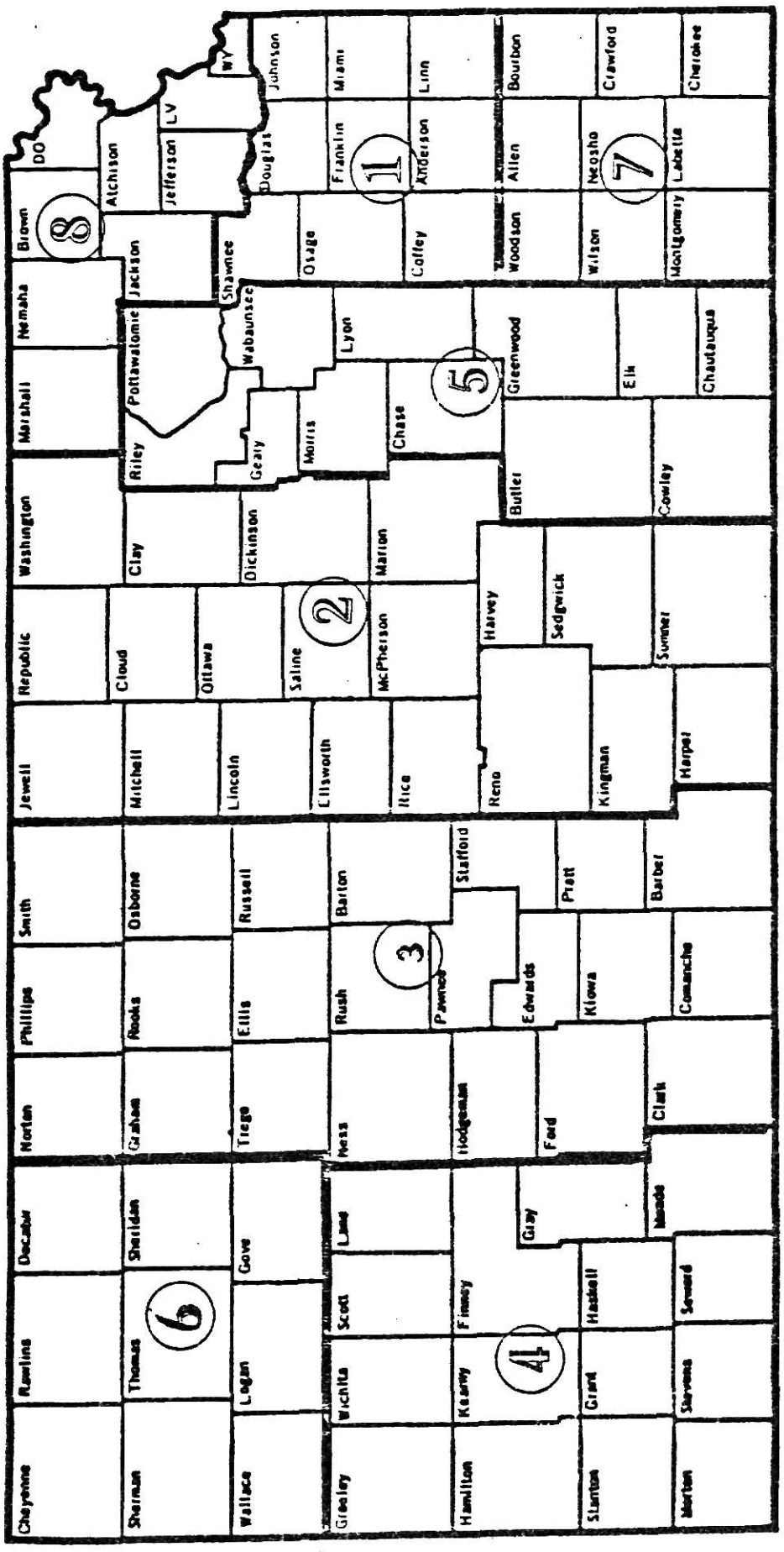

Figure 2: The Eight Regions of KAM

Region 3: Rolling Plains and Breaks

Central Rolling Red Plains

Great Bend Sand Plains

(transition from continuous wheat to fallow region)

Region 4: Central High Tableland

Southern High Plains

(irrigation region and dryland wheat on fallow)

Region 5: Bluestem Hills

(Flint Hills pasture with crops on bottomland)

Region 6: Central High Table Land

(80-90% of wheat on fallowing, potential irrigation region)

Region 7: Cherokee Prairies

(general crop and livestock farming)

Region 8: Nebraska and Kansas Loess

(general crop and livestock farming, also considered as a part of the cornbelt)

CHAPTER III

SELECTION OF CROP PRICES

A general definition for linear programming would be: "LP is the analysis of problems in which a linear function of a number of variables is to be maximized (or minimized) when those variables are subject to a number of restraints in the form of linear inequalities" (R. Dorfman et. al.).

The LP- model has utility only to the extent to which crop prices are accurately estimated. Emphasis should be placed on the accurate estimation of prices. Prices too high or too low will distort income estimation. In spite of the lack of accuracy of crop prices over time an approach is needed to estimate the price effect influence on crop and livestock production.

Parametric programming is a method that could be used, which is to vary one of the crop prices for short intervals. But the underlying assumption that all other crop prices are constant is highly unrealistic. It may be a feasible approach for specific questions of a single crop where the influence of a price change for crop B on the supply of crop B has to be examinied by assuming the price for crop A remains constant.

This study considered five different price sets for the main crops. The testing and first solutions of KAM were done with Kansas crop prices based on the 1959-75 average relative price relationship. (The 1959-75 average price for all crops and livestock products was divided by the average corn price.) The price ratios were then multiplied by $2.00, an estimate of the current price of corn. To test further the influence of a change in the price for the three main crops, several extreme price sets

which actually occurred were chosen.

Explanation of the evaluation for the four price sets:

a) For the years 1971 - 1977 the average monthly Kansas prices of wheat, corn and grain sorghum were plotted. (See Fig. 3-8)

b) The extreme low price and the extreme high price between 1971 - 1977 was determined for wheat and grain sorghum (marked with a circle in the appropriate Figure)

c) The prices of all crops during the years when the extremes occurred were selected and used as the price sets.

d) For each region the specific crop price was calculated, by subtracting the transportation costs, given in Table 1, from the quoted Kansas prices. It is assumed that Kansas City, located in Region one, is the central market.

e) The four price sets were the basis for four different objective functions:

I. ZWH = Objective function with high wheat price

II. ZGH = Objective function with high grain sorghum price

III. ZWL = Objective function with low wheat price

IV. ZGL = Objective function with low grain sorghum price

Table 2 shows the average prices for all regions, the ratio of the wheat price over grain sorghum price and the date the prices occurred.

The 1959-75 average wheat to corn price ratio is 1.38, the grain sorghum to corn price ratio is .85. Using $2.00 as the estimate of the current corn price, the comparable wheat price is $2.76, and the comparable grain sorghum price is $1.70. These price estimates represent long term price relationship at the central market. From the central market price is subtracted the cost of transportation to the central

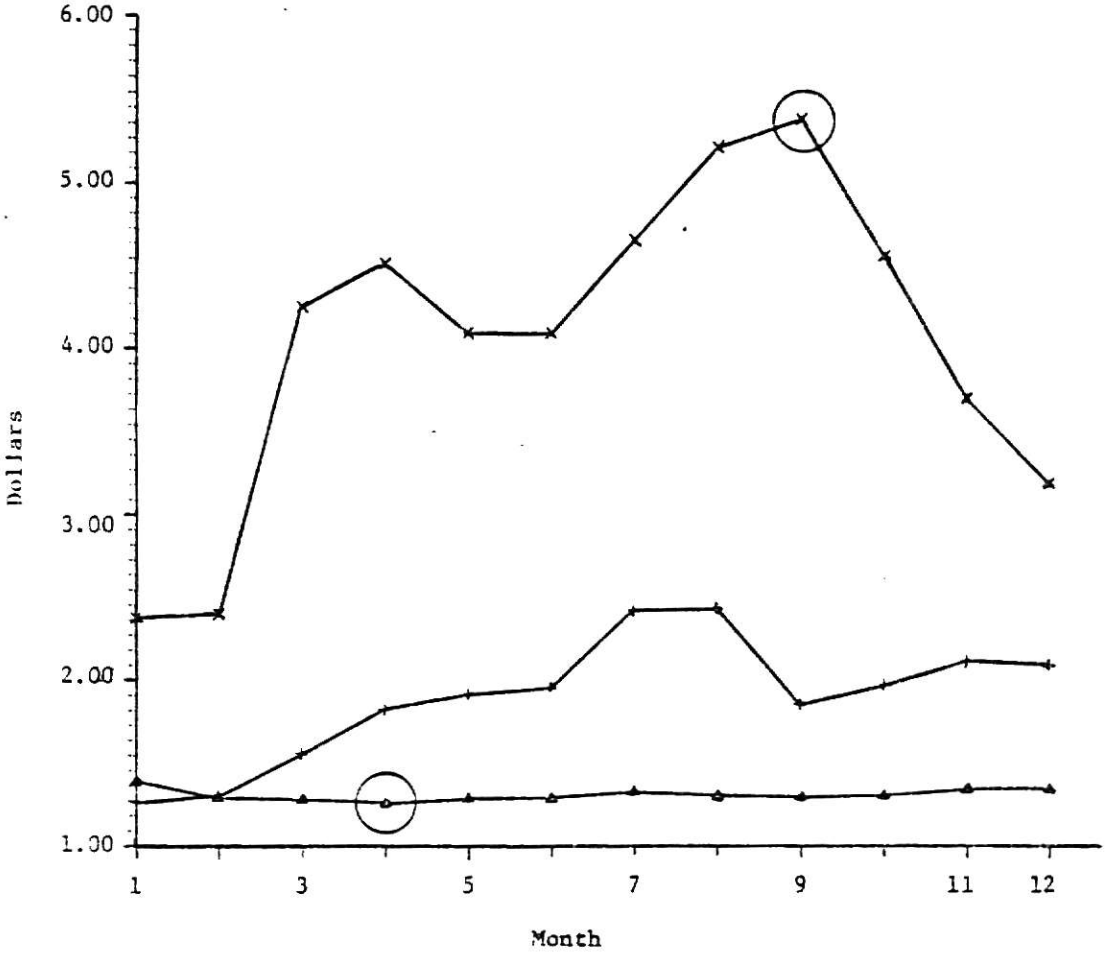

Figure 3: Monthly Kansas Wheat Prices for 1971, 1972 and 1973

▲——▲ Wheat Price for 12 months in 1971
+——+ Wheat Price for 12 months in 1972
×——× Wheat Price for 12 months in 1973

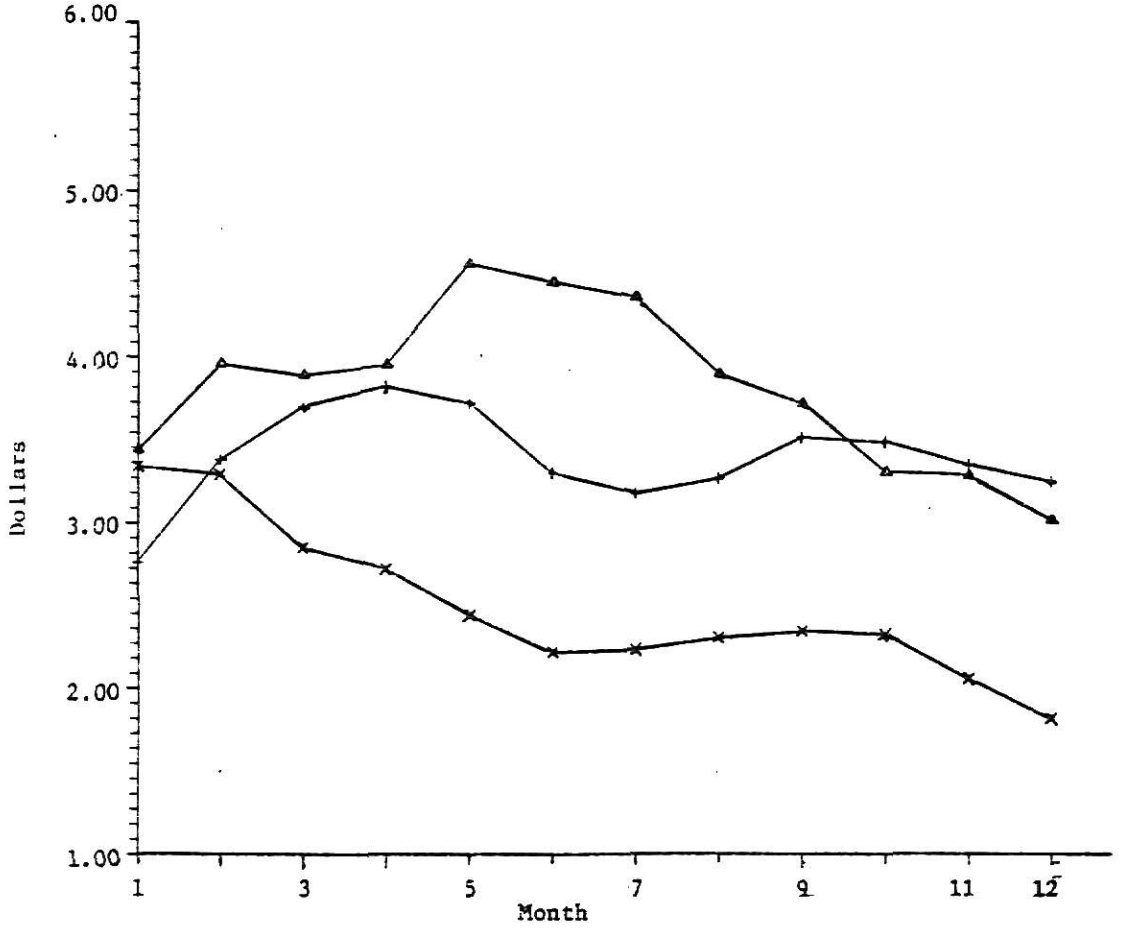

Figure 4: Monthly Kansas Wheat Price for 1974, 1975, and 1976

▲——▲ Wheat Price for 12 months in 1974
+——+ Wheat Price for 12 months in 1975
x——x Wheat Price for 12 months in 1976

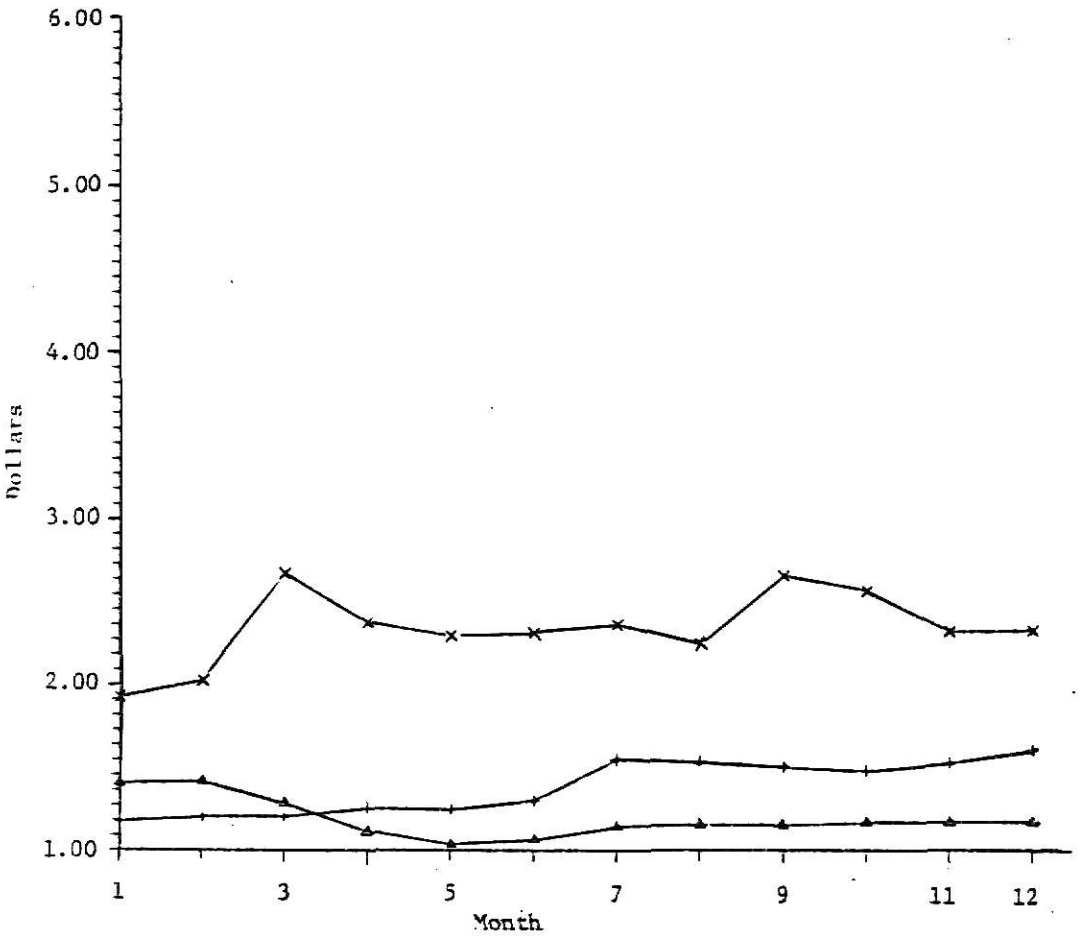

Figure 5: Monthly Kansas Corn Prices for 1971, 1972 and 1973

▲——▲ Corn Price for 12 months in 1971
+——+ Corn Price for 12 months in 1972
x——x Corn Price for 12 months in 1973

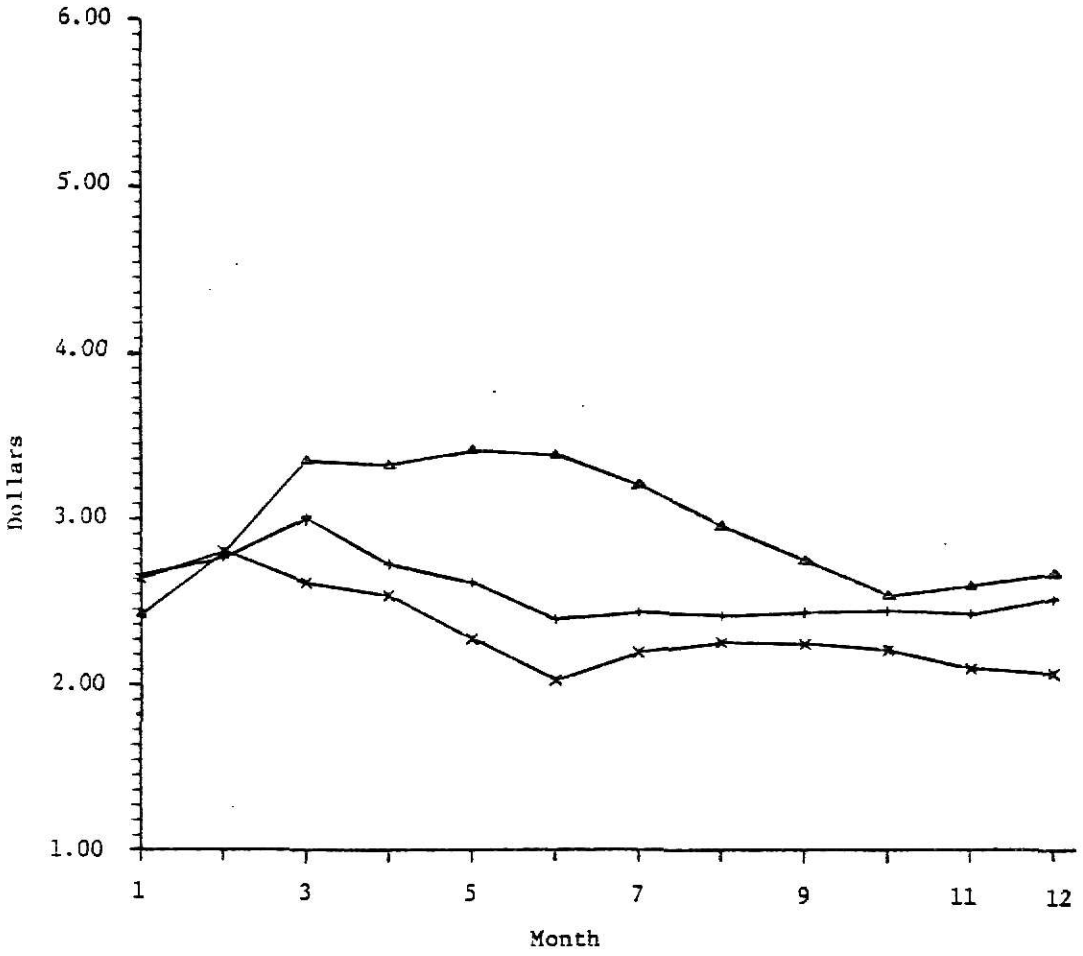

Figure 6: Monthly Kansas Corn Prices for 1974, 1975 and 1976

△——△ Corn Price for 12 months in 1974
+——+ Corn Price for 12 months in 1975
×——× Corn Price for 12 months in 1976

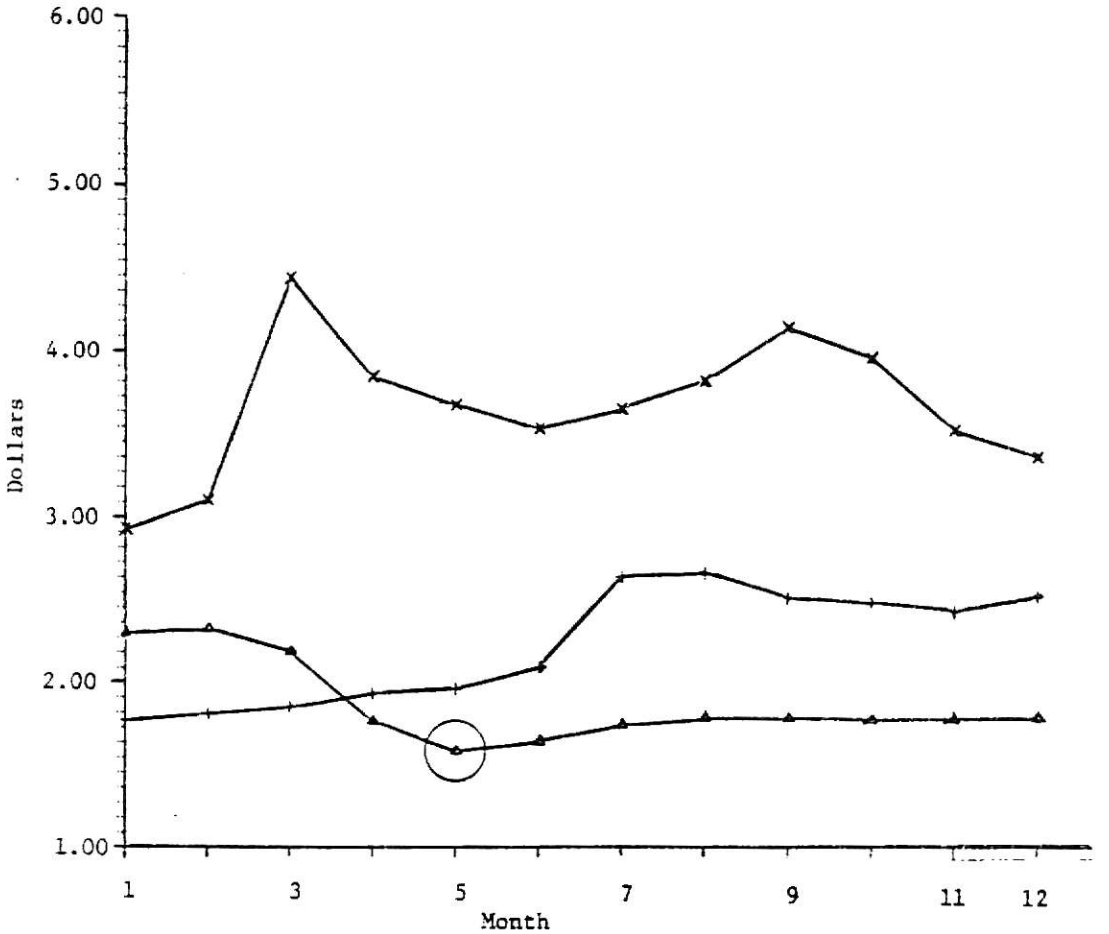

Figure 7: Monthly Kansas Grain Sorghum Prices for 1971, 1972 and 1973

△——△ Grain Sorghum Price for 12 months in 1971
+——+ Grain Sorghum Price for 12 months in 1972
×——× Grain Sorghum Price for 12 months in 1973

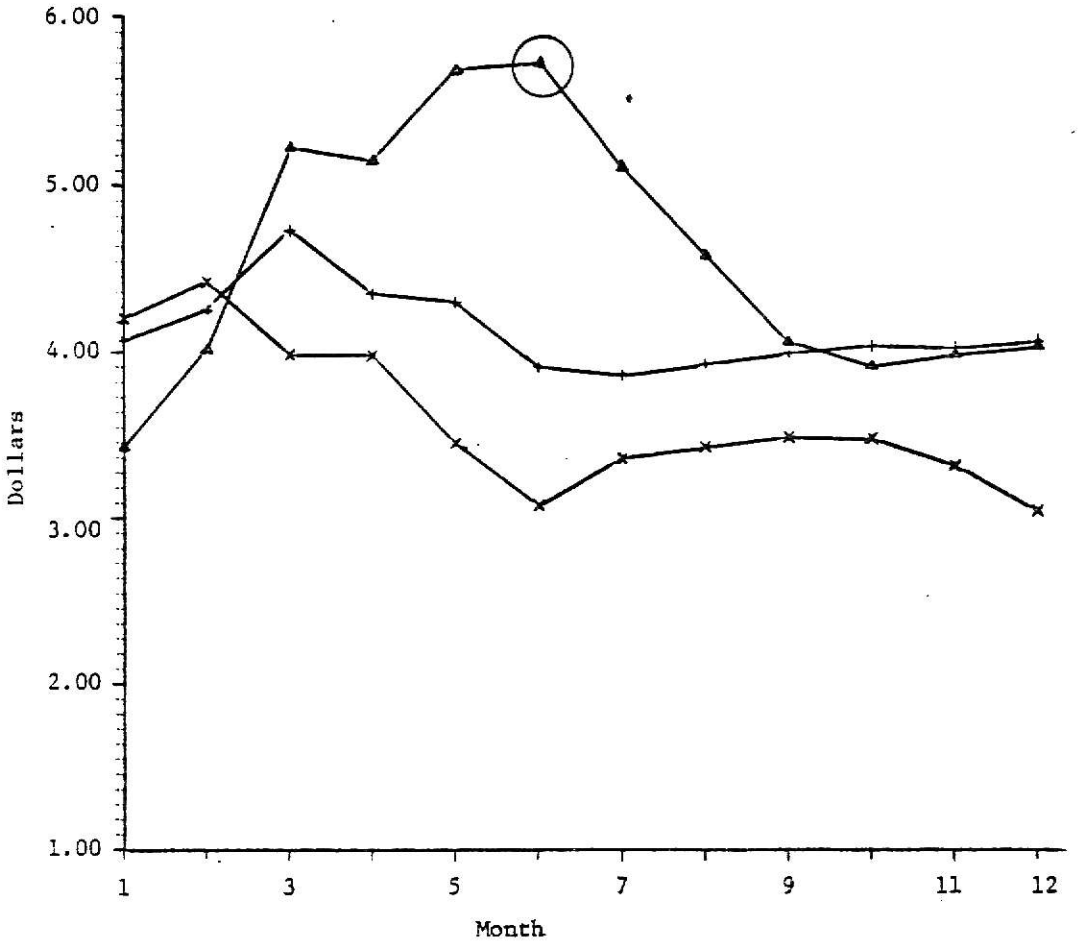

Figure 8: Monthly Kansas Grain Sorghum Prices for 1974, 1975 and 1976

△ —— △ Grain Sorghum Price for 12 months in 1974
\+ —— + Grain Sorghum Price for 12 months in 1975
× —— × Grain Sorghum Price for 12 months in 1976

Table 6: Transportation Cost From Specified Regions to the Central Market (Kansas City)

Region i	Transportation Cost for: ($/Bu.)		
	Wheat	Corn	Gr. So.
1	.00	.00	.00
2	.12	.12	.13
3	.20	.21	.21
4	.29	.30	.30
5	.05	.06	.06
6	.26	.26	.27
7	.06	.07	.07
8	.07	.08	.08

Table 7: Average Crop Prices over all Regions for Different Price Sets, Wheat to Grain Sorghum Price Ratio and Date When Extreme Prices Occurred

Price Set	Crop Price for: $/Bu.			Price Ratio	Date
	Wheat	Corn	Gr. So.	W/Gr.S.	
* NORMAL	2.62	1.86	1.56	1.68	-
I ZWH	5.25	2.52	3.99	1.30	9-73/74
II ZGH	4.30	3.24	5.50	0.78	6-74/75
III ZWL	1.12	0.97	1.62	0.70	4-71/72
IV ZGL	1.16	0.89	1.44	0.80	5-71/72

* Price was used for the testing of KAM.

market to determine the prices received in each region. The prices of all regions are average to obtain the values in Table 2 for the "Normal" price.

The average high wheat price, set I, is twice the "normal" price, and the average low price, set III, is one-half the "normal" price. The average high grain sorghum price is 3.5 times larger than the "normal" price, and the average low grain sorghum price is .9 the "normal" grain sorghum price. Thus, the price sets selected are relatively higher for grain sorghum than wheat when compared with their averages.

The highest wheat to grain sorghum price ratio occurs with normal prices. Even when wheat prices were highest, grain sorghum prices had increased relatively more than wheat prices. When wheat prices were lowest, grain prices were higher than the normal price. Market price for wheat and grain sorghum are very different for sets II, III, and IV, however their relative prices are very close.

It is not the scope of this paper to describe all other data. Nevertheless, each datum may be checked by consulting Appendix I, "Equation Listing".

CHAPTER IV

MODEL RESULTS AND INTERPRETATION

OVERVIEW

First are some general remarks about the aggregated results for Kansas. In the two following sections are a discussion of some changes among the regions of KAM, first for high crop prices and second for low crop prices.

Figure 9 summarizes the aggregated results of KAM. It shows for grain sorghum, wheat and corn the supply estimated by KAM for the five different price sets shown in Table 2.

A supply response curve is not apparent because the limited number of price combinations were not selected to determine such. The price sets show different absolute prices and also changes in the relative prices. However prices for livestock, soybeans, alfalfa, silage and forage remained constant.

Among the three main crops, only grain sorghum shows the general form of a supply response curve. As long as the wheat to grain sorghum price ratio is .8 and below, grain sorghum has almost a "perfect elastic" response. The grain sorghum supply response becomes more "elastic" as its price relative to wheat is larger than 1.3. Wheat supply response remains inelastic as long as its price ratio with grain sorghum is below .8. The lower the price ratio between wheat and grain sorghum, the less response is there in the wheat production even though its absolute price might be high. The substitution of grain sorghum for wheat seems to be due to the generally low price ratio between those crops. Corn remains

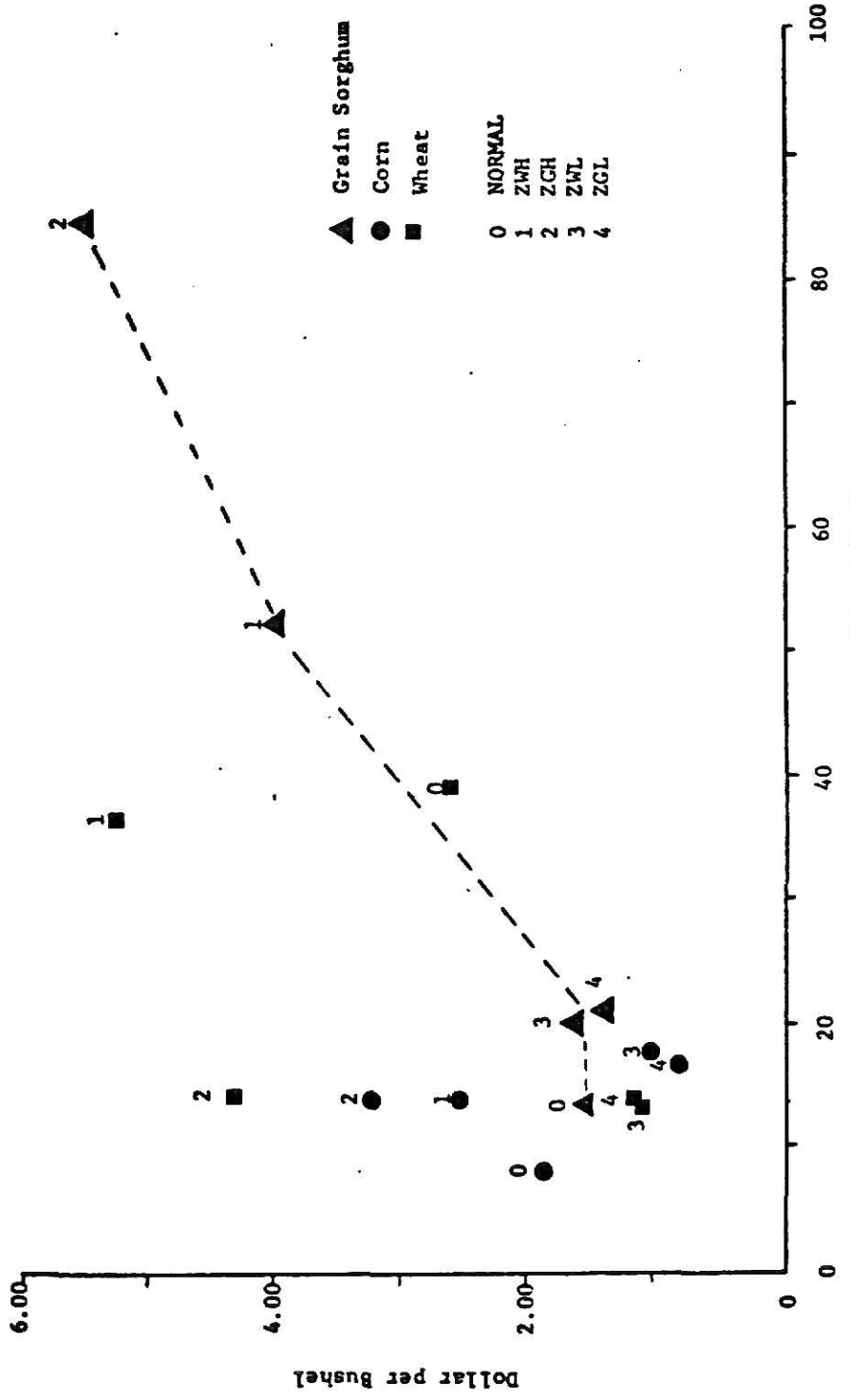

Figure 9: Estimated Production of the three Crops Using the 5 Price Sets

fairly inelastic for all five price sets.

Numbers of some livestock systems remains almost constant for all different crop price sets, even though there are quite big shifts within the crop production. The only change occurs for feeder steers. If the absolute prices for wheat, corn and grain sorghum are high (price sets ZWH and ZGH), there are no feeder steers in KAM. On the other hand, feeder steers increase drastically for low main crop prices (price sets ZWL and ZGL), consequently, feed lots have to be developed.

Unused cropland disappears completely when crop prices are high, but increases drastically when the low crop price sets are in affect.

Although some difficulties still have to be tested in KAM, this study shows some important relationships among high and low price sets.

HIGH CROP PRICES

The following interpretations are made by comparing the result tables.

Table two summarized the main results for the two objectives with high prices as well as for the two objectives with low prices, and compares them with the results of the normal objective. The relative prices for the different price sets change. Despite these changes, the pattern of the results in Table 3 allows the formation of three main groups of results: normal, high- and low price set groups. For further use, it will be referred to then as "Normal prices", "High prices" and "Low prices".

With "High prices", livestock remains constant compared with "Normal prices", except that feeder steers drop in each region from 100 percent in "Normal prices" to zero (exception Region 1 in ZWH remains 100 percent).

The most remarkable increase among crops occurs in all regions for grain sorghum. The average acre increase with high wheat prices (ZWH) is 82 percent (except in Region 2, it stays 100 percent); with high grain sorghum prices (ZGH) the average increase is 339 percent. Since the upper limits for crops in KAM have been removed, the results with an increase of more than 500 percent in the regions 1, 3, 4, and 6 seem to be too high.

Wheat acreage increase with high wheat price (ZWH) are small but with high grain sorghum price (ZGH) it decreases to an average of 65 percent even with the average price of $4.30/bu because of its low price relative to grain sorghum. Although the acreage of wheat with high wheat price increases, its production in bushels decreases by an average of 7 percent. This may be due to a substitution of grain sorghum within good regions and the displacing of wheat into less fertile regions. The biggest displacement occurs in regions three, four, seven and eight.

There is no unused land with a high price for wheat, corn, and grain sorghum. Other crops that compete with wheat and grain sorghum dereases, such as corn, soybean, silage and alfalfa. The acreage for native hay increases even in regions 2 and 5 where it was zero in "Normal prices". Native hay does not compete with crops for cropland and is needed for livestock replacing some alfalfa in the ration.

The operating capital needed to take the additional cropland into production increases roughly by 10 percent. The hired labor seems to be unrealistically high for certain regions.

LOW CROP PRICES

The absolute prices and relative prices are more uniform for the "Low price" group than for "High price". The price ratio between wheat and grain sorghum is closer for ZWL (.7) and ZGL (.8) than it was for "High prices" (1.3 and .78). Therefore the summarized results in Table four shows little difference between low wheat price and low grain sorghum price. This illustrates the importance of relative prices as well as absolute prices in selecting enterprises.

Unused cropland increases by about 225 percent compared to "Normal prices" due to the low prices in wheat, corn and grain sorghum. Feed crops such as soybeans (+25%), alfalfa (+25%) increase rather significantly because their absolute prices remain unchanged and consequently their relative prices increase. Even corn (region 5, 3, 2, 1) and grain sorghum (region 2, 3, 1) increase in some regions despite their low price. Native hay and silage drop mainly in regions two and five by more than 50 percent.

Wheat acreage shows the biggest decrease with 75 percent. The main decrease occurs on continuous wheat in region one, seven and eight. For these potential livestock regions, it is easier to substitute feed crops for wheat. Region six is an exception where wheat increases by 400 percent despite the price of one dollar per bushel.

Feeder steers increase over 100 percent for the regions three, four, five, and six. Feedlots have to be developed for regions three, four and six. This was never the case for "Normal prices" or "High prices". The other livestock remains constant.

Except for the regions where feed lots have to be developed, the

Table 8: Summary of Crop Production Estimates For Kansas with Normal, High Wheat and Grain Sorghum Price Sets.

OBJECTIVE	* NORMAL				I ZWH				II ZGH			
CROPS	ACRES		BUSHELS		ACRES		BUSHELS		ACRES		BUSHELS	
Wheat Continuous	71914	100			115588	160			21200	29		
F + I	59880	100			23690	43			23690	43		
	126794	100	39111	100	139278	109	36624	93	44890	35	13926	38
Corn	17312	100	7851	100	14300	82	14279	182	14300	82	14279	182
Gr.S. D + I	42758	100	13393	100	78114	182	50212	374	187735	439	89786	633
Soybean	9697	100			5920	61			5920	61		
SIlag. D + I	3703	100			3652	97			2908	78		
Alfalfa	13001	100			10742	82			11351	87		
Nativ Hay	2810	100			5401	192			6301	224		
Cropl. Unused	39591	100			-				-			
Plant Alf.	4293	100			755	17			1364	31		

Remarks:
AC acres in 100
BU bushels in 10000
F + I Fallowing and Irrigation
D + I Dryland and Irrigation

(the number in the right corner of a field shows the percentage change compared with * Normal = 100%)

Table 9: Summary of Crop Production Estimates For Kansas With Normal, Low Wheat and Low Grain Sorghum Price Sets.

OBJECTIVE	* NORMAL				III ZWL				IV ZGL			
CROPS	ACRES		BUSHELS		ACRES		BUSHELS		ACRES		BUSHELS	
Wheat Continuous	71914	100			21200	29			21200	29		
F + I	59880	100			23690	43			23690	43		
	126794	100	39111	100	44890	35	13926	38	44890	35	13926	38
Corn	17312	100	7851	100	18873	109	17727	225	17535	101	16424	209
Gr.S. D + I	42758	100	13393	100	43245	101	20017	149	44205	103	20335	151
Soybean	9697	100			12055	124			14512	150		
Silag. D + I	3703	100			1846	50			1947	52		
Alfalfa	13001	100			16235	124			16960	130		
Nativ Hay	2810	100			1641	58			8756	98		
Cropl. Unused	39591	100			129786	327			129976	328		
Plant Alf.	4293	100			6248	145			6973	162		

Remarks: AC acres in 100
BU bushels in 10,000
F + I Fallowing and Irrigation
D + I Dryland and Irrigation

(the number in the right corner of a field shows tha percentage change compared with * normal = 100%.)

operating capital decreases by 5 to 10 percent. Hiring of labor decreases for region one through three and five; for the others it increases.

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APPENDIX I

A LISTING OF THE LINEAR PROGRAMMING EQUATIONS

Page

Equations..... 38

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1PCALF   -Z       +1PASTNAT +1LAB-J,F +1LAB-M,A +1LAB-M,J +1LAB-J,A +1LAB-S,O +1LAB-N,O -1TCALF  +1RALFH  +1RFORREQ +1RWPASTU
         +1OPCAP  +1DEPREC  +1FUEL

1SCALF   +Z       +1TCALF

1TWSTR   +1TCALF  -1TWSTR

1PWSTR   -Z       +1LAB-J,F +1LAB-M,A +1LAB-S,O +1LAB-N,O +1TWSTR  +1RCORN  +1RALFH  +1RFORREQ +1RWPASTU +1OPCAP  +1DEPREC
         -1WSTR   +1FUEL

1SWSTR   +Z       -1BCSWSTR +1WSTR

1TGSTR   +1WSTR   -1TGSTR

1SGSTR   +Z       -1BCSGSTR +1GSTR

1TFSTR   +1GSTR   -1TFSTR

1PGSTRFS +Z       +1PASTNAT +1LAB-M,J +1LAB-J,A +1LAB-S,O +1TGSTR  +1CPCAP  +1DEPREC +1FUEL

1PGSTR   -Z       +1PASTNAT +1LAB-M,J +1LAB-J,A +1OPCAP  +1DEPREC -1GSTR  +1TGSTR  +1FUEL

1PWFSTR  +Z       +1LAB-M,J +1LAB-J,A +1LAB-S,O +1WSTR  +1RCORN  +1RALFH  +1OPCAP  +1DEPREC +1FOLOTCP +1FUEL

1PWGFSTR +Z       +1LAB-J,F +1LAB-S,O +1LAB-N,O +1TFSTR +1RCORN  +1RALFH  +1OPCAP  +1DEPREC +1FOLOTCP +1FUEL

1BFDSTRA +Z       +1LAB-J,F +1LAB-M,A +1LAB-N,O +1RCORN  +1RALFH  +1OPCAP  +1LSKCAP +1DEPREC +1FOLOTCP +1FUEL

1BFDSTRB +Z       +1LAB-M,J +1LAB-J,A +1LAB-S,O +1RCORN  +1RALFH  +1CPCAP  +1LSKCAP +1DEPREC +1FOLOTCP +1FUEL

1PSMILK  +Z       +1PASTNAT +1PASTTAM +1LAB-J,F +1LAB-M,A +1LAB-M,J +1LAB-J,A +1LAB-S,O +1LAB-N,O +1RCORN  +1RALFH  +1OPCAP
         +1LSKCAP +1DEPREC  +1FUEL

1PHOG    +Z       +1LAB-J,F +1LAB-M,A +1LAB-M,J +1LAB-J,A +1LAB-S,O +1LAB-N,O +1RCORN  +1OPCAP  +1LSKCAP +1DEPREC +1FUEL

2PCALF   -Z       +2PASTNAT +2LAB-J,F +2LAB-M,A +2LAB-M,J +2LAB-J,A +2LAB-S,O +2LAB-N,O -2TCALF  +2RALFH  +2RFORREQ +2RWPASTU
         +2OPCAP  +2DEPREC  +2FUEL

2SCALF   +Z       -2BCSCALF +2TCALF

2TWSTR   +2TCALF  -2TWSTR

2PWSTR   -Z       +2LAB-J,F +2LAB-M,A +2LAB-S,O +2LAB-N,O +2TWSTR  +2RCORN  +2RALFH  +2RFORREQ +2RWPASTU +2OPCAP  +2DEPREC
         -2WSTR   +2FUEL

2SWSTR   +Z       -2BCSWSTR +2WSTR

2TGSTR   +2WSTR   -2TGSTR

2SGSTR   +Z       -2BCSGSTR +2GSTR

2TFSTR   +2GSTR   -2TFSTR

2PGSTRFS +Z       +2PASTNAT +2LAB-M,J +2LAB-J,A +2LAB-S,O +2TGSTR  +2DPCAP  +2DEPREC +2FUEL

2PGSTR   -Z       +2PASTNAT +2LAB-M,J +2LAB-J,A +2DPCAP  +2DEPREC +2TGSTR  -2GSTR   +2FUEL

2PWFSTR  +Z       +2LAB-M,J +2LAB-J,A +2LAB-S,O +2WSTR  +2RCORN  +2RALFH  +2DPCAP  +2DEPREC +2FOLOTCP +2FUEL

2PWGFSTR +Z       +2LAB-J,F +2LAB-S,O +2LAB-N,O +2TFSTR +2RCORN  +2RALFH  +2DPCAP  +2DEPREC +2FOLOTCP +2FUEL

2BFDSTRA +Z       +2LAB-J,F +2LAB-M,A +2LAB-N,O +2RCORN  +2RALFH  +2DPCAP  +2LSKCAP +2DEPREC +2FOLOTCP +2FUEL

2BFDSTRB +Z       +2LAB-M,J +2LAB-J,A +2LAB-S,O +2RCORN  +2RALFH  +2CPCAP  +2LSKCAP +2DEPREC +2FOLOTCP +2FUEL

2PSMILK  +Z       +2PASTNAT +2PASTTAM +2LAB-J,F +2LAB-M,A +2LAB-M,J +2LAB-J,A +2LAB-S,O +2LAB-N,O +2RCORN  +2RALFH  +2OPCAP
         +2LSKCAP +2DEPREC  +2FUEL

2PHOG    +Z       +2LAB-J,F +2LAB-M,A +2LAB-M,J +2LAB-J,A +2LAB-S,O +2LAB-N,O +2RCORN  +2DPCAP  +2LSKCAP +2DEPREC +2FUEL

3PCALF   -Z       +3PASTNAT +3LAB-J,F +3LAB-M,A +3LAB-M,J +3LAB-J,A +3LAB-S,O +3LAB-N,O -3TCALF  +3RALFH  +3RFORREQ +3RWPASTU
         +3OPCAP  +3DEPREC  +3FUEL

3SCALF   +Z       -3BCSCALF +3TCALF

3TWSTR   +3TCALF  -3TWSTR

3PWSTR   -Z       +3LAB-J,F +3LAB-M,A +3LAB-S,O +3LAB-N,O +3TWSTR  +3RCORN  +3RALFH  +3RFORREQ +3RWPASTU +3OPCAP  +3DEPREC
         -3WSTR   +3FUEL

3SWSTR   +Z       -3BCSWSTR +3WSTR

3TGSTR   +3WSTR   -3TGSTR

3SGSTR   +Z       -3BCSGSTR +3GSTR

3TFSTR   +3GSTR   -3TFSTR

3PGSTRFS +Z       +3PASTNAT +3LAB-M,J +3LAB-J,A +3LAB-S,O +3TGSTR  +3DPCAP  +3DEPREC +3FUEL

3PWFSTR  +Z       +3LAB-M,J +3LAB-J,A +3LAB-S,O +3WSTR  +3RCORN  +3RALFH  +3DPCAP  +3DEPREC +3FOLOTCP +3FUEL

3PWGFSTR +Z       +3LAB-J,F +3LAB-S,O +3LAB-N,O +3TFSTR +3RCORN  +3RALFH  +3DPCAP  +3DEPREC +3FOLOTCP +3FUEL

3BFDSTRA +Z       +3LAB-J,F +3LAB-M,A +3LAB-N,O +3RCORN  +3RALFH  +3CPCAP  +3LSKCAP +3DEPREC +3FOLOTCP +3FUEL

3BFDSTRB +Z       +3LAB-M,J +3LAB-J,A +3LAB-S,O +3RCORN  +3RALFH  +3DPCAP  +3LSKCAP +3DEPREC +3FOLOTCP +3FUEL

3PSMILK  +Z       +3PASTNAT +3PASTTAM +3LAB-J,F +3LAB-M,A +3LAB-M,J +3LAB-J,A +3LAB-S,O +3LAB-N,O +3RCORN  +3RALFH  +3OPCAP
         +3LSKCAP +3DEPREC  +3FUEL

3PHOG    +Z       +3LAB-J,F +3LAB-M,A +3LAB-M,J +3LAB-J,A +3LAB-S,O +3LAB-N,O +3RCORN  +3OPCAP  +3LSKCAP +3DEPREC +3FUEL

3PGSTR   -Z       +3PASTNAT +3LAB-M,J +3LAB-J,A +3OPCAP  +3DEPREC +3TGSTR  -3GSTR   +3FUEL

4PCALF   -Z       +4PASTNAT +4LAB-J,F +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,O +4LAB-N,O -4TCALF  +4RALFH  +4RFORREQ +4RWPASTU
         +4OPCAP  +4DEPREC  +4FUEL

4SCALF   +Z       -4BCSCALF +4TCALF

4TWSTR   +4TCALF  -4TWSTR

4PWSTR   -Z       +4LAB-J,F +4LAB-M,A +4LAB-S,O +4LAB-N,O +4TWSTR  +4RCORN  +4RALFH  +4RFORREQ +4RWPASTU +4OPCAP  +4DEPREC
         -4WSTR   +4FUEL

4SWSTR   +Z       -4BCSWSTR +4WSTR

4TGSTR   +4WSTR   -4TGSTR
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6SGSTR   +Z       -6BESGSTR +4GSTR
6TFSTR   +4GSTR   -4TFSTR
4PGSTRFS +Z       +4PASTNAT +4LAB-M,J +4LAB-J,A +4LAB-S,O +4TGSTR  +4OPCAP  +4DEPREC  +4FUEL
4PGSTR   -Z       +4PASTNAT +4LAB-M,J +4LAB-J,A +4OPCAP   +4DEPREC -4GSTR   +4TGSTR  +4FUEL
4PWFSTR  +Z       +4LAB-M,J +4LAB-J,A +4LAB-S,O +4WSTR    +4RCORN  +4RALFH  +4OPCAP  +4DEPREC  +4FCLOTCP +4FUEL
4PWGFSTR +Z       +4LAB-J,F +4LAB-S,O +4LAB-N,O +4TFSTR   +4RCORN  +4RALFH  +4OPCAP  +4DEPREC  +4FCLOTCP +4FUEL
4BFDSTRA +Z       +4LAB-J,F +4LAB-M,A +4LAB-N,O +4RCORN   +4RALFH  +4CPCAP  +4LSKCAP  +4DEPREC  +4FCLOTCP +4FUEL
4BFDSTRB +Z       +4LAB-M,J +4LAB-J,A +4LAB-S,O +4RCORN   +4RALFH  +4OPCAP  +4LSKCAP  +4DEPREC  +4FCLOTCP +4FUEL
4PSHILK  +Z       +4PASTNAT +4PASTTAM +4LAB-J,F +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,O +4LAB-N,O +4RCORN  +4RALFH  +4OPCAP
         +4LSKCAP +4DEPREC  +4FUEL
4PHOG    +Z       +4LAB-J,F +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,O +4LAB-N,O +4RCORN  +4OPCAP  +4LSKCAP  +4DEPREC  +4FUEL
5PCALF   -Z       +5PASTNAT +5LAB-J,F +5LAB-M,A +5LAB-M,J +5LAB-J,A +5LAB-S,O +5LAB-N,O -5TCALF  +5RALFH  +5RFORREQ +5RWPASTU
         +5OPCAP  +5DEPREC  +5FUEL
5SCALF   +Z       -5BESCALF +5TCALF
5TWSTR   +5TCALF  -5TWSTR
5PWSTR   -Z       +5LAB-J,F +5LAB-M,A +5LAB-S,O +5LAB-N,O +5TWSTR  +5RCORN  +5RALFH  +5RFORREQ +5RWPASTU +5OPCAP  +5DEPREC
         -5WSTR   +5FUEL
5SWSTR   +Z       -5BESWSTR +5WSTR
5TGSTR   +5WSTR   -5TGSTR
5SGSTR   +Z       -5BESGSTR +5GSTR
5TFSTR   +5GSTR   -5TFSTR
5PGSTRFS +Z       +5PASTNAT +5LAB-M,J +5LAB-J,A +5LAB-S,O +5TGSTR  +5OPCAP  +5DEPREC  +5FUEL
5PWFSTR  +Z       +5LAB-M,J +5LAB-J,A +5LAB-S,O +5WSTR    +5RCORN  +5RALFH  +5OPCAP  +5DEPREC  +5FCLOTCP +5FUEL
5PWGFSTR +Z       +5LAB-J,F +5LAB-S,O +5LAB-N,O +5TFSTR   +5RCORN  +5RALFH  +5OPCAP  +5DEPREC  +5FCLOTCP +5FUEL
5BFDSTRA +Z       +5LAB-J,F +5LAB-M,A +5LAB-N,O +5RCORN   +5RALFH  +5OPCAP  +5LSKCAP  +5DEPREC  +5FCLOTCP +5FUEL
5BFDSTRB +Z       +5LAB-M,J +5LAB-J,A +5LAB-S,O +5RCORN   +5RALFH  +5CPCAP  +5LSKCAP  +5DEPREC  +5FCLOTCP +5FUEL
5PSHILK  +Z       +5PASTNAT +5PASTTAM +5LAB-J,F +5LAB-M,A +5LAB-M,J +5LAB-J,A +5LAB-S,O +5LAB-N,O +5RCORN  +5RALFH  +5OPCAP
         +5LSKCAP +5DEPREC  +5FUEL
5PHCG    +Z       +5LAB-J,F +5LAB-M,A +5LAB-M,J +5LAB-J,A +5LAB-S,O +5LAB-N,O +5RCORN  +5CPCAP  +5LSKCAP  +5DEPREC  +5FUEL
5PGSTR   -Z       +5PASTNAT +5LAB-M,J +5LAB-J,A +5OPCAP   +5DEPREC -5GSTR   +5TGSTR  +5FUEL
6PCALF   -Z       +6PASTNAT +6LAB-J,F +6LAB-M,A +6LAB-M,J +6LAB-J,A +6LAB-S,O +6LAB-N,O -6TCALF  +6RALFH  +6RFORREQ +6RWPASTU
         +6OPCAP  +6DEPREC  +6FUEL
6SCALF   +Z       -6BESCALF +6TCALF
6TWSTR   +6TCALF  -6TWSTR
6PWSTR   -Z       +6LAB-J,F +6LAB-M,A +6LAB-S,O +6LAB-N,O +6TWSTR  +6RCORN  +6RALFH  +6RFORREQ +6RWPASTU +6OPCAP  +6DEPREC
         -6WSTR   +6FUEL
6SWSTR   +Z       -6BESWSTR +6WSTR
6TGSTR   +6WSTR   -6TGSTR
6SGSTR   +Z       -6BESGSTR +6GSTR
6TFSTR   +6GSTR   -6TFSTR
6PGSTRFS +Z       +6PASTNAT +6LAB-M,J +6LAB-J,A +6LAB-S,O +6TGSTR  +6OPCAP  +6DEPREC  +6FUEL
6PWFSTR  +Z       +6LAB-M,J +6LAB-J,A +6LAB-S,O +6WSTR    +6RCORN  +6RALFH  +6OPCAP  +6DEPREC  +6FCLOTCP +6FUEL
6PWGFSTR +Z       +6LAB-J,F +6LAB-S,O +6LAB-N,O +6TFSTR   +6RCORN  +6RALFH  +6OPCAP  +6DEPREC  +6FCLOTCP +6FUEL
6BFDSTRA +Z       +6LAB-J,F +6LAB-M,A +6LAB-N,O +6RCORN   +6RALFH  +6CPCAP  +6LSKCAP  +6DEPREC  +6FCLOTCP +6FUEL
6BFDSTRB +Z       +6LAB-M,J +6LAB-J,A +6LAB-S,O +6RCORN   +6RALFH  +6OPCAP  +6LSKCAP  +6DEPREC  +6FCLOTCP +6FUEL
6PSHILK  +Z       +6PASTNAT +6PASTTAM +6LAB-J,F +6LAB-M,A +6LAB-M,J +6LAB-J,A +6LAB-S,O +6LAB-N,O +6RCORN  +6RALFH  +6OPCAP
         +6LSKCAP +6DEPREC  +6FUEL
6PHOG    +Z       +6LAB-J,F +6LAB-M,A +6LAB-M,J +6LAB-J,A +6LAB-S,O +6LAB-N,O +6RCORN  +6OPCAP  +6LSKCAP  +6DEPREC  +6FUEL
6PGSTR   -Z       +6PASTNAT +6LAB-M,J +6LAB-J,A +6OPCAP   +6DEPREC -6GSTR   +6TGSTR  +6FUEL
7PCALF   -Z       +7PASTNAT +7LAB-J,F +7LAB-M,A +7LAB-M,J +7LAB-J,A +7LAB-S,O +7LAB-N,O -7TCALF  +7RALFH  +7RFORREQ +7RWPASTU
         +7OPCAP  +7DEPREC  +7FUEL
7SCALF   +Z       -7BESCALF +7TCALF
7TWSTR   +7TCALF  -7TWSTR
7PWSTR   -Z       +7LAB-J,F +7LAB-M,A +7LAB-S,O +7LAB-N,O +7TWSTR  +7RCORN  +7RALFH  +7RFORREQ +7RWPASTU +7OPCAP  +7DEPREC
         -7WSTR   +7FUEL
7SWSTR   +Z       -7BESWSTR +7WSTR
7TGSTR   +7WSTR   -7TGSTR
7SGSTR   +Z       -7BESGSTR +7GSTR
7TFSTR   +7GSTR   -7TFSTR
7PGSTRFS +Z       +7PASTNAT +7LAB-M,J +7LAB-J,A +7LAB-S,O +7TGSTR  +7OPCAP  +7DEPREC  +7FUEL
7PWGFSTR +Z       +7LAB-J,F +7LAB-S,O +7LAB-N,O +7TFSTR   +7RCORN  +7RALFH  +7OPCAP  +7DEPREC  +7FCLOTCP +7FUEL
7PWFSTR  +Z       +7LAB-M,J +7LAB-J,A +7LAB-S,O +7WSTR    +7RCORN  +7RALFH  +7OPCAP  +7DEPREC  +7FCLOTCP +7FUEL
7BFDSTRA +Z       +7LAB-J,F +7LAB-M,A +7LAB-N,O +7RCORN   +7RALFH  +7OPCAP  +7LSKCAP  +7DEPREC  +7FCLOTCP +7FUEL
7BFDSTRB +Z       +7LAB-M,J +7LAB-J,A +7LAB-S,O +7RCORN   +7RALFH  +7CPCAP  +7LSKCAP  +7DEPREC  +7FCLOTCP +7FUEL
7PSHILK  +Z       +7PASTNAT +7PASTTAM +7LAB-J,F +7LAB-M,A +7LAB-M,J +7LAB-J,A +7LAB-S,O +7LAB-N,O +7RCORN  +7RALFH  +7OPCAP
         +7LSKCAP +7DEPREC  +7FUEL
```

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7PHOG     +Z        +7LAB-J,F +7LAB-M,A +7LAB-M,J +7LAB-J,A +7LAB-S,O +7LAB-N,O +7RCORN   +7CPCAP   +7LSKCAP  +7DEPREC  +7FUEL

7PGSTR    -Z        +7PASTNAT +7LAB-M,J +7LAB-J,A +7OPCAP   +7DEPREC -7GSTR   +7TGSTR   +7FUEL

8PCALF    -Z        +8PASTNAT +8LAB-J,F +8LAB-M,A +8LAB-M,J +8LAB-J,A +8LAB-S,O +8LAB-N,O -8TCALF   +8RALFH   +8RFORREQ +8RWPASTU
          +8OPCAP   +8DEPREC  +8FUEL

8SCALF    +Z        -88GSCALF +8TCALF

8TWSTR    +8TCALF   -8TWSTR

8PWSTR    -Z        +8LAB-J,F +8LAB-M,A +8LAB-S,O +8LAB-N,O +8TWSTR   +8RCORN   +8RALFH   +8RFORREQ +8RWPASTU +8OPCAP   +8DEPREC
          -8WSTR    +8FUEL

8SWSTR    +Z        -88GSWSTR +8WSTR

8TGSTR    +8WSTR    -8TGSTR

8SGSTR    +Z        -88GSGSTR +8GSTR

8TFSTR    +8GSTR    -8TFSTR

8PGSTRFS  +Z        +8PASTNAT +8LAB-M,J +8LAB-J,A +8LAB-S,O +8TGSTR   +8CPCAP   +8DEPREC  +8FUEL

8PWFSTR   +Z        +8LAB-M,J +8LAB-J,A +8LAB-S,O +8WSTR    +8RCORN   +8RALFH   +8OPCAP   +8DEPREC  +8FCLOTCP +8FUEL

8PWGFSTR  +Z        +8LAB-J,F +8LAB-S,O +8LAB-N,O +8TFSTR   +8RCORN   +8RALFH   +8OPCAP   +8DEPREC  +8FCLOTCP +8FUEL

8BFOSTRA  +Z        +8LAB-J,F +8LAB-M,A +8LAB-N,O +8RCORN   +8RALFH   +8CPCAP   +8LSKCAP  +8DEPREC  +8FCLOTCP +8FUEL

8BFOSTRB  +Z        +8LAB-M,J +8LAB-J,A +8LAB-S,O +8RCORN   +8RALFH   +8CPCAP   +8LSKCAP  +8DEPREC  +8FCLOTCP +8FUEL

8PSMILK   +Z        +8PASTNAT +8PASTTAM +8LAB-J,F +8LAB-M,A +8LAB-P,J +8LAB-J,A +8LAB-S,O +8LAB-N,O +8RCORN   +8RALFH   +8OPCAP
          +8LSKCAP  +8DEPREC  +8FUEL

8PHOG     +Z        +8LAB-J,F +8LAB-M,A +8LAB-M,J +8LAB-J,A +8LAB-S,O +8LAB-N,O +8RCORN   +8CPCAP   +8LSKCAP  +8DEPREC  +8FUEL

8PGSTR    -Z        +8PASTNAT +8LAB-M,J +8LAB-J,A +8OPCAP   +8DEPREC  +8TGSTR   -8GSTR   +8FUEL

1PWHT     -Z        +1CPLDI   -1RWPASTU +1LAB-M,A +1LAB-M,J +1LAB-J,A +1LAB-S,O +1FWH-JUN +1FWH-SEP +1FWH-OCT -1WHTPD   +1CPCAP
          +1DEPREC  +1FUEL    +1FERT    -1CUSTWHT

1SWHT     +Z        +1WHTPD

1PCORN    -Z        +1CPLDI   -1RWPASTU +1LAB-M,A +1LAB-M,J +1LAB-J,A +1LAB-S,O +1LAB-N,O +1FWH-MAY +1FWH-JUN +1FWH-SEP +1FWH-OCT
          -1CORNPD  +1CPCAP   +1DEPREC  +1FUEL    +1FERT    -1CUSTCCR

1SCORN    +Z        +1CORNPD  -1SFDGRAI

1FCORN    -Z        +1CORNPD  -1RCORN

1PGRSOR   -Z        +1CPLDI   -1RWPASTU +1LAB-M,A +1LAB-M,J +1LAB-J,A +1LAB-S,O +1LAB-N,O +1FWH-MAY +1FWH-JUN +1FWH-OCT -1GRSOPD
          +1OPCAP   +1DEPREC  +1FUEL    +1FERT    -1CUSTGS

1SGRSO    +Z        +1GRSOPD  -1SFDGRAI

1FGRSO    -Z        +1GRSOPD  -1RCORN

1PSOY     +Z        +1CPLDI   +1LAB-M,A +1LAB-M,J +1LAB-J,A +1LAB-S,O +1LAB-N,O +1FWH-MAY +1FWH-JUN +1FWH-OCT +1OPCAP   +1DEPREC
          +1FUEL    +1FERT    -1CUSTSOY

1PSIL     -Z        +1CPLDI   +1LAB-M,A +1LAB-M,J +1LAB-J,A +1LAB-S,O +1LAB-N,O +1FWH-MAY +1FWH-JUN +1FWH-SEP +1FWH-OCT -1RALFH
          +1OPCAP   +1DEPREC  +1FUEL    +1FERT

1PALFH    -Z        +1ALFHAY  +1LAB-M,J +1LAB-J,A +1LAB-S,O +1FWH-JUN +1FWH-SEP -1ALFPD   +1OPCAP   +1DEPREC  +1FUEL    +1FERT

1SALFH    +Z        +1LAB-J,A +1LAB-S,O +1ALFPD   -1SALFH

1FALFH    +1ALFPD   -1RALFH

1PNATH    -Z        +1NATHAY  +1LAB-J,A -1NATHPD  +1OPCAP   +1DEPREC  +1FUEL

1FNATH    +1NATHPD  -1RALFH

1SNATH    +Z        +1NATHPD  -1SALFH

1HLABFT   -Z        -1LAB-J,F -1LAB-M,A -1LAB-M,J -1LAB-J,A -1LAB-S,O -1LAB-N,O -1FWH-MAY -1FWH-JUN -1FWH-SEP -1FWH-OCT

1HLABSU   -Z        -1LAB-M,J -1LAB-J,A -1FWH-JUN

1FUELCST  -Z        -1FUEL

1FERTCST  -Z        -1FERT

1DEPR     -Z        -1DEPREC

5PWHT     -Z        +5CPLDI   +5LAB-M,A +5LAB-M,J +5LAB-J,A +5LAB-S,O +5FWH-JUN +5FWH-SEP +5FWH-OCT -5WHTPD   +5OPCAP   +5DEPREC
          +5FUEL    +5FERT    -5RWPASTU -5CUSTWHT

5SWHT     +Z        +5WHTPD

5PCORN    -Z        +5CPLDI   +5LAB-M,A +5LAB-M,J +5LAB-J,A +5LAB-S,O +5LAB-N,O +5FWH-MAY +5FWH-JUN +5FWH-SEP +5FWH-OCT -5CORNPD
          +5OPCAP   +5DEPREC  +5FUEL    +5FERT    -5RWPASTU -5CUSTCCR

5SCORN    +Z        +5CORNPD  -5SFDGRAI

5FCORN    -Z        +5CORNPD  -5RCORN

5PGRSOR   -Z        +5CPLDI   +5LAB-M,A +5LAB-M,J +5LAB-J,A +5LAB-S,O +5LAB-N,O +5FWH-MAY +5FWH-JUN +5FWH-OCT -5GRSOPD  +5CPCAP
          +5DEPREC  +5FUEL    +5FERT    -5RWPASTU -5CUSTGS

5SGRSO    +Z        +5GRSOPD  -5SFDGRAI

5FGRSO    -Z        +5GRSOPD  -5RCORN

5PSOY     +Z        +5CPLDI   +5LAB-M,A +5LAB-M,J +5LAB-J,A +5LAB-S,O +5LAB-N,O +5FWH-MAY +5FWH-JUN +5FWH-OCT +5OPCAP   +5DEPREC
          +5FUEL    +5FERT    -5CUSTSOY

5PSIL     -Z        +5CPLDI   +5LAB-M,A +5LAB-M,J +5LAB-J,A +5LAB-S,O +5LAB-N,O +5FWH-MAY +5FWH-JUN +5FWH-SEP +5FWH-OCT -5RALFH
          +5OPCAP   +5DEPREC  +5FUEL    +5FERT

5PALFH    -Z        +5ALFHAY  +5LAB-M,J +5LAB-J,A +5LAB-S,O +5FWH-JUN +5FWH-SEP -5ALFPD   +5OPCAP   +5DEPREC  +5FUEL    +5FERT

5SALFH    +Z        +5ALFPD   -5SALFH

5FALFH    +5ALFPD   -5RALFH

5PNATH    -Z        +5NATHAY  +5LAB-S,O -5NATHPD  +5OPCAP   +5DEPREC  +5FUEL

5FNATH    +5NATHPD  -5RALFH
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```
$SNATH    +Z        +$NATHPD  -$SALFH
$HLABFT   -Z        -$LAB-J,F -$LAB-M,A -$LAB-M,J -$LAB-J,A -$LAB-S,O -$LAB-N,D -$FWH-MAY -$FWH-JUN -$FWH-SEP
$HLABSU   -Z        -$LAB-M,J -$LAB-J,A -$FWH-JUN
$FUELCST  -Z        -$FUEL
$FERTCST  -Z        -$FERT
$DEPR     -Z        -$DEPREC
7PWHT     -Z        +7CPLD1   +7LAB-M,A +7LAB-M,J +7LAB-J,A +7LAB-S,O +7FWH-JUN +7FWH-SEP +7FWH-OCT -7WHTPD   +7LPCAP   +3DEPREC
          +7FUEL    +7FERT    -7RWPASTU -7CUSTWHT
7SWHT     +Z        +7WHTPD
7PCORN    -Z        +7CPLD1   +7LAB-M,A +7LAB-M,J +7LAB-J,A +7LAB-S,O +7LAB-N,D +7FWH-MAY +7FWH-JUN +7FWH-SEP +7FWH-OCT -7CORNPD
          +7OPCAP   +7DEPREC  +7FUEL    +7FERT    -7RWPASTU -7CUSTCOR
7SCORN    +Z        +7CORNPD  -7SFDGRAI
7FCORN    -Z        +7CORNPD  -7RCORN
7PGRSOR   -Z        +7CPLD1   +7LAB-M,A +7LAB-M,J +7LAB-J,A +7LAB-S,O +7LAB-N,D +7FWH-MAY +7FWH-JUN +7FWH-OCT -7GRSCPD  +7CPCAP
          +7DEPREC  +7FUEL    +7FERT    -7RWPASTU -7CUSTGS
7SGRSO    +Z        +7GRSCPD  -7SFDGRAI
7FGRSO    -Z        +7GRSOPD  -7RCORN
7PSOY     +Z        +7CPLD1   +7LAB-M,A +7LAB-M,J +7LAB-J,A +7LAB-S,O +7LAB-N,D +7FWH-MAY +7FWH-JUN +7FWH-OCT +7CPCAP   +7DEPREC
          +7FUEL    +7FERT    -7CUSTSOY
7PSIL     -Z        +7CPLD1   +7LAB-M,A +7LAB-M,J +7LAB-J,A +7LAB-S,O +7LAB-N,D +7FWH-MAY +7FWH-JUN +7FWH-SEP +7FWH-OCT -7RALFH
          +7OPCAP   +7DEPREC  +7FUEL    +7FERT
7PALFH    -Z        +7ALFHAY  +7LAB-M,J +7LAB-J,A +7LAB-S,O +7FWH-JUN +7FWH-SEP -7ALFPD   +7OPCAP   +7DEPREC  +7FUEL   +7FERT
7SALFH    +Z        +7ALFPD   -7SALFH
7FALFH    +7ALFPD   -7RALFH
7PNATH    -Z        +7NATHAY  +7LAB-J,A -7NATHPD  +7OPCAP   +7DEPREC  +7FUEL
7FNATH    +7RATHPD  -7RALFH
7SNATH    +Z        +7NATHPD  -7SALFH
7HLABFT   -Z        -7LAB-J,F -7LAB-M,A -7LAB-M,J -7LAB-J,A -7LAB-S,O -7LAB-N,D -7FWH-MAY -7FWH-JUN -7FWH-SEP -7FWH-OCT
7HLABSU   -Z        -7LAB-M,J -7LAB-J,A -7FWH-JUN
7FUELCST  -Z        -7FUEL
7FERTCST  -Z        -7FERT
7DEPR     -Z        -7DEPREC
8PWHT     -Z        +8CPLD1   +8LAB-M,A +8LAB-M,J +8LAB-J,A +8LAB-S,O +8FWH-JUN +8FWH-SEP +8FWH-OCT -8WHTPD   +8OPCAP   +8DEPREC
          +8FUEL    +8FERT    -8RWPASTU -8CUSTWHT
8SWHT     +Z        +8WHTPD
8PCORN    -Z        +8CPLD1   +8LAB-M,A +8LAB-M,J +8LAB-J,A +8LAB-S,O +8LAB-N,D +8FWH-MAY +8FWH-JUN +8FWH-SEP +8FWH-OCT -8CORNPD
          +8OPCAP   +8DEPREC  +8FUEL    +8FERT    -8RWPASTU -8CUSTCOR
8SCORN    +Z        +8CORNPD  -8SFDGRAI
8FCORN    -Z        +8CORNPD  -8RCORN
8PGRSOR   -Z        +8CPLD1   +8LAB-M,A +8LAB-M,J +8LAB-J,A +8LAB-S,O +8LAB-N,D +8FWH-MAY +8FWH-JUN +8FWH-OCT -8GRSCPD  +8CPCAP
          +8DEPREC  +8FUEL    +8FERT    -8RWPASTU -8CUSTGS
8SGRSO    +Z        +8GRSCPD  -8SFDGRAI
8FGRSO    -Z        +8GRSOPD  -8RCORN
8PSOY     +Z        +8CPLD1   +8LAB-M,A +8LAB-M,J +8LAB-J,A +8LAB-S,O +8LAB-N,D +8FWH-MAY +8FWH-JUN +8FWH-OCT +8CPCAP   +8DEPREC
          +8FUEL    +8FERT    -8CUSTSOY
8PSIL     -Z        +8CPLD1   +8LAB-M,A +8LAB-M,J +8LAB-J,A +8LAB-S,O +8LAB-N,D +8FWH-MAY +8FWH-JUN +8FWH-SEP +8FWH-OCT -8RALFH
          +8OPCAP   +8DEPREC  +8FUEL    +8FERT
8PALFH    -Z        +8ALFHAY  +8LAB-M,J +8LAB-J,A +8LAB-S,O +8FWH-JUN +8FWH-SEP -8ALFPD   +8OPCAP   +8DEPREC  +8FUEL   +8FERT
8SALFH    +Z        +8ALFPD   -8SALFH
8FALFH    +8ALFPD   -8RALFH
8PNATH    -Z        +8LAB-J,A -8NATHPD  +8OPCAP   +8DEPREC  +8FUEL    +8NATHAY
8FNATH    +8RATHPD  -8RALFH
8SNATH    +Z        +8ALFPD   -8SALFH
8HLABFT   -Z        -8LAB-J,F -8LAB-M,A -8LAB-M,J -8LAB-J,A -8LAB-S,O -8LAB-N,D -8FWH-MAY -8FWH-JUN -8FWH-SEP -8FWH-OCT
8HLABSU   -Z        -8LAB-M,J -8LAB-J,A -8FWH-JUN
8FUELCST  -Z        -8FUEL
8FERTCST  -Z        -8FERT
8DEPR     -Z        -8DEPREC
2PWHT     -Z        +2CPLD1   -2RWPASTU +2LAB-J,F +2LAB-M,J +2LAB-J,A +2LAB-S,O +2FWH-JUN +2FWH-SEP +2FWH-OCT -2WHTPD   +2OPCAP
          +2DEPREC  +2FUEL    +2FERT    -2CUSTWHT
2SWHT     +Z        +2WHTPD
2PCORN    -Z        +2CPLD2   +2LAB-M,A +2LAB-M,J +2LAB-J,A +2LAB-S,O +2LAB-N,D +2FWH-MAY +2FWH-JUN +2FWH-SEP +2FWH-OCT -2CORNPD
          +2OPCAP   +2DEPREC  +2FUEL    +2FERT    -2RWPASTU -2CUSTCOR
2SCORN    +Z        +2CORNPD  -2SFDGRAI
2FCORN    -Z        +2CORNPD  -2RCORN
2PGRSOR   -Z        +2CPLD1   -2RWPASTU +2LAB-M,A +2LAB-M,J +2LAB-J,A +2LAB-S,O +2LAB-N,D +2FWH-MAY +2FWH-JUN +2FWH-SEP +2FWH-OCT
          -2GRSOPD  +2DPCAP   +2DEPREC  +2FUEL    +2FERT    -2CUSTGS
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```
2SGRSO   +Z        +2GRSCPD  -2SFDGRAI
2FGRSO   -Z        +2GRSUPD  -2RCURN
2PSIL    -Z        +2CPLD1   +2LAB-M,A +2LAB-M,J +2LAB-J,A +2LAB-S,O +2LAB-N,O +2FWH-OCT -2RALFH   +2OPCAP   +2DEPREC  +2FUEL
         +2FERT
2PALFH   -Z        +2ALFHAY  +2LAB-M,A +2LAB-M,J +2LAB-J,A +2LAB-S,O +2FWH-JUN -2ALFPD   +2CPCAP   +2DEPREC  +2FUEL    +2FERT
2SALFH   +Z        +2ALFPD   -2SALFH
2FALFH   +2ALFPD   -2RALFH
2PNATH   -Z        +2LAB-J,A -2NATHPD  +2OPCAP   +2DEPREC  +2FUEL    +2NATHAY
2FNATH   +2NATHPD  -2RALFH
2SNATH   +Z        +2NATHPD  -2SALFH
2HLABFT  -Z        -2LAB-J,F -2LAB-M,A -2LAB-M,J -2LAB-J,A -2LAB-S,O -2LAB-N,O -2FWH-MAY -2FWH-JUN -2FWH-SEP -2FWH-OCT
2HLABSU  -Z        -2LAB-M,J -2LAB-J,A -2FWH-JUN
2FUELCST -Z        -2FUEL
2FERTCST -Z        -2FERT
2DEPR    -Z        -2DEPREC
3PWHT    -Z        +3CPLD1   +3LAB-M,J +3LAB-J,A +3LAB-S,O +3FWH-JUN -3WHTPD   +3OPCAP   +3DEPREC  +3FUEL    -3CUSTWHT +3FWH-SEP
3SWHT    +Z        +3WHTPD
3PCORN   -Z        +3CPLD2   +3LAB-M,A +3LAB-M,J +3LAB-J,A +3LAB-S,O +3LAB-N,O +3FWH-MAY +3FWH-JUN +3FWH-SEP +3FWH-OCT -3CORNPD
         +3OPCAP   +3DEPREC  +3FUEL    +3FERT    -3RWPASTU -3CUSTWHT
3SCORN   +Z        +3CORNPD  -3SFDGRAI
3FCORN   -Z        +3CORNPD  -3RCORN
3PGRSOR  -Z        +3LAB-M,A +3CPLD1   +3LAB-M,J +3LAB-J,A +3LAB-S,O +3LAB-N,O +3FWH-MAY +3FWH-JUN +3FWH-SEP +3FWH-OCT -3GRSOPD
         +3OPCAP   +3DEPREC  +3FUEL    +3FERT    -3RWPASTU -3CUSTGS
3SGRSO   +Z        +3GRSOPD  -3SFDGRAI
3FGRSO   -Z        +3GRSOPD  -3RCORN
3PSILIR  -Z        +3CPLD2   +3LAB-M,A +3LAB-M,J +3LAB-J,A +3LAB-S,O +3LAB-N,O +3FWH-MAY +3FWH-JUN +3FWH-SEP +3FWH-OCT -3RALFH
         +3OPCAP   +3DEPREC  +3FUEL    +3FERT
3PALFH   -Z        +3ALFHAY  +3LAB-M,A +3LAB-M,J +3LAB-J,A +3LAB-S,O +3FWH-MAY +3FWH-JUN +3FWH-SEP +3FWH-OCT -3ALFPD   +3CPCAP
         +3DEPREC  +3FUEL    +3FERT
3SALFH   +Z        +3ALFPD   -3SFDGRAI
3FALFH   +3ALFPD   -3RALFH
3HLABFT  -Z        -3LAB-J,F -3LAB-M,A -3LAB-M,J -3LAB-J,A -3LAB-S,O -3LAB-N,O -3FWH-MAY -3FWH-JUN -3FWH-SEP -3FWH-OCT
3HLABSU  -Z        -3LAB-M,J -3LAB-J,A -3FWH-JUN
3PFORAGE -Z        +3CPLD1   +3LAB-M,A +3LAB-M,J +3LAB-J,A +3LAB-S,O +3LAB-N,O +3FWH-MAY +3FWH-JUN +3FWH-SEP +3FWH-OCT -3RFORREQ
         +3OPCAP   +3DEPREC  +3FUEL
3FUELCST -Z        -3FUEL
3FERTCST -Z        -3FERT
3DEPR    -Z        -3DEPREC
3PWHTFAL -Z        +3CPLD1   -3RWPASTU +3LAB-M,A +3LAB-M,J +3LAB-J,A +3LAB-S,O +3FWH-JUN +3FWH-SEP +3FWH-OCT -3WHTPD   +3OPCAP
         +3DEPREC  +3FUEL    -3CUSTWHT
3PWHTIRR -Z        +3CPLD2   +3LAB-M,J +3LAB-J,A +3LAB-S,O +3FWH-JUN +3FWH-SEP +3FWH-OCT -3WHTPD   +3OPCAP   +3DEPREC  +3FUEL
         +3FERT    -3RWPASTU -3CUSTWHT
3PGSIRR  -Z        +3CPLD2   +3LAB-M,A +3LAB-M,J +3LAB-J,A +3LAB-S,O +3LAB-N,O +3FWH-MAY +3FWH-JUN +3FWH-SEP +3FWH-OCT -3GRSCPD
         +3OPCAP   +3DEPREC  +3FUEL    +3FERT    -3RWPASTU -3CUSTGS
4PWHT    -Z        +4CPLD1   +4LAB-M,J +4LAB-J,A +4LAB-S,O +4FWH-JUN +4FWH-SEP +4FWH-OCT -4WHTPD   +4OPCAP   +4DEPREC  +4FUEL
         -4CUSTWHT
4SWHT    +Z        +4WHTPD
4PCORN   -Z        +4CPLD2   +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,O +4LAB-N,O +4FWH-MAY +4FWH-JUN +4FWH-SEP -4CORNPD  +4OPCAP
         +4DEPREC  +4FUEL    +4FERT    -4RWPASTU -4CUSTCOR +4FWH-OCT
4SCORN   +Z        +4CORNPD  -4SFDGRAI
4FCORN   -Z        +4CORNPD  -4RCORN
4PGRSOR  -Z        +4CPLD1   +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,O +4LAB-N,O +4FWH-MAY +4FWH-JUN +4FWH-SEP -4GRSOPD  +4OPCAP
         +4DEPREC  +4FUEL    -4RWPASTU -4CUSTGS  +4FWH-OCT
4SGRSO   +Z        +4GRSCPD  -4SFDGRAI
4FGRSO   -Z        +4GRSOPD  -4RCORN
4PSIL    -Z        +4CPLD2   +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,O +4LAB-N,O +4FWH-MAY +4FWH-JUN +4FWH-SEP +4FWH-OCT -4RALFH
         +4OPCAP   +4DEPREC  +4FUEL    +4FERT
4PALFH   -Z        +4ALFHAY  +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,O +4FWH-MAY +4FWH-JUN +4FWH-SEP +4FWH-OCT -4ALFPD   +4CPCAP
         +4DEPREC  +4FUEL    +4FERT
4SALFH   +Z        +4ALFPD   -4SALFH
4FALFH   +4ALFPD   -4RALFH
4HLABFT  -Z        -4LAB-J,F -4LAB-M,A -4LAB-M,J -4LAB-J,A -4LAB-S,O -4LAB-N,O -4FWH-MAY -4FWH-JUN -4FWH-SEP -4FWH-OCT
4HLABSU  -Z        -4LAB-J,A -4FWH-JUN
4PFORAGE -Z        +4CPLD1   +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,O +4LAB-N,O +4FWH-MAY +4FWH-JUN +4FWH-SEP +4FWH-OCT -4RFORREQ
         +4OPCAP   +4DEPREC  +4FUEL
4FUELCST -Z        -4FUEL
4FERTCST -Z        -4FERT
4DEPR    -Z        -4DEPREC
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4PWHTFAL  -Z          +4CPLD1   +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,D +4FWH-JUN +4FWH-SEP -4WHTPD   +4DPCAP   +4DEPREC  +4FUEL
          -4RWPASTU   -4CUSTWHT

4WHTIRR   -Z          +4CPLD2   +4LAB-M,J +4LAB-J,A +4LAB-S,D +4FWH-JUN +4FWH-SEP +4FWH-OCT -4WHTPD   +4DPCAP   +4DEPREC  +4FUEL
          +4FERT      -4RWPASTU -4CUSTWHT

4GSIRR    -Z          +4CPLD2   +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,D +4LAB-N,D +4FWH-MAY +4FWH-JUN +4FWH-SEP +4FWH-OCT -4GRSCPD
          +4DPCAP     +4DEPREC  +4FUEL    +4FERT    -4RWPASTU -4CUSTGS

4PWHT     -Z          +4CPLD1   +4LAB-M,J +4LAB-J,A +4LAB-S,D +4FWH-JUN +4FWH-SEP +4FWH-OCT -4WHTPD   +4DPCAP   +4DEPREC  +4FUEL
          -4CUSTWHT

4SWHT     +Z          +4WHTPD

4PCORN    -Z          +4CPLD2   +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,D +4LAB-N,D +4FWH-MAY +4FWH-JUN +4FWH-SEP +4FWH-OCT -4CORNPD
          +4DPCAP     +4DEPREC  +4FUEL    +4FERT    -4RWPASTU -4CUSTCOR

4SCORN    +Z          +4CORNPD  -4SFDGRAI

4FCORN    -Z          +4CORNPD  -4RCORN

4PGRSOR   -Z          +4CPLD1   +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,D +4LAB-N,D +4FWH-MAY +4FWH-JUN +4FWH-OCT -4GRSCPD  +4DPCAP
          +4DEPREC    +4FUEL    -4RWPASTU -4CUSTGS

4SGRSO    +Z          +4GRSOPD  -4SFDGRAI

4FGRSO    -Z          +4GRSOPD  -4RCORN

4PFORAGE  -Z          +4CPLD1   +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,D +4LAB-N,D +4FWH-MAY +4FWH-JUN +4FWH-SEP +4FWH-OCT -4REGRREQ
          +4DPCAP     +4DEPREC  +4FUEL

4PSIL     -Z          +4CPLD2   +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,D +4LAB-N,D +4FWH-MAY +4FWH-JUN +4FWH-SEP +4FWH-OCT -4ALFH
          +4DPCAP     +4DEPREC  +4FUEL    +4FERT

4PALFH    -Z          +4ALFMAY  +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,D +4FWH-MAY +4FWH-JUN +4FWH-SEP +4FWH-OCT -4ALFPD   +4DPCAP
          +4DEPREC    +4FUEL    +4FERT

4SALFH    +Z          +4ALFPD   -4SALFH

4FALFH    +4ALFPD     -4RALFH

4MLABFT   -Z          -4LAB-J,F -4LAB-M,A -4LAB-M,J -4LAB-J,A -4LAB-S,D -4LAB-N,D -4FWH-MAY -4FWH-JUN -4FWH-SEP -4FWH-OCT

4MLABSU   -Z          -4LAB-J,A -4FWH-JUN

4FUELCST  -Z          -4FUEL

4FERTCST  -Z          -4FERT

4DEPR     -Z          -4DEPREC

5PWHTFAL  -Z          +5CPLD1   +5LAB-M,A +5LAB-M,J +5LAB-J,A +5LAB-S,D +5FWH-JUN +5FWH-SEP -5WHTPD   +5DPCAP   +5DEPREC  +5FUEL
          -5RWPASTU   -5CUSTWHT

5PWHTIRR  -Z          +5CPLD2   +5LAB-M,J +5LAB-J,A +5LAB-S,D +5FWH-JUN +5FWH-SEP +5FWH-OCT -5WHTPD   +5DPCAP   +5DEPREC  +5FUEL
          +5FERT      -5RWPASTU -5CUSTWHT

5PGSIRR   -Z          +5CPLD2   +5LAB-M,A +5LAB-M,J +5LAB-J,A +5LAB-S,D +5LAB-N,D +5FWH-MAY +5FWH-JUN +5FWH-OCT -5GRSCPD  +5DPCAP
          +5DEPREC    +5FUEL    +5FERT    -5RWPASTU -5CUSTGS

1CHVWHT   +1CUSTWHT -Z          -1LAB-M,J -1LAB-J,A -1FWH-JUN -1DEPREC

1CHVCORN  -Z          -1DEPREC  +1CUSTCOR -1LAB-S,D -1LAB-N,D -1FWH-OCT

1CHVGRSO  -Z          -1DEPREC  -1LAB-S,D -1LAB-N,D -1FWH-OCT +1CUSTGS

1CHVSOY   -Z          -1DEPREC  -1LAB-S,D -1LAB-N,D -1FWH-OCT +1CUSTSOY

5CHVWHT   -Z          -5DEPREC  +5CUSTWHT -5LAB-M,J -5LAB-J,A -5FWH-JUN

5CHVCORN  -Z          -5DEPREC  +5CUSTCOR +5LAB-S,D

5CHVGRSO  -Z          -5DEPREC  +5CUSTGS  -5FWH-OCT -5LAB-N,D -5LAB-S,D

5CHVSOY   -Z          -5DEPREC  +5CUSTSOY -5FWH-OCT -5LAB-N,D -5LAB-S,D

7CHVWHT   -Z          -7DEPREC  +7CUSTWHT -7LAB-M,J -7LAB-J,A -7FWH-JUN

7CHVCORN  -Z          -7DEPREC  +7CUSTCOR -7LAB-S,D -7LAB-N,D -7FWH-SEP -7FWH-OCT

7CHVGRSO  -Z          -7DEPREC  +7CUSTGS  -7LAB-S,D -7LAB-N,D -7FWH-OCT

7CHVSOY   -Z          -7DEPREC  +7CUSTSOY -7LAB-S,D -7LAB-N,D -7FWH-OCT

8CHVWHT   -Z          -8DEPREC  +8CUSTWHT -8LAB-M,J -8LAB-J,A -8FWH-JUN

8CHVCORN  -Z          -8DEPREC  +8CUSTCOR -8LAB-S,D -8LAB-N,D -8FWH-SEP -8FWH-OCT

8CHVGRSO  -Z          -8DEPREC  +8CUSTGS  -8LAB-S,D -8LAB-N,D -8FWH-OCT

8CHVSOY   -Z          -8DEPREC  +8CUSTSOY -8LAB-S,D -8LAB-N,D -8FWH-OCT

2CHVWHT   -Z          -2DEPREC  +2CUSTWHT -2LAB-M,J -2LAB-J,A -2FWH-JUN

2CHVCORN  -Z          -2DEPREC  +2CUSTCOR -2LAB-S,D -2LAB-N,D -2FWH-SEP -2FWH-OCT

2CHVGRSO  -Z          -2DEPREC  +2CUSTGS  -2LAB-S,D -2LAB-N,D -2FWH-SEP -2FWH-OCT

3CHVWHT   -Z          -3DEPREC  +3CUSTWHT -3LAB-M,J -3LAB-J,A -3FWH-JUN

3CHVCORN  -Z          -3DEPREC  +3CUSTCOR -3LAB-S,D -3LAB-N,D -3FWH-SEP -3FWH-OCT

3CHVGRSO  -Z          -3DEPREC  +3CUSTGS  -3LAB-S,D -3LAB-N,D -3FWH-SEP -3FWH-OCT

4CHVWHT   -Z          -4DEPREC  +4CUSTWHT -4LAB-M,J -4LAB-J,A -4FWH-JUN

4CHVCORN  -Z          -4DEPREC  +4CUSTCOR -4LAB-S,D -4LAB-N,D -4FWH-SEP -4FWH-OCT

4CHVGRSO  -Z          -4DEPREC  +4CUSTGS  -4LAB-S,D -4LAB-N,D -4FWH-SEP -4FWH-OCT

6CHVWHT   -Z          -6DEPREC  +6CUSTWHT -6LAB-M,J -6LAB-J,A -6FWH-JUN

6CHVCORN  -Z          -6DEPREC  +6CUSTCOR -6LAB-S,D -6LAB-N,D -6FWH-SEP -6FWH-OCT

6CHVGRSO  -Z          -6DEPREC  +6CUSTGS  -6LAB-S,D -6LAB-N,D -6FWH-OCT

1BUYFDGR  -Z          +1SFDGRAI -1RCORN

2BUYFDGR  -Z          +2SFDGRAI -2RCORN
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3BUYFDGR  -Z        +3SFDGRAI -3RCORN
4BUYFDGR  -Z        +4SFDGRAI -4RCORN
5BUYFDGR  -Z        +5SFDGRAI -5RLORN
6BUYFDGR  -Z        +6SFDGRAI -6RCORN
7BUYFDGR  -Z        +7SFDGRAI -7RCORN
8BUYFDGR  -Z        +8SFDGRAI -8RCORN
ALFH1>2   -Z        +1SALFH   -2RALFH
ALFH1>3   -Z        +1SALFH   -3RALFH
ALFH1>4   -Z        +1SALFH   -4RALFH
ALFH1>5   -Z        +1SALFH   -5RALFH
ALFH1>6   -Z        +1SALFH   -6RALFH
ALFH1>7   -Z        +1SALFH   -7RALFH
ALFH1>8   -Z        +1SALFH   -8RALFH
ALFH2>1   -Z        +2SALFH   -1RALFH
ALFH2>3   -Z        +2SALFH   -3RALFH
ALFH2>4   -Z        +2SALFH   -4RALFH
ALFH2>5   -Z        +2SALFH   -5RALFH
ALFH2>6   -Z        +2SALFH   -6RALFH
ALFH2>7   -Z        +2SALFH   -7RALFH
ALFH2>8   -Z        +2SALFH   -8RALFH
ALFH3>1   -Z        +3SALFH   -1RALFH
ALFH3>2   -Z        +3SALFH   -2RALFH
ALFH3>4   -Z        +3SALFH   -4RALFH
ALFH3>5   -Z        +3SALFH   -5RALFH
ALFH3>6   -Z        +3SALFH   -6RALFH
ALFH3>7   -Z        +3SALFH   -7RALFH
ALFH3>8   -Z        +3SALFH   -8RALFH
ALFH4>1   -Z        +4SALFH   -1RALFH
ALFH4>2   -Z        +4SALFH   -2RALFH
ALFH4>3   -Z        +4SALFH   -3RALFH
ALFH4>5   -Z        +4SALFH   -5RALFH
ALFH4>6   -Z        +4SALFH   -6RALFH
ALFH4>7   -Z        +4SALFH   -7RALFH
ALFH4>8   -Z        +4SALFH   -8RALFH
ALFH5>1   -Z        +5SALFH   -1RALFH
ALFH5>2   -Z        +5SALFH   -2RALFH
ALFH5>3   -Z        +5SALFH   -3RALFH
ALFH5>4   -Z        +5SALFH   -4RALFH
ALFH5>6   -Z        +5SALFH   -6RALFH
ALFH5>7   -Z        +5SALFH   -7RALFH
ALFH5>8   -Z        +5SALFH   -8RALFH
ALFH6>1   -Z        +6SALFH   -1RALFH
ALFH6>2   -Z        +6SALFH   -2RALFH
ALFH6>3   -Z        +6SALFH   -3RALFH
ALFH6>4   -Z        +6SALFH   -4RALFH
ALFH6>5   -Z        +6SALFH   -5RALFH
ALFH6>7   -Z        +6SALFH   -7RALFH
ALFH6>8   -Z        +6SALFH   -8RALFH
ALFH7>1   -Z        +7SALFH   -1RALFH
ALFH7>2   -Z        +7SALFH   -2RALFH
ALFH7>3   -Z        +7SALFH   -3RALFH
ALFH7>4   -Z        +7SALFH   -4RALFH
ALFH7>5   -Z        +7SALFH   -5RALFH
ALFH7>6   -Z        +7SALFH   -6RALFH
ALFH7>8   -Z        +7SALFH   -8RALFH
ALFH8>1   -Z        +8SALFH   -1RALFH
ALFH8>2   -Z        +8SALFH   -2RALFH
ALFH8>3   -Z        +8SALFH   -3RALFH
ALFH8>4   -Z        +8SALFH   -4RALFH
ALFH8>5   -Z        +8SALFH   -5RALFH
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ALFMB>6   -Z        +8SALFM   -6RALFM
ALFMB>7   -Z        +8SALFM   -7RALFM
FDGR1>2   -Z        +1SFDGRAI -2SFDGRAI
FDGR1>3   -Z        +1SFDGRAI -3SFDGRAI
FDGR1>4   -Z        +1SFDGRAI -4SFDGRAI
FDGR1>5   -Z        +1SFDGRAI -5SFDGRAI
FDGR1>6   -Z        +1SFDGRAI -6SFDGRAI
FDGR1>7   -Z        +1SFDGRAI -7SFDGRAI
FDGR1>8   -Z        +1SFDGRAI -8SFDGRAI
FDGR2>1   -Z        +2SFDGRAI -1SFDGRAI
FDGR2>3   -Z        +2SFDGRAI -3SFDGRAI
FDGR2>4   -Z        +2SFDGRAI -4SFDGRAI
FDGR2>5   -Z        +2SFDGRAI -5SFDGRAI
FDGR2>6   -Z        +2SFDGRAI -6SFDGRAI
FDGR2>7   -Z        +2SFDGRAI -7SFDGRAI
FDGR2>8   -Z        +2SFDGRAI -8SFDGRAI
FDGR3>1   -Z        +3SFDGRAI -1SFDGRAI
FDGR3>2   -Z        +3SFDGRAI -2SFDGRAI
FDGR3>4   -Z        +3SFDGRAI -4SFDGRAI
FDGR3>5   -Z        +3SFDGRAI -5SFDGRAI
FDGR3>6   -Z        +3SFDGRAI -6SFDGRAI
FDGR3>7   -Z        +3SFDGRAI -7SFDGRAI
FDGR3>8   -Z        +3SFDGRAI -8SFDGRAI
FDGR4>1   -Z        +4SFDGRAI -1SFDGRAI
FDGR4>2   -Z        +4SFDGRAI -2SFDGRAI
FDGR4>3   -Z        +4SFDGRAI -3SFDGRAI
FDGR4>5   -Z        +4SFDGRAI -5SFDGRAI
FDGR4>6   -Z        +4SFDGRAI -6SFDGRAI
FDGR4>7   -Z        +4SFDGRAI -7SFDGRAI
FDGR4>8   -Z        +4SFDGRAI -8SFDGRAI
FDGR5>1   -Z        +5SFDGRAI -1SFDGRAI
FDGR5>2   -Z        +5SFDGRAI -2SFDGRAI
FDGR5>3   -Z        +5SFDGRAI -3SFDGRAI
FDGR5>4   -Z        +5SFDGRAI -4SFDGRAI
FDGR5>6   -Z        +5SFDGRAI -6SFDGRAI
FDGR5>7   -Z        +5SFDGRAI -7SFDGRAI
FDGR5>8   -Z        +5SFDGRAI -8SFDGRAI
FDGR6>1   -Z        +6SFDGRAI -1SFDGRAI
FDGR6>2   -Z        +6SFDGRAI -2SFDGRAI
FDGR6>3   -Z        +6SFDGRAI -3SFDGRAI
FDGR6>4   -Z        +6SFDGRAI -4SFDGRAI
FDGR6>5   -Z        +6SFDGRAI -5SFDGRAI
FDGR6>7   -Z        +6SFDGRAI -7SFDGRAI
FDGR6>8   -Z        +6SFDGRAI -8SFDGRAI
FDGR7>1   -Z        +7SFDGRAI -1SFDGRAI
FDGR7>2   -Z        +7SFDGRAI -2SFDGRAI
FDGR7>3   -Z        +7SFDGRAI -3SFDGRAI
FDGR7>4   -Z        +7SFDGRAI -4SFDGRAI
FDGR7>5   -Z        +7SFDGRAI -5SFDGRAI
FDGR7>6   -Z        +7SFDGRAI -6SFDGRAI
FDGR7>8   -Z        +7SFDGRAI -8SFDGRAI
FDGR8>1   -Z        +8SFDGRAI -1SFDGRAI
FDGR8>2   -Z        +8SFDGRAI -2SFDGRAI
FDGR8>3   -Z        +8SFDGRAI -3SFDGRAI
FDGR8>4   -Z        +8SFDGRAI -4SFDGRAI
FDGR8>5   -Z        +8SFDGRAI -5SFDGRAI
FDGR8>6   -Z        +8SFDGRAI -6SFDGRAI
FDGR8>7   -Z        +8SFDGRAI -7SFDGRAI
ICALF2    -Z        +2LSRCAP  +1BGSCALF -2TWSTR
ICALF3    -Z        +3LSRCAP  +1BGSCALF -3TWSTR
```

```
1CALF4    -Z        +4LSKCAP  +1BCSCALF -4TWSTR
1CALF5    -Z        +5LSKCAP  +1BCSCALF -5TWSTR
1CALF6    -Z        +6LSKCAP  +1BCSCALF -6TWSTR
1CALF7    -Z        +7LSKCAP  +1BCSCALF -7TWSTR
1CALF8    -Z        +8LSKCAP  +1BCSCALF -8TWSTR
2CALF1    -Z        +1LSKCAP  +2BCSCALF -1TWSTR
2CALF3    -Z        +3LSKCAP  +2BCSCALF -3TWSTR
2CALF4    -Z        +4LSKCAP  +2BCSCALF -4TWSTR
2CALF5    -Z        +5LSKCAP  +2BCSCALF -5TWSTR
2CALF6    -Z        +6LSKCAP  +2BCSCALF -6TWSTR
2CALF7    -Z        +7LSKCAP  +2BCSCALF -7TWSTR
2CALF8    -Z        +8LSKCAP  +2BCSCALF -8TWSTR
3CALF1    -Z        +1LSKCAP  +3BCSCALF -1TWSTR
3CALF2    -Z        +2LSKCAP  +3BCSCALF -2TWSTR
3CALF4    -Z        +4LSKCAP  +3BCSCALF -4TWSTR
3CALF5    -Z        +5LSKCAP  +3BCSCALF -5TWSTR
3CALF6    -Z        +6LSKCAP  +3BCSCALF -6TWSTR
3CALF7    -Z        +7LSKCAP  +3BCSCALF -7TWSTR
3CALF8    -Z        +8LSKCAP  +3BCSCALF -8TWSTR
4CALF1    -Z        +1LSKCAP  +4BCSCALF -1TWSTR
4CALF2    -Z        +2LSKCAP  +4BCSCALF -2TWSTR
4CALF3    -Z        +3LSKCAP  +4BCSCALF -3TWSTR
4CALF5    -Z        +5LSKCAP  +4BCSCALF -5TWSTR
4CALF6    -Z        +6LSKCAP  +4BCSCALF -6TWSTR
4CALF7    -Z        +7LSKCAP  +4BCSCALF -7TWSTR
4CALF8    -Z        +8LSKCAP  +4BCSCALF -8TWSTR
5CALF1    -Z        +1LSKCAP  +5BCSCALF -1TWSTR
5CALF2    -Z        +2LSKCAP  +5BCSCALF -2TWSTR
5CALF3    -Z        +3LSKCAP  +5BCSCALF -3TWSTR
5CALF4    -Z        +4LSKCAP  +5BCSCALF -4TWSTR
5CALF6    -Z        +6LSKCAP  +5BCSCALF -6TWSTR
5CALF7    -Z        +7LSKCAP  +5BCSCALF -7TWSTR
5CALF8    -Z        +8LSKCAP  +5BCSCALF -8TWSTR
6CALF1    -Z        +1LSKCAP  +6BCSCALF -1TWSTR
6CALF2    -Z        +2LSKCAP  +6BCSCALF -2TWSTR
6CALF3    -Z        +3LSKCAP  +6BCSCALF -3TWSTR
6CALF4    -Z        +4LSKCAP  +6BCSCALF -4TWSTR
6CALF5    -Z        +5LSKCAP  +6BCSCALF -5TWSTR
6CALF7    -Z        +7LSKCAP  +6BCSCALF -7TWSTR
6CALF8    -Z        +8LSKCAP  +6BCSCALF -8TWSTR
7CALF1    -Z        +1LSKCAP  +7BCSCALF -1TWSTR
7CALF2    -Z        +2LSKCAP  +7BCSCALF -2TWSTR
7CALF3    -Z        +3LSKCAP  +7BCSCALF -3TWSTR
7CALF4    -Z        +4LSKCAP  +7BCSCALF -4TWSTR
7CALF5    -Z        +5LSKCAP  +7BCSCALF -5TWSTR
7CALF6    -Z        +6LSKCAP  +7BCSCALF -6TWSTR
7CALF8    -Z        +8LSKCAP  +7BCSCALF -8TWSTR
8CALF1    -Z        +1LSKCAP  +8BCSCALF -1TWSTR
8CALF2    -Z        +2LSKCAP  +8BCSCALF -2TWSTR
8CALF3    -Z        +3LSKCAP  +8BCSCALF -3TWSTR
8CALF4    -Z        +4LSKCAP  +8BCSCALF -4TWSTR
8CALF5    -Z        +5LSKCAP  +8BCSCALF -5TWSTR
8CALF6    -Z        +6LSKCAP  +8BCSCALF -6TWSTR
8CALF7    -Z        +7LSKCAP  +8BCSCALF -7TWSTR
1GSTR2    -Z        +2LSKCAP  +1BCSWSTR -2TGSTR
1GSTR3    -Z        +2LSKCAP  +1BCSWSTR -3TGSTR
1GSTR4    -Z        +4LSKCAP  +1BCSWSTR -4TGSTR
1GSTR5    -Z        +5LSKCAP  +1BCSWSTR -5TGSTR
1GSTR6    -Z        +6LSKCAP  +1BCSWSTR -6TGSTR
1GSTR7    -Z        +7LSKCAP  +1BCSWSTR -7TGSTR
```

```
1GSTR8   -Z      +8LSKCAP  +1BCSWSTR -8TGSTR
2GSTR1   -Z      +1LSKCAP  +2BCSWSTR -1TGSTR
2GSTR3   -Z      +3LSKCAP  +2BCSWSTR -3TGSTR
2GSTR4   -Z      +4LSKCAP  +2BCSWSTR -4TGSTR
2GSTR5   -Z      +5LSKCAP  +2BCSWSTR -5TGSTR
2GSTR6   -Z      +6LSKCAP  +2BCSWSTR -6TGSTR
2GSTR7   -Z      +7LSKCAP  +2BCSWSTR -7TGSTR
2GSTR8   -Z      +8LSKCAP  +2BCSWSTR -8TGSTR
3GSTR1   -Z      +1LSKCAP  +3BCSWSTR -1TGSTR
3GSTR2   -Z      +2LSKCAP  +3BCSWSTR -2TGSTR
3GSTR4   -Z      +4LSKCAP  +3BCSWSTR -4TGSTR
3GSTR5   -Z      +5LSKCAP  +3BCSWSTR -5TGSTR
3GSTR6   -Z      +6LSKCAP  +3BCSWSTR -6TGSTR
3GSTR7   -Z      +7LSKCAP  +3BCSWSTR -7TGSTR
3GSTR8   -Z      +8LSKCAP  +3BCSWSTR -8TGSTR
4GSTR1   -Z      +1LSKCAP  +4BCSWSTR -1TGSTR
4GSTR2   -Z      +2LSKCAP  +4BCSWSTR -2TGSTR
4GSTR3   -Z      +3LSKCAP  +4BCSWSTR -3TGSTR
4GSTR5   -Z      +5LSKCAP  +4BCSWSTR -5TGSTR
4GSTR6   -Z      +6LSKCAP  +4BCSWSTR -6TGSTR
4GSTR7   -Z      +7LSKCAP  +4BCSWSTR -7TGSTR
4GSTR8   -Z      +8LSKCAP  +4BCSWSTR -8TGSTR
5GSTR1   -Z      +1LSKCAP  +5BCSWSTR -1TGSTR
5GSTR2   -Z      +2LSKCAP  +5BCSWSTR -2TGSTR
5GSTR3   -Z      +3LSKCAP  +5BCSWSTR -3TGSTR
5GSTR4   -Z      +4LSKCAP  +5BCSWSTR -4TGSTR
5GSTR6   -Z      +6LSKCAP  +5BCSWSTR -6TGSTR
5GSTR7   -Z      +7LSKCAP  +5BCSWSTR -7TGSTR
5GSTR8   -Z      +8LSKCAP  +5BCSWSTR -8TGSTR
6GSTR1   -Z      +1LSKCAP  +6BCSWSTR -1TGSTR
6GSTR2   -Z      +2LSKCAP  +6BCSWSTR -2TGSTR
6GSTR3   -Z      +3LSKCAP  +6BCSWSTR -3TGSTR
6GSTR4   -Z      +4LSKCAP  +6BCSWSTR -4TGSTR
6GSTR5   -Z      +5LSKCAP  +6BCSWSTR -5TGSTR
6GSTR7   -Z      +7LSKCAP  +6BCSWSTR -7TGSTR
6GSTR8   -Z      +8LSKCAP  +6BCSWSTR -8TGSTR
7GSTR1   -Z      +1LSKCAP  +7BCSWSTR -1TGSTR
7GSTR2   -Z      +2LSKCAP  +7BCSWSTR -2TGSTR
7GSTR3   -Z      +3LSKCAP  +7BCSWSTR -3TGSTR
7GSTR4   -Z      +4LSKCAP  +7BCSWSTR -4TGSTR
7GSTR5   -Z      +5LSKCAP  +7BCSWSTR -5TGSTR
7GSTR6   -Z      +6LSKCAP  +7BCSWSTR -6TGSTR
7GSTR8   -Z      +8LSKCAP  +7BCSWSTR -8TGSTR
8GSTR1   -Z      +1LSKCAP  +8BCSWSTR -1TGSTR
8GSTR2   -Z      +2LSKCAP  +8BCSWSTR -2TGSTR
8GSTR3   -Z      +3LSKCAP  +8BCSWSTR -3TGSTR
8GSTR4   -Z      +4LSKCAP  +8BCSWSTR -4TGSTR
8GSTR5   -Z      +5LSKCAP  +8BCSWSTR -5TGSTR
8GSTR6   -Z      +6LSKCAP  +8BCSWSTR -6TGSTR
8GSTR7   -Z      +7LSKCAP  +8BCSWSTR -7TGSTR
1FSTR2   -Z      +2LSKCAP  +1BCSGSTR -2TFSTR
1FSTR3   -Z      +3LSKCAP  +1BCSGSTR -3TFSTR
1FSTR4   -Z      +4LSKCAP  +1BCSGSTR -4TFSTR
1FSTR5   -Z      +5LSKCAP  +1BCSGSTR -5TFSTR
1FSTR6   -Z      +6LSKCAP  +1BCSGSTR -6TFSTR
1FSTR7   -Z      +7LSKCAP  +1BCSGSTR -7TFSTR
1FSTR8   -Z      +8LSKCAP  +1BCSGSTR -8TFSTR
2FSTR1   -Z      +1LSKCAP  +2BCSGSTR -1TFSTR
2FSTR3   -Z      +3LSKCAP  +2BCSGSTR -3TFSTR
2FSTR4   -Z      +4LSKCAP  +2BCSGSTR -4TFSTR
```

```
2FSTR5   -Z      +5LSKCAP  +2BCSGSTR -5TFSTR
2FSTR6   -Z      +6LSKCAP  +2BCSGSTR -6TFSTR
2FSTR7   -Z      +7LSKCAP  +2BCSGSTR -7TFSTR
2FSTR8   -Z      +8LSKCAP  +2BCSGSTR -8TFSTR
3FSTR1   -Z      +1LSKCAP  +3BCSGSTR -1TFSTR
3FSTR2   -Z      +2LSKCAP  +3BCSGSTR -2TFSTR
3FSTR4   -Z      +4LSKCAP  +3BCSGSTR -4TFSTR
3FSTR5   -Z      +5LSKCAP  +3BCSGSTR -5TFSTR
3FSTR6   -Z      +6LSKCAP  +3BCSGSTR -6TFSTR
3FSTR7   -Z      +7LSKCAP  +3BCSGSTR -7TFSTR
3FSTR8   -Z      +8LSKCAP  +3BCSGSTR -8TFSTR
4FSTR1   -Z      +1LSKCAP  +4BCSGSTR -1TFSTR
4FSTR2   -Z      +2LSKCAP  +4BCSGSTR -2TFSTR
4FSTR3   -Z      +3LSKCAP  +4BCSGSTR -3TFSTR
4FSTR5   -Z      +5LSKCAP  +4BCSGSTR -5TFSTR
4FSTR6   -Z      +6LSKCAP  +4BCSGSTR -6TFSTR
4FSTR7   -Z      +7LSKCAP  +4BCSGSTR -7TFSTR
4FSTR8   -Z      +8LSKCAP  +4BCSGSTR -8TFSTR
5FSTR1   -Z      +1LSKCAP  +5BCSGSTR -1TFSTR
5FSTR2   -Z      +2LSKCAP  +5BCSGSTR -2TFSTR
5FSTR3   -Z      +3LSKCAP  +5BCSGSTR -3TFSTR
5FSTR4   -Z      +4LSKCAP  +5BCSGSTR -4TFSTR
5FSTR6   -Z      +6LSKCAP  +5BCSGSTR -6TFSTR
5FSTR7   -Z      +7LSKCAP  +5BCSGSTR -7TFSTR
5FSTR8   -Z      +8LSKCAP  +5BCSGSTR -8TFSTR
6FSTR1   -Z      +1LSKCAP  +6BCSGSTR -1TFSTR
6FSTR2   -Z      +2LSKCAP  +6BCSGSTR -2TFSTR
6FSTR3   -Z      +3LSKCAP  +6BCSGSTR -3TFSTR
6FSTR4   -Z      +4LSKCAP  +6BCSGSTR -4TFSTR
6FSTR5   -Z      +5LSKCAP  +6BCSGSTR -5TFSTR
6FSTR7   -Z      +7LSKCAP  +6BCSGSTR -7TFSTR
6FSTR8   -Z      +8LSKCAP  +6BCSGSTR -8TFSTR
7FSTR1   -Z      +7LSKCAP  +7BCSGSTR -1TFSTR
7FSTR2   -Z      +2LSKCAP  +7BCSGSTR -2TFSTR
7FSTR3   -Z      +3LSKCAP  +7BCSGSTR -3TFSTR
7FSTR4   -Z      +4LSKCAP  +7BCSGSTR -4TFSTR
7FSTR5   -Z      +5LSKCAP  +7BCSGSTR -5TFSTR
7FSTR6   -Z      +6LSKCAP  +7BCSGSTR -6TFSTR
7FSTR8   -Z      +8LSKCAP  +7BCSGSTR -8TFSTR
8FSTR1   -Z      +1LSKCAP  +8BCSGSTR -1TFSTR
8FSTR2   -Z      +2LSKCAP  +8BCSGSTR -2TFSTR
8FSTR3   -Z      +3LSKCAP  +8BCSGSTR -3TFSTR
8FSTR4   -Z      +4LSKCAP  +8BCSGSTR -4TFSTR
8FSTR5   -Z      +5LSKCAP  +8BCSGSTR -5TFSTR
8FSTR6   -Z      +6LSKCAP  +8BCSGSTR -6TFSTR
8FSTR7   -Z      +7LSKCAP  +8BCSGSTR -7TFSTR
1FDST2   -Z      +2LSKCAP  +1BCSWSTR -2TFSTR
1FDST3   -Z      +3LSKCAP  +1BCSWSTR -3TFSTR
1FDST4   -Z      +4LSKCAP  +1BCSWSTR -4TFSTR
1FDST5   -Z      +5LSKCAP  +1BCSWSTR -5TFSTR
1FDST6   -Z      +6LSKCAP  +1BCSWSTR -6TFSTR
1FDST7   -Z      +7LSKCAP  +1BCSWSTR -7TFSTR
1FDST8   -Z      +8LSKCAP  +1BCSWSTR -8TFSTR
2FDST1   -Z      +1LSKCAP  +2BCSWSTR -1TFSTR
2FDST3   -Z      +3LSKCAP  +2BCSWSTR -3TFSTR
2FDST4   -Z      +4LSKCAP  +2BCSWSTR -4TFSTR
2FDST5   -Z      +5LSKCAP  +2BCSWSTR -5TFSTR
2FDST6   -Z      +6LSKCAP  +2BCSWSTR -6TFSTR
2FDST7   -Z      +7LSKCAP  +2BCSWSTR -7TFSTR
2FDST8   -Z      +8LSKCAP  +2BCSWSTR -8TFSTR
```

```
3FDST1    -Z        +1LSKCAP  +3BCSWSTR -1TFSTR
3FDST2    -Z        +2LSKCAP  +3BCSWSTR -2TFSTR
3FDST4    -Z        +4LSKCAP  +3BCSWSTR -4TFSTR
3FDST5    -Z        +5LSKCAP  +3BCSWSTR -5TFSTR
3FDST6    -Z        +6LSKCAP  +3BCSWSTR -6TFSTR
3FDST7    -Z        +7LSKCAP  +3BCSWSTR -7TFSTR
3FDST8    -Z        +8LSKCAP  +3BCSWSTR -8TFSTR
4FDST1    -Z        +1LSKCAP  +4BCSWSTR -1TFSTR
4FDST2    -Z        +2LSKCAP  +4BCSWSTR -2TFSTR
4FDST3    -Z        +3LSKCAP  +4BCSWSTR -3TFSTR
4FDST5    -Z        +5LSKCAP  +4BCSWSTR -5TFSTR
4FDST6    -Z        +6LSKCAP  +4BCSWSTR -6TFSTR
4FDST7    -Z        +7LSKCAP  +4BCSWSTR -7TFSTR
4FDST8    -Z        +8LSKCAP  +4BCSWSTR -8TFSTR
5FDST1    -Z        +1LSKCAP  +5BCSWSTR -1TFSTR
5FDST2    -Z        +2LSKCAP  +5BCSWSTR -2TFSTR
5FDST3    -Z        +3LSKCAP  +5BCSWSTR -3TFSTR
5FDST4    -Z        +4LSKCAP  +5BCSWSTR -4TFSTR
5FDST6    -Z        +6LSKCAP  +5BCSWSTR -6TFSTR
5FDST7    -Z        +7LSKCAP  +5BCSWSTR -7TFSTR
5FDST8    -Z        +8LSKCAP  +5BCSWSTR -8TFSTR
6FDST1    -Z        +1LSKCAP  +6BCSWSTR -1TFSTR
6FDST2    -Z        +2LSKCAP  +6BCSWSTR -2TFSTR
6FDST3    -Z        +3LSKCAP  +6BCSWSTR -3TFSTR
6FDST4    -Z        +4LSKCAP  +6BCSWSTR -4TFSTR
6FDST5    -Z        +5LSKCAP  +6BCSWSTR -5TFSTR
6FDST7    -Z        +7LSKCAP  +6BCSWSTR -7TFSTR
6FDST8    -Z        +8LSKCAP  +6BCSWSTR -8TFSTR
7FDST1    -Z        +1LSKCAP  +7BCSWSTR -1TFSTR
7FDST2    -Z        +2LSKCAP  +7BCSWSTR -2TFSTR
7FDST3    -Z        +3LSKCAP  +7BCSWSTR -3TFSTR
7FDST4    -Z        +4LSKCAP  +7BCSWSTR -4TFSTR
7FDST5    -Z        +5LSKCAP  +7BCSWSTR -5TFSTR
7FDST6    -Z        +6LSKCAP  +7BCSWSTR -6TFSTR
7FDST8    -Z        +8LSKCAP  +7BCSWSTR -8TFSTR
8FDST1    -Z        +1LSKCAP  +8BCSWSTR -1TFSTR
8FDST2    -Z        +2LSKCAP  +8BCSWSTR -2TFSTR
8FDST3    -Z        +3LSKCAP  +8BCSWSTR -3TFSTR
8FDST4    -Z        +4LSKCAP  +8BCSWSTR -4TFSTR
8FDST5    -Z        +5LSKCAP  +8BCSWSTR -5TFSTR
8FDST6    -Z        +6LSKCAP  +8BCSWSTR -6TFSTR
8FDST7    -Z        +7LSKCAP  +8BCSWSTR -7TFSTR
1OPCAPR   -Z        -1OPCAP
2OPCAPR   -Z        -2OPCAP
3OPCAPR   -Z        -3OPCAP
4OPCAPR   -Z        -4OPCAP
5OPCAPR   -Z        -5OPCAP
6OPCAPR   -Z        -6OPCAP
7OPCAPR   -Z        -7OPCAP
8OPCAPR   -Z        -8OPCAP
1LSKCAPR  -Z        -1LSKCAP
2LSKCAPR  -Z        -2LSKCAP
3LSKCAPR  -Z        -3LSKCAP
4LSKCAPR  -4LSKCAP  -Z
5LSKCAPR  -5LSKCAP  -Z
6LSKCAPR  -6LSKCAP  -Z
7LSKCAPR  -7LSKCAP  -Z
8LSKCAPR  -8LSKCAP  -Z
1PLTALF   -Z        +1CPLD1   -1ALFMAY  +1LAB-M,J +1LAB-J,A +1FWM-MAY +1FWM-JUN
2PLTALF   -Z        +2CPLD1   -2ALFMAY  +2LAB-M,J +2LAB-J,A +2FWM-MAY +2FWM-JUN
```

```
3PLTALF   -Z        +3CPLD2   -3ALFMAY  +3LAB-M,J +3LAB-J,A +3FWM-MAY +3FWM-JUN
4PLTALF   -Z        +4CPLD2   -4ALFMAY  +4LAB-M,J +4LAB-J,A +4FWM-MAY +4FWM-JUN
5PLTALF   -Z        +5CPLD1   +5ALFMAY  +5LAB-M,J +5LAB-J,A +5FWM-MAY +5FWM-JUN
6PLTALF   -Z        +6CPLD2   -6ALFMAY  +6LAB-M,J +6LAB-J,A +6FWM-MAY +6FWM-JUN
7PLTALF   -Z        +7CPLD1   -7ALFMAY  +7LAB-M,J +7LAB-J,A +7FWM-MAY +7FWM-JUN
8PLTALF   -Z        +8CPLD1   -8ALFMAY  +8LAB-M,J +8LAB-J,A +8FWM-MAY +8FWM-JUN
2DEVIRR   -Z        +2CPLD1   -2CPLD2
3DEVIRR   -Z        +3CPLD1   -3CPLD2
4DEVIRR   -Z        +4CPLD1   -4CPLD2
6DEVIRR   -Z        +6CPLD1   -6CPLD2
1TPAST    -1PASTMAT +1PASTTAR
2TPAST    -2PASTMAT +2PASTTAR
3TPAST    -3PASTMAT +3PASTTAR
4TPAST    -4PASTMAT +4PASTTAR
5TPAST    -5PASTMAT +5PASTTAR
6TPAST    -6PASTMAT +6PASTTAR
7TPAST    -7PASTMAT +7PASTTAR
8TPAST    -8PASTMAT +8PASTTAR
1ALF>FOR  +1RALFM   -1RFORREQ
2ALF>FOR  +2RALFM   -2RFORREQ
3ALF>FOR  +3RALFM   -3RFORREQ
4ALF>FOR  +4RALFM   -4RFORREQ
5ALF>FOR  +5RALFM   -5RFORREQ
6ALF>FOR  +6RALFM   -6RFORREQ
7ALF>FOR  +7RALFM   -7RFORREQ
8ALF>FOR  +8RALFM   -8RFORREQ
1TNH>FOR  +1NATHPD  -1RFORREQ
2TNH>FOR  +2NATHPD  -2RFORREQ
5TNH>FOR  +5NATHPD  -5RFORREQ
7TNH>FOR  +7NATHPD  -7RFORREQ
8TNH>FOR  +8NATHPD  -8RFORREQ
1TNH>WPU  +1NATHPD  -1RWPASTU
2TNH>WPU  +2NATHPD  -2RWPASTU
5TNH>WPU  +5NATHPD  -5RWPASTU
7TNH>WPU  +7NATHPD  -7RWPASTU
8TNH>WPU  +8NATHPD  -8RWPASTU
1FDLOTDE  -Z        -1FDLOTCP
2FDLOTDE  -Z        -2FDLOTCP
3FDLOTDE  -Z        -3FDLOTCP
4FDLOTDE  -Z        -4FDLOTCP
5FDLOTDE  -Z        -5FDLOTCP
6FDLOTDE  -Z        -6FDLOTCP
7FDLOTDE  -Z        -7FDLOTCP
8FDLOTDE  -Z        -8FDLOTCP
1TFWMMDJ  -Z        -1FWM-JUN +1FWM-MAY
2TFWMMDJ  -Z        -2FWM-JUN +2FWM-MAY
3TFWMMDJ  -Z        -3FWM-JUN +3FWM-MAY
4TFWMMDJ  -Z        -4FWM-JUN +4FWM-MAY
5TFWMMDJ  -Z        -5FWM-JUN +5FWM-MAY
6TFWMMDJ  -Z        -6FWM-JUN +6FWM-MAY
7TFWMMDJ  -Z        -7FWM-JUN +7FWM-MAY
8TFWMMDJ  -Z        -8FWM-JUN +8FWM-MAY
1TFWMJDM  -Z        -1FWM-MAY +1FWM-JUN
2TFWMJDM  -Z        -2FWM-MAY +2FWM-JUN
3TFWMJDM  -Z        -3FWM-MAY +3FWM-JUN
4TFWMJDM  -Z        -4FWM-MAY +4FWM-JUN
5TFWMJDM  -Z        -5FWM-MAY +5FWM-JUN
6TFWMJDM  -Z        -6FWM-MAY +6FWM-JUN
7TFWMJDM  -Z        -7FWM-MAY +7FWM-JUN
8TFWMJDM  -Z        -8FWM-MAY +8FWM-JUN
```

```
1IDLECPL  +Z        +1CPLD1
2IDLECPL  +Z        +2CPLD1
3IDLECPL  +Z        +3CPLD1
4IDLECPL  +Z        +4CPLD1
5IDLECPL  +Z        +5CPLD1
6IDLECPL  +Z        +6CPLD1
7IDLECPL  +Z        +7CPLD1
8IDLECPL  +Z        +8CPLD1
1PLTTPAS  -Z        +1CPLD1   -1PASTTAM
2PLTTPAS  -Z        +2CPLD1   -2PASTTAM
5PLTTPAS  -Z        +5CPLD1   -5PASTTAM
7PLTTPAS  -Z        +7CPLD1   -7PASTTAM
8PLTTPAS  -Z        +8CPLD1   -8PASTTAM
4TAM>CP1  +4PASTTAM -4CPLD1
6TAM>CP1  +6PASTTAM -6CPLD1
1FSTR1    +CONST
2FSTR2    +CONST
3FSTR3    +CONST
4FSTR4    +CONST
5FSTR5    +CONST
6FSTR6    +CONST
7FSTR7    +CONST
8FSTR8    +CONST
1FDST1    +CONST
2FDST2    +CONST
3FDST3    +CONST
4FDST4    +CONST
5FDST5    +CONST
6FDST6    +CONST
7FDST7    +CONST
8FDST8    +CONST
1DEVIRR   +CONST
5DEVIRR   +CONST
7DEVIRR   +CONST
8DEVIRR   +CONST
3TNM>FDR  +CONST
4TNM>FDR  +CONST
6TNM>FDR  +CONST
3TNM>WPU  +CONST
4TNM>WPU  +CONST
6TNM>WPU  +CONST
3PLTTPAS  +CONST
4PLTTPAS  +CONST
6PLTTPAS  +CONST
1PGSIRR   +CONST
5PGSIRR   +CONST
7PGSIRR   +CONST
8PGSIRR   +CONST
2PGSIRR   +CONST
2CMVSOY   +CONST
3CMVSOY   +CONST
4CMVSOY   +CONST
6CMVSOY   +CONST
ALFM1>1   +CONST
ALFM2>2   +CONST
ALFM3>3   +CONST
ALFM4>4   +CONST
ALFM5>5   +CONST
ALFM6>6   +CONST
ALFM7>7   +CONST
```

```
ALFHB>8   +CONST
FDGR1>1   +CONST
FDGR2>2   +CONST
FDGR3>3   +CONST
FDGR4>4   +CONST
FDGR5>5   +CONST
FDGR6>6   +CONST
FDGR7>7   +CONST
FDGR8>8   +CONST
ICALF1    +CONST
2CALF2    +CONST
3CALF3    +CONST
4CALF4    +CONST
5CALF5    +CONST
6CALF6    +CONST
7CALF7    +CONST
8CALF8    +CONST
1GSTR1    +CONST
2GSTR2    +CONST
3GSTR3    +CONST
4GSTR4    +CONST
5GSTR5    +CONST
6GSTR6    +CONST
7GSTR7    +CONST
8GSTR8    +CONST
B         - +1CPLD1    +1PASTNAT +1PASTTAM +1NATHAY  +1ALFHAY  +1LAB-J,F +1LAB-M,A +1LAB-M,J +1LAB-J,A +1LAB-S,O +1LAB-N,O +1FDLOTCP
            +1FWH-MAY +1FWH-JUN +1FWH-SEP +1FWH-OCT +2CPLD1   +2PASTNAT +2CPLD2   +2PASTTAM +2NATHAY  +2ALFHAY  +2LAB-J,F +2LAB-M,A
            +2LAB-M,J +2LAB-J,A +2LAB-S,O +2LAB-N,O +2FDLOTCP +2FWH-MAY +2FWH-JUN +2FWH-SEP +2FWH-OCT +3CPLD1   +3CPLD2   +3PASTNAT
            +3PASTTAM +3ALFHAY  +3LAB-J,F +3LAB-M,A +3LAB-M,J +3LAB-J,A +3LAB-S,O +3LAB-N,O +3FWH-MAY +3FWH-JUN +3FWH-SEP +3FWH-OCT
            +3FDLOTCP +4CPLD1   +4CPLD2   +4PASTNAT +4PASTTAM +4ALFHAY  +4LAB-J,F +4LAB-M,A +4LAB-M,J +4LAB-J,A +4LAB-S,O +4LAB-N,O
            +4FWH-MAY +4FWH-JUN +4FWH-SEP +4FWH-OCT +4FDLOTCP +5CPLD1   +5PASTNAT +5PASTTAM +5NATHAY  +5ALFHAY  +5LAB-J,F +5LAB-M,A
            +5LAB-M,J +5LAB-J,A +5LAB-S,O +5LAB-N,O +5FWH-MAY +5FWH-JUN +5FWH-SEP +5FWH-OCT +5FDLOTCP +6CPLD1   +6CPLD2   +6PASTNAT
            +6PASTTAM +6ALFHAY  +6LAB-J,F +6LAB-M,A +6LAB-M,J +6LAB-J,A +6LAB-S,O +6LAB-N,O +6FWH-MAY +6FWH-JUN +6FWH-SEP +6FWH-OCT
            +6FDLOTCP +7CPLD1   +7PASTNAT +7PASTTAM +7NATHAY  +7ALFHAY  +7LAB-J,F +7LAB-M,A +7LAB-M,J +7LAB-J,A +7LAB-S,O +7LAB-N,O
            +7FWH-MAY +7FWH-JUN +7FWH-SEP +7FWH-OCT +7FDLOTCP +8CPLD1   +8PASTNAT +8PASTTAM +8NATHAY  +8ALFHAY  +8LAB-J,F +8LAB-M,A
            +8LAB-M,J +8LAB-J,A +8LAB-S,O +8LAB-N,O +8FWH-MAY +8FWH-JUN +8FWH-SEP +8FWH-OCT +8FDLOTCP
```

```
1 2     -.307000 02 * IPCALF    +.199950 03 * ISCALF    -.145500 02 * IPWSTR    +.307000 03 * ISWSTR    +.325870 03 * ISGSTR
        +.362790 03 * IPGSTRFS  -.205000 01 * IPGSTR    +.399160 03 * IPWFSTR   +.408270 03 * ISWGFSTR  +.132960 03 * IBFGSTRA
        +.130150 03 * IPFGSTRB  +.545640 03 * IPSMILK   +.671610 03 * IPHUG     -.307000 02 * 2PCALF    +.199950 03 * 2SCALF
        -.145500 02 * 2PWSTR    +.307000 03 * 2SWSTR    +.325870 03 * 2PGSTR    +.362790 03 * 2PGSTRFS  -.205000 01 * 2PGSTR
        +.399160 03 * 2PWFSTR   +.408270 03 * 2PWGFSTR  +.132960 03 * 2BFGSTRA  +.130150 03 * 2BFGSTRB  +.545640 03 * 2PSMILK
        +.307000 03 * 2PHUG     -.307000 02 * 3PCALF    +.199950 03 * 3SCALF    -.145500 02 * 3PWSTR    +.307000 03 * 3SWSTR
        +.325870 03 * 3PGSTR    +.362790 03 * 3PGSTRFS  +.399160 03 * 3PWFSTR   +.408270 03 * 3PWGFSTR  +.132960 03 * 3BFGSTRA
        +.130150 03 * 3BFGSTRB  +.545640 03 * 3PSMILK   +.671610 03 * 3PHUG     -.205000 01 * 3PGSTR    -.307000 02 * 4PCALF
        +.199950 03 * 4SCALF    -.145500 02 * 4PWSTR    -.307000 03 * 4SWSTR    +.325870 03 * 4SGSTR    -.362790 03 * 4PGSTRFS
        +.545840 03 * 4PSMILK   +.671610 03 * 4PHUG     -.205000 01 * 4PGSTR    -.307000 02 * 5PCALF    +.199950 03 * 5SCALF
        -.145500 02 * 5PWSTR    +.307000 03 * 5SWSTR    +.325870 03 * 5SGSTR    +.362790 03 * 5PGSTRFS  +.399160 03 * 5PWFSTR
        +.132960 03 * 5BFGSTRA  +.130150 03 * 5BFGSTRB  +.545640 03 * 5PSMILK   +.671610 03 * 5PHUG     -.205000 01 * 5PGSTR
        -.307000 02 * 6PCALF    +.199950 03 * 6SCALF    -.145500 02 * 6PWSTR    +.307000 03 * 6SWSTR    +.325870 03 * 6SGSTR
        +.362790 03 * 6PGSTRFS  +.399160 03 * 6PWFSTR   +.408270 03 * 6PWGFSTR  +.132960 03 * 6BFGSTRA  +.130150 03 * 6BFGSTRB
        +.545840 03 * 6PSMILK   +.671610 03 * 6PHUG     -.205000 01 * 6PGSTR    -.307000 02 * 7PCALF    +.199950 03 * 7SCALF
        -.145500 02 * 7PWSTR    +.307000 03 * 7SWSTR    +.325870 03 * 7SGSTR    +.362790 03 * 7PGSTRFS  +.408270 03 * 7PWGFSTR
        +.399160 03 * 7PWFSTR   +.132960 03 * 7BFGSTRA  +.130150 03 * 7BFGSTRB  +.545840 03 * 7PSMILK   +.671780 03 * 7PHUG
        -.205000 01 * 7PGSTR    -.307000 02 * 8PCALF    +.199950 03 * 8SCALF    -.145500 02 * 8PWSTR    +.307000 03 * 8SWSTR
        +.325870 03 * 8SGSTR    +.362790 03 * 8PGSTRFS  +.399160 03 * 8PWFSTR   +.408270 03 * 8PWGFSTR  +.132960 03 * 8BFGSTRA
        +.130150 03 * 8BFGSTRB  +.545840 03 * 8PSMILK   +.671610 03 * 8PHUG     -.205000 01 * 8PGSTR    -.270000 02 * 1PWMT
        +.275000 01 * 1SWMT     -.455000 02 * 1PCORN    +.200000 01 * 1SCORN    -.730000-01 * 1PCORN    -.370000 02 * 1PGRSCR
        +.170000 01 * 1SGRSC    -.700000-01 * 1PGRSC    +.644300 02 * 1PSIL     -.465000 02 * 1PSIL     -.390000 02 * 1PALFM
        +.345000 02 * 1SALFM    -.269000 02 * 1PNATM    +.310000 02 * 1SNATM    -.600000 04 * 1MLABFT   -.325000 02 * 1MLABSU
        -.100000 01 * 1FUELCST   -.100000 01 * 1FERTCST  -.100000 01 * 1DEPR     +.270000 02 * 5PWMT     +.270000 01 * 55WMT
        -.448000 02 * 5PCORN     +.194000 01 * 55CORN    -.730000-01 * 5FCORN    -.348000 02 * 5PGRSDR   +.164300 01 * 55GRSC
        -.700000-01 * 5FGRSC     +.626500 02 * 5PSOY     -.465000 02 * 5PSIL     -.390000 02 * 5PALFM    +.350000 02 * 55ALFM
        -.265000 02 * 5PNATM     +.310000 02 * 55NATM    -.600000 04 * 5MLABFT   -.300000 02 * 5MLABSU   -.100000 01 * 5FUELCST
        -.100000 01 * 5FERTCST   -.100000 01 * 5DEPR     -.270000 02 * 7PWMT     +.269000 01 * 75WMT     -.445000 02 * 7PCORN
        +.193000 01 * 75CORN     -.700000-01 * 7FCORN    -.398000 02 * 7PGRDOR   +.168000 01 * 75GRSC    -.700000-01 * 7FGRSC
        +.534700 02 * 7PSOY      -.465000 02 * 7PSIL     -.390000 02 * 7PALFM    +.350000 02 * 75ALFM    -.265000 02 * 7PNATM
        +.310000 02 * 75NATM     -.600000 04 * 7MLABFT   -.300000 02 * 7MLABSU   -.100000 01 * 7FUELCST  -.100000 01 * 7FERTCST
        -.100000 01 * 7DEPR      -.270000 02 * 8PWMT     +.268000 01 * 85WMT     -.461000 02 * 8PCORN    +.192000 01 * 85CORN
        -.700000-01 * 8FCORN     -.399000 02 * 8PGRSDR   +.162300 01 * 85GRSC    -.700000-01 * 8FGRSC    +.719400 02 * 8FSOY
        -.465000 02 * 8PSIL      -.390000 02 * 8PALFM    +.350000 02 * 85ALFM    -.265000 02 * 8PNATM    +.310000 02 * 85NATM
        -.600000 04 * 8MLABFT    -.300000 02 * 8MLABSU   -.100000 01 * 8FUELCST  -.100000 01 * 8FERTCST  -.100000 01 * 8DEPR
        -.183500 02 * 2PWMT      +.268000 01 * 25WMT     -.723600 02 * 2PCORN    +.179000 01 * 25CORN    -.700000-01 * 2FCORN
        -.256500 02 * 2PGRSDR    +.157000 01 * 25GRSC    -.700000-01 * 2FGRSC    -.409000 02 * 2PSIL     -.395000 02 * 2PALFM
        +.345000 02 * 25ALFM     -.269000 02 * 2PNATM    +.310000 02 * 25NATM    -.850000 04 * 2MLABFT   -.325000 02 * 2MLABSU
        -.100000 01 * 2FUELCST   -.100000 01 * 2FERTCST  -.100000 01 * 2DEPR     -.120000 02 * 3PWMT     +.255000 01 * 35WMT
        -.723600 02 * 3PCORN     +.179000 01 * 35CORN    -.700000-01 * 3FCORN    -.225500 02 * 3PGRSDR   +.144000 01 * 35GRSC
        -.700000-01 * 3FGRSC     -.427500 02 * 3PSILIR   -.415000 02 * 3PALFM    +.350000 02 * 35ALFM    -.250000 02 * 3MLABFT
        -.350000 02 * 3MLABSU    -.250000 02 * 3PFORAGE  -.100000 01 * 3FUELCST  -.100000 01 * 3FERTCST  -.100000 01 * 3DEPR
        -.155000 02 * 3PWMTFAL   -.328900 02 * 3PWMTIRR  -.387500 02 * 3PGSIRR  -.112000 02 * 4PWMT     +.249000 01 * 45WMT
        -.715000 02 * 4PCORN     +.173000 01 * 45CORN    -.700000-01 * 4FCORN    -.174000 02 * 4PGRSDR   +.140000 01 * 45GRSC
        -.700000-01 * 4FGRSC     -.427500 02 * 4PSIL     -.415000 02 * 4PALFM    +.340000 02 * 45ALFM    -.900000 04 * 4MLABFT
        -.375000 02 * 4MLABSU    -.250000 02 * 4PFORAGE  -.100000 01 * 4FUELCST  -.100000 01 * 4FERTCST  -.100000 01 * 4DEPR
        -.130000 02 * 4PWMTFAL   -.330000 02 * 4PWMTIRR  -.387500 02 * 4GSIRR   -.112000 02 * 6PWMT     +.249000 01 * 65WMT
        -.715000 02 * 6PCORN     +.183000 01 * 65CORN    -.700000-01 * 6FCORN    -.174000 02 * 6PGRSDR   +.143000 01 * 65GRSC
        -.700000-01 * 6FGRSC     -.250000 02 * 6PFORAGE  -.427500 02 * 6PSIL     -.415000 02 * 6PALFM    +.350000 02 * 65ALFM
        -.900000 04 * 6MLABFT    -.375000 02 * 6MLABSU   -.100000 01 * 6FUELCST  -.100000 01 * 6FERTCST  -.100000 01 * 6DEPR
        -.130000 02 * 6PWMTFAL   -.330000 02 * 6PWMTIRR  -.387500 02 * 6PGSIRR  -.929300 01 * 1CMVWMT   -.123800 02 * 1CMVGCRN
        -.957000 01 * 1CMVGRSC   -.101500 02 * 1CMVSOY   -.944000 01 * 5CMVWMT   -.122500 02 * 5CMVGCRN  -.103500 02 * 5CMVGRSC
        -.101900 02 * 5CMVSOY    -.884000 01 * 7CMVWMT   -.113500 02 * 7CMVGCRN  -.103100 02 * 7CMVGRSC  -.945000 01 * 7CMVSOY
        -.101300 02 * 8CMVWMT    -.140500 02 * 8CMVGCRN  -.111700 02 * 6CMVGRSC  -.109600 02 * 8CMVSOY   -.974300 01 * 2CMVWMT
        -.198100 02 * 2CMVGCRN   -.108600 02 * 2CMVGRSC  -.877000 01 * 3CMVWMT   -.182500 02 * 3CMVGCRN  -.100000 02 * 3CMVGRSC
        -.797000 01 * 4CMVWMT    -.207300 02 * 4CMVGCRN  -.869000 01 * 4CMVGRSC  -.807000 01 * 6CMVWMT   -.165000 02 * 6CMVGCRN
        -.981000 01 * 6CMVGRSC   -.210000 01 * 1BUYFDGR  -.210000 01 * 2BUYFDGR  -.210000 01 * 3BUYFDGR  -.210000 01 * 4BUYFDGR
        -.210000 01 * 5BUYFDGR   -.210000 01 * 6BUYFDGR  -.210000 01 * 7BUYFDGR  -.210000 01 * 8BUYFDGR  -.457500 02 * ALFM1X2

        -.477500 02 * ALFM1X3    -.500000 02 * ALFM1X4    -.440000 02 * ALFM1X5    -.500000 02 * ALFM1X6    -.440000 02 * ALFM1X7
        -.443000 02 * ALFM1X8    -.457500 02 * ALFM2X1    -.443000 02 * ALFM2X3    -.470000 02 * ALFM2X4    -.440000 02 * ALFM2X5
        -.470000 02 * ALFM2X6    -.462500 02 * ALFM2X7    -.462500 02 * ALFM2X8    -.477500 02 * ALFM3X1    -.443000 02 * ALFM3X2
        -.449000 02 * ALFM3X4    -.462500 02 * ALFM3X5    -.449000 02 * ALFM3X6    -.480000 02 * ALFM3X7    -.480000 02 * ALFM3X8
        -.500000 02 * ALFM4X1    -.470000 02 * ALFM4X2    -.449000 02 * ALFM4X3    -.487500 02 * ALFM4X5    -.449000 02 * ALFM4X6
        -.500000 02 * ALFM4X7    -.500000 02 * ALFM4X8    -.440000 02 * ALFM5X1    -.440000 02 * ALFM5X2    -.462500 02 * ALFM5X3
        -.487500 02 * ALFM5X4    -.487500 02 * ALFM5X6    -.449000 02 * ALFM5X7    -.440000 02 * ALFM5X8    -.500000 02 * ALFM6X1
        -.470000 02 * ALFM6X2    -.449000 02 * ALFM6X3    -.449000 02 * ALFM6X4    -.487500 02 * ALFM6X5    -.500000 02 * ALFM6X7
        -.490000 02 * ALFM6X8    -.440000 02 * ALFM7X1    -.462500 02 * ALFM7X2    -.480000 02 * ALFM7X3    -.500000 02 * ALFM7X4
        -.449000 02 * ALFM7X5    -.500000 02 * ALFM7X6    -.462500 02 * ALFM7X8    -.443000 02 * ALFM8X1    -.462500 02 * ALFM8X2
        -.480000 02 * ALFM8X3    -.500000 02 * ALFM8X4    -.440000 02 * ALFM8X5    -.495000 02 * ALFM8X6    -.462500 02 * ALFM8X7
        -.900000-01 * FDGR1X2    -.130000 00 * FDGR1X3    -.160000 00 * FDGR1X4    -.600000-01 * FDGR1X5    -.160000 00 * FDGR1X6
        -.600000-01 * FDGR1X7    -.700000-01 * FDGR1X8    -.900000-01 * FDGR2X1    -.700000-01 * FDGR2X3    -.110000 00 * FDGR2X4
        -.600000-01 * FDGR2X5    -.110000 00 * FDGR2X6    -.100000 00 * FDGR2X7    -.100000 00 * FDGR2X8    -.130000 00 * FDGR3X1
        -.700000-01 * FDGR3X2    -.800000-01 * FDGR3X4    -.100000 00 * FDGR3X5    -.600000-01 * FDGR3X6    -.130000 00 * FDGR3X7
        -.130000 00 * FDGR3X8    -.140000 00 * FDGR4X1    -.110000 00 * FDGR4X2    -.600000-01 * FDGR4X3    -.150000 00 * FDGR4X5
        -.800000-01 * FDGR4X6    -.160000 00 * FDGR4X7    -.160000 00 * FDGR4X8    -.600000-01 * FDGR5X1    -.600000-01 * FDGR5X2
        -.100000 00 * FDGR5X3    -.150000 00 * FDGR5X4    -.150000 00 * FDGR5X6    -.600000-01 * FDGR5X7    -.800000-01 * FDGR5X8
        -.160000 00 * FDGR6X1    -.110000 00 * FDGR6X2    -.800000-01 * FDGR6X3    -.600000-01 * FDGR6X4    -.150000 00 * FDGR6X5
        -.170000 00 * FDGR6X7    -.150000 00 * FDGR6X8    -.600000-01 * FDGR7X1    -.100000 00 * FDGR7X2    -.130000 00 * FDGR7X3
        -.160000 00 * FDGR7X4    -.600000-01 * FDGR7X5    -.170000 00 * FDGR7X6    -.100000 00 * FDGR7X8    -.700000-01 * FDGR8X1
        -.100000 00 * FDGR8X2    -.130000 00 * FDGR8X3    -.160000 00 * FDGR8X4    -.800000-01 * FDGR8X5    -.150000 00 * FDGR8X6
        -.100000 00 * FDGR8X7    -.200445 03 * 1CALF2     -.206870 03 * 1CALF3     -.209320 03 * 1CALF4     -.202110 03 * 1CALF5
        -.209450 03 * 1CALF6     -.202320 03 * 1CALF7     -.202720 03 * 1CALF8     -.202440 03 * 2CALF1     -.202720 03 * 2CALF3
        -.205840 03 * 2CALF4     -.202320 03 * 2CALF5     -.205840 03 * 2CALF6     -.205150 03 * 2CALF7     -.205150 03 * 2CALF8
        -.206870 03 * 3CALF1     -.202720 03 * 3CALF2     -.204450 03 * 3CALF4     -.205080 03 * 3CALF5     -.203250 03 * 3CALF6
        -.207150 03 * 3CALF7     -.207150 03 * 3CALF8     -.209320 03 * 4CALF1     -.205840 03 * 4CALF2     -.204450 03 * 4CALF3
        -.207840 03 * 4CALF5     -.203430 03 * 4CALF6     -.209320 03 * 4CALF7     -.209480 03 * 4CALF8     -.202110 03 * 5CALF1
        -.202320 03 * 5CALF2     -.205080 03 * 5CALF3     -.207840 03 * 5CALF4     -.207840 03 * 5CALF6     -.203250 03 * 5CALF7
        -.202920 03 * 5CALF8     -.209450 03 * 6CALF1     -.205840 03 * 6CALF2     -.203250 03 * 6CALF3     -.203430 03 * 6CALF4
        -.207840 03 * 6CALF5     -.209990 03 * 6CALF7     -.206660 03 * 6CALF8     -.202320 03 * 7CALF1     -.205150 03 * 7CALF2
        -.207150 03 * 7CALF3     -.205320 03 * 7CALF4     -.203250 03 * 7CALF5     -.209990 03 * 7CALF6     -.205070 03 * 7CALF8
        -.202720 03 * 8CALF1     -.205150 03 * 8CALF2     -.207150 03 * 8CALF3     -.204480 03 * 8CALF4     -.202920 03 * 8CALF5
        -.208660 03 * 8CALF6     -.205070 03 * 8CALF7     -.318160 03 * 1GSTR2     -.323080 03 * 1GSTR3     -.323580 03 * 1GSTR4
        -.315480 03 * 1GSTR5     -.323700 03 * 1GSTR6     -.315710 03 * 1GSTR7     -.316170 03 * 1GSTR8     -.316160 03 * 2GSTR1
        -.316170 03 * 2GSTR3     -.319740 03 * 2GSTR4     -.315710 03 * 2GSTR5     -.319740 03 * 2GSTR6     -.318680 03 * 2GSTR7
        -.318680 03 * 2GSTR8     -.320860 03 * 3GSTR1     -.316170 03 * 3GSTR2     -.316680 03 * 3GSTR4     -.316680 03 * 3GSTR5
        -.316680 03 * 3GSTR6     -.321170 03 * 3GSTR7     -.321160 03 * 3GSTR8     -.323580 03 * 4GSTR1     -.319740 03 * 4GSTR2
        -.316680 03 * 4GSTR3     -.321940 03 * 4GSTR5     -.317010 03 * 4GSTR6     -.323580 03 * 4GSTR7     -.323560 03 * 4GSTR8
        -.315480 03 * 5GSTR1     -.315710 03 * 5GSTR2     -.318880 03 * 5GSTR3     -.321940 03 * 5GSTR4     -.321940 03 * 5GSTR6
        -.316800 03 * 5GSTR7     -.316340 03 * 5GSTR8     -.323760 03 * 6GSTR1     -.319740 03 * 6GSTR2     -.316800 03 * 6GSTR3
        -.317010 03 * 6GSTR4     -.321940 03 * 6GSTR5     -.324250 03 * 6GSTR7     -.322840 03 * 6GSTR8     -.315710 03 * 7GSTR1
        -.318880 03 * 7GSTR2     -.321170 03 * 7GSTR3     -.323560 03 * 7GSTR4     -.316800 03 * 7GSTR5     -.324250 03 * 7GSTR6
        -.318880 03 * 7GSTR8     -.316170 03 * 8GSTR1     -.318860 03 * 8GSTR2     -.321170 03 * 8GSTR3     -.323560 03 * 8GSTR4
        -.316340 03 * 8GSTR5     -.322840 03 * 8GSTR6     -.318860 03 * 8GSTR7     -.317730 03 * 1FSTR2     -.340770 03 * 1FSTR3
        -.355860 03 * 1FSTR4     -.334720 03 * 1FSTR5     -.343540 03 * 1FSTR6     -.334940 03 * 1FSTR7     -.335500 03 * 1FSTR8
        -.337730 03 * 2FSTR1     -.335500 03 * 2FSTR3     -.339490 03 * 2FSTR4     -.334980 03 * 2FSTR5     -.339490 03 * 2FSTR6
        -.338530 03 * 2FSTR7     -.338530 03 * 2FSTR8     -.340770 03 * 3FSTR1     -.335500 03 * 3FSTR2     -.331200 03 * 3FSTR4
        -.338530 03 * 3FSTR5     -.336200 03 * 3FSTR6     -.341110 03 * 3FSTR7     -.341110 03 * 3FSTR8     -.355860 03 * 4FSTR1
        -.339490 03 * 4FSTR2     -.331200 03 * 4FSTR3     -.341580 03 * 4FSTR5     -.336430 03 * 4FSTR6     -.343760 03 * 4FSTR7
        -.343760 03 * 4FSTR8     -.334720 03 * 5FSTR1     -.339490 03 * 5FSTR2     -.338530 03 * 5FSTR3     -.341980 03 * 5FSTR4
        -.341980 03 * 5FSTR6     -.336200 03 * 5FSTR7     -.335730 03 * 5FSTR8     -.339490 03 * 6FSTR1     -.339490 03 * 6FSTR2
        -.336200 03 * 6FSTR3     -.336430 03 * 6FSTR4     -.341580 03 * 6FSTR5     -.344590 03 * 6FSTR7     -.342970 03 * 6FSTR8
        -.339490 03 * 7FSTR1     -.338530 03 * 7FSTR2     -.341110 03 * 7FSTR3     -.343760 03 * 7FSTR4     -.336200 03 * 7FSTR5
        -.344590 03 * 7FSTR6     -.338530 03 * 7FSTR8     -.335500 03 * 8FSTR1     -.338530 03 * 8FSTR2     -.341110 03 * 8FSTR3
        -.343760 03 * 8FSTR4     -.335730 03 * 8FSTR5     -.342670 03 * 8FSTR6     -.338530 03 * 8FSTR7     -.318160 03 * 1FDST2
        -.320460 03 * 1FDST3     -.323980 03 * 1FDST4     -.315480 03 * 1FDST5     -.323700 03 * 1FDST6     -.315710 03 * 1FDST7
        -.316170 03 * 1FDST8     -.318160 03 * 2FDST1     -.316170 03 * 2FDST3     -.319740 03 * 2FDST4     -.315710 03 * 2FDST5
        -.319740 03 * 2FDST6     -.318680 03 * 2FDST7     -.318680 03 * 2FDST8     -.320860 03 * 3FDST1     -.316170 03 * 3FDST2
        -.316800 03 * 3FDST4     -.318480 03 * 3FDST5     -.316800 03 * 3FDST6     -.321170 03 * 3FDST7     -.321170 03 * 3FDST8
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                -.323580 03 * 4FDST1    -.319740 03 * 4FDST2    -.316620 03 * 4FDST3    -.321940 03 * 4FDST5    -.317010 03 * 4FDST6
                -.323560 03 * 4FDST7    -.323560 03 * 4FDST8    -.315480 03 * 5FDST1    -.315710 03 * 5FDST2    -.318480 03 * 5FDST3
                -.321940 03 * 5FDST4    -.321940 03 * 5FDST6    -.316620 03 * 5FDST7    -.316340 03 * 5FDST8    -.323700 03 * 6FDST1
                -.319740 03 * 6FDST2    -.316620 03 * 6FDST3    -.317010 03 * 6FDST4    -.321940 03 * 6FDST5    -.324250 03 * 6FDST7
                -.322840 03 * 6FDST8    -.315710 03 * 7FDST1    -.318480 03 * 7FDST2    -.321170 03 * 7FDST3    -.323580 03 * 7FDST4
                -.316800 03 * 7FDST5    -.324250 03 * 7FDST6    -.318480 03 * 7FDST8    -.316170 03 * 8FDST1    -.318480 03 * 8FDST2
                -.321170 03 * 8FDST3    -.323560 03 * 8FDST4    -.316150 03 * 8FDST5    -.322440 03 * 8FDST6    -.318480 03 * 8FDST7
                -.600000-01 * 1CPLAPR   -.600000-01 * 2CPLAPR   -.600000-01 * 3CPLAPR   -.600000-01 * 4CPLAPR   -.600000-01 * 5CPLAPR
                -.600000-01 * 6CPLAPR   -.600000-01 * 7CPLAPR   -.600000-01 * 8CPLAPR   -.600000-01 * 1LSRCAPR  -.600000-01 * 2LSRCAPR
                -.600000-01 * 3LSRCAPR  -.600000-01 * 4LSRCAPR  -.600000-01 * 5LSRCAPR  -.600000-01 * 6LSRCAPR  -.600000-01 * 7LSRCAPR
                -.600000-01 * 8LSRCAPR  -.150000 02 * 1PLTALF   -.120000 02 * 2PLTALF   -.210000 02 * 3PLTALF   -.690000 01 * 4PLTALF
                -.130000 02 * 5PLTALF   -.960000 01 * 6PLTALF   -.160000 02 * 7PLTALF   -.160000 02 * 8PLTALF   -.323000 02 * 1DEVIAR
                -.323000 02 * 1DEVIAR   -.323000 02 * 4DEVIAR   -.323000 02 * 6DEVIAR   -.240000 02 * 1FDLECTDE  -.200000 02 * 2FDLECTDE
                -.185000 02 * 3FDLECTDE -.180000 02 * 4FDLECTDE -.200000 02 * 5FDLECTDE -.200000 02 * 6FDLECTDE -.210000 02 * 7FDLECTDE
                -.210000 02 * 8FDLECTDE -.500000 01 * 1TFWMMJJ  -.500000 01 * 2TFWMMJJ  -.500000 01 * 3TFWMMJJ  -.500000 01 * 4TFWMMJJ
                -.500000 01 * 5TFWMMJJ  -.500000 01 * 6TFWMMJJ  -.500000 01 * 7TFWMMJJ  -.500000 01 * 8TFWMMJJ  -.500000 01 * 1TFWMJJM
                -.500000 01 * 2TFWMJJM  -.500000 01 * 3TFWMJJM  -.500000 01 * 4TFWMJJM  -.500000 01 * 5TFWMJJM  -.500000 01 * 6TFWMJJM
                -.500000 01 * 7TFWMJJM  -.500000 01 * 8TFWMJJM  +.200000 02 * 1IDLECPL  +.180000 02 * 2IDLECPL  +.160000 02 * 3IDLECPL
                +.150000 02 * 4IDLECPL  +.200000 02 * 5IDLECPL  +.150000 02 * 6IDLECPL  +.200000 02 * 7IDLECPL  +.200000 02 * 8IDLECPL
                -.500000 01 * 1PLTTPAS  -.500000 01 * 2PLTTPAS  -.500000 01 * 3PLTTPAS  -.500000 01 * 4PLTTPAS  -.500000 01 * 5PLTTPAS
                 OBJECTIV
2  ICPLOI       0.10000 01 * 1PWHT      +.100000 01 * 1PCORN    +.100000 01 * 1PGRSOR   +.100000 01 * 1PSOY     +.100000 01 * 1PSIL
                +.100000 01 * 1PLTALF   +.100000 01 * 1IDLECPL  +.100000 01 * 1PLTTPAS
                <=  1400000.00000

3  IPASTNAT     0.65000 01 * 1PCALF     +.350000 01 * 1PGSTRFS  +.200000 01 * 1PGSTR    +.150000 01 * 1PSMILK   -.100000 01 * 1TPAST
                <=  1150000.00000

4  IPASTTAR     0.15000 01 * 1PSMILK    +.466000 00 * 1TPAST    -.100000 01 * 1PLTTPAS
                <=   385000.00000

5  INATMAY      0.10000 01 * 1PNATM
                <=   100000.00000

6  IALFMAY      0.10000 01 * 1PALFM     -.100000 01 * 1PLTALF
                <=    62500.00000

7  ILAB-J,F     0.26000 01 * 1PCALF     +.225000 01 * 1PWSTR    +.140000 01 * 1PWGFSTR  +.140000 01 * 1BFDSTRA  +.950000 01 * 1PSMILK
                +.680000 01 * 1PHOG     -.300000 03 * 1HLABFT
                <=   852967.00000

8  ILAB-M,A     0.26000 01 * 1PCALF     +.700000 00 * 1PWSTR    +.140000 01 * 1BFDSTRA  +.110000 02 * 1PSMILK   +.560000 01 * 1PHOG
                +.100000-01 * 1PWHT     +.390000 00 * 1PCORN    +.390000 00 * 1PGRSOR   +.230000 00 * 1PSOY     +.290000 00 * 1PSIL
                -.300000 03 * 1HLABFT
                <=  1091745.00000

9  ILAB-M,J     0.10000 00 * 1PCALF     +.200000 00 * 1PGSTRFS  +.200000 00 * 1PGSTR    +.150000 01 * 1PWFSTR   +.150000 01 * 1BFDSTRB
                +.133000 02 * 1PSMILK   +.470000 01 * 1PHOG     +.640000 00 * 1PWHT     +.800000 00 * 1PCORN    +.720000 00 * 1PGRSOR
                +.940000 00 * 1PSOY     +.720000 00 * 1PSIL     +.282000 01 * 1PALFM    -.400000 03 * 1HLABFT   -.330000 01 * 1HLABSU
                -.320000 00 * 1CHVWHT   +.600000 00 * 1PLTALF
                <=  2417773.00000

10 ILAB-J,A     0.20000 00 * 1PCALF     +.200000 00 * 1PGSTRFS  +.100000 00 * 1PGSTR    +.140000 01 * 1PWFSTR   +.140000 01 * 1BFDSTRB
                +.140000 02 * 1PSMILK   +.890000 01 * 1PHOG     +.780000 00 * 1PWHT     +.190000 00 * 1PCORN    +.210000 00 * 1PGRSOR
                +.700000-01 * 1PSOY     +.210000 00 * 1PSIL     +.576000 01 * 1PALFM    +.130000 01 * 1SALFM    +.300000 01 * 1PNATM
                -.400000 03 * 1HLABFT   -.660000 01 * 1HLABSU   -.390000 00 * 1CHVWHT   +.800000 00 * 1PLTALF
                <=  2450699.00000

11 ILAB-S,O     0.60000 00 * 1PCALF     +.670000 00 * 1PWSTR    +.200000 00 * 1PGSTRFS  +.140000 01 * 1PWFSTR   +.150000 01 * 1PWGFSTR
                +.140000 01 * 1BFDSTRB  +.700000 01 * 1PSMILK   +.440000 01 * 1PHOG     +.510000 00 * 1PWHT     +.122000 01 * 1PCORN
                +.100000 01 * 1PGRSOR   +.115000 01 * 1PSOY     +.269000 01 * 1PSIL     +.460000 00 * 1PALFM    +.130000 01 * 1SALFM
                -.350000 03 * 1HLABFT   -.620000 00 * 1CHVCORN  -.500000 00 * 1CHVGRSO  -.540000 00 * 1CHVSOY
                <=  2307533.00000

12 ILAB-N,O     0.10000 01 * 1PCALF     +.225000 01 * 1PWSTR    +.140000 01 * 1PWGFSTR  +.150000 01 * 1BFDSTRA  +.830000 01 * 1PSMILK
                +.560000 01 * 1PHOG     +.100000 01 * 1PCORN    +.540000 00 * 1PGRSOR   +.850000 00 * 1PSOY     +.134000 01 * 1PSIL
                -.300000 03 * 1HLABFT   -.340000 00 * 1CHVCORN  -.220000 00 * 1CHVGRSO  -.220000 00 * 1CHVSOY
                <=  1023929.00000
13 IPWH-MAY     0.48000 03 * 1PCORN     +.400000 00 * 1PGRSOR   +.330000 00 * 1PSOY     +.400000 00 * 1PSIL     -.150000 03 * 1HLABFT
                +.400000 00 * 1PLTALF   +.100000 01 * 1TFWMMJJ  -.100000 01 * 1TFWMJJM
                <=   431275.00000

14 IPWH-JUN     0.64000 00 * 1PWHT      +.320000 00 * 1PCORN    +.320000 00 * 1PGRSOR   +.610000 00 * 1PSOY     +.320000 00 * 1PSIL
                +.282000 01 * 1PALFM    -.150000 03 * 1HLABFT   -.500000 01 * 1HLABSU   -.320000 00 * 1CHVWHT   +.400000 00 * 1PLTALF
                -.100000 01 * 1TFWMMJJ  +.100000 01 * 1TFWMJJM
                <=   364935.00000

15 IPWH-SEP     0.37000 00 * 1PWHT      +.220000 00 * 1PCORN    +.530000 00 * 1PSIL     +.460000 00 * 1PALFM    -.150000 03 * 1HLABFT
                <=   385893.00000

16 IPWH-OCT     0.14000 00 * 1PWHT      +.100000 01 * 1PCORN    +.100000 01 * 1PGRSOR   +.108000 01 * 1PSOY     +.252000 01 * 1PSIL
                -.140000 03 * 1HLABFT   -.620000 00 * 1CHVCORN  -.500000 00 * 1CHVGRSO  -.540000 00 * 1CHVSOY
                <=   459477.00000

17 IWHTPD       -.31000 02 * 1PWHT      +.100000 01 * 1SWHT
                <=          0.0

18 ICORNPD      -.65000 02 * 1PCORN     +.100000 01 * 1SCORN    +.100000 01 * 1PCORN
                <=          0.0

19 IGRSOPD      -.52000 02 * 1PGRSOR    +.100000 01 * 1SGRSO    +.100000 01 * 1PGRSO
                <=          0.0

20 IALFPD       -.25000 01 * 1PALFM     +.105000 01 * 1SALFM    +.105000 01 * 1PALFM
                <=          0.0

21 INATMPD      -.11000 01 * 1PNATM     +.100000 01 * 1PNATM    +.100000 01 * 1SNATM    +.100000 01 * 1TNM>FOR  +.100000 01 * 1TNM>MPO
                <=          0.0

22 IBESCALP     0.10000 01 * 1CALP2     +.100000 01 * 1CALP3    +.100000 01 * 1CALP4    +.100000 01 * 1CALP5    +.100000 01 * 1CALP6
                +.100000 01 * 1CALP7    +.100000 01 * 1CALP8
                <=          0.0
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23  1&&SWSTR -.10000 01 * 1SWSTR   +.100000 01 * 1GSTR2   +.100000 01 * 1GSTR3   +.100000 01 * 1GSTR4   +.100000 01 * 1GSTR5
             +.100000 01 * 1GSTR6   +.100000 01 * 1GSTR7   +.100000 01 * 1GSTR8   +.100000 01 * 1FDST2   +.100000 01 * 1FDST3
             +.100000 01 * 1FDST4   +.100000 01 * 1FDST5   +.100000 01 * 1FDST6   +.100000 01 * 1FDST7   +.100000 01 * 1FDST8
             <=          0.0

24  1&&SGSTR -.10000 01 * 1SGSTR   +.100000 01 * 1FSTR2   +.100000 01 * 1FSTR3   +.100000 01 * 1FSTR4   +.100000 01 * 1FSTR5
             +.100000 01 * 1FSTR6   +.100000 01 * 1FSTR7   +.100000 01 * 1FSTR8
             <=          0.0

25  1TCALF   -.75000 00 * 1PCALF   +.100000 01 * 1SCALF   +.100000 01 * 1TWSTR
             <=          0.0
26  1TWSTR   -.99500 00 * 1TWSTR   +.100000 01 * 1PWSTR   -.990000 00 * 2CALF1   -.990000 00 * 3CALF1   -.990000 00 * 4CALF1
             -.990000 00 * 5CALF1   -.990000 00 * 6CALF1   -.990000 00 * 7CALF1   -.990000 00 * 8CALF1
             <=          0.0

27  1WSTR    -.99500 00 * 1PWSTR   +.100000 01 * 1SWSTR   +.100000 01 * 1TGSTR   +.100000 01 * 1PWFSTR
             <=          0.0

28  1TGSTR   -.99500 00 * 1TGSTR   +.100000 01 * 1PGSTRFS +.100000 01 * 1PGSTR   -.995000 00 * 2GSTR1   -.995000 00 * 3GSTR1
             -.995000 00 * 4GSTR1   -.995000 00 * 5GSTR1   -.995000 00 * 6GSTR1   -.995000 00 * 7GSTR1   -.995000 00 * 8GSTR1
             <=          0.0

29  1GSTR    0.10000 01 * 1SGSTR   +.100000 01 * 1TFSTR   -.998000 00 * 1PGSTR
             <=          0.0

30  1TFSTR   -.99800 00 * 1TFSTR   +.100000 01 * 1PWGFSTR -.995000 00 * 2FSTR1   -.995000 00 * 3FSTR1   -.995000 00 * 4FSTR1
             -.995000 00 * 5FSTR1   -.995000 00 * 6FSTR1   -.995000 00 * 7FSTR1   -.995000 00 * 8FSTR1   -.990000 00 * 2FDST1
             -.990000 00 * 3FDST1   -.990000 00 * 4FDST1   -.990000 00 * 5FDST1   -.990000 00 * 6FDST1   -.990000 00 * 7FDST1
             -.990000 00 * 8FDST1
             <=          0.0

31  1RCORN   0.13000 02 * 1PWSTR   +.510000 02 * 1PWFSTR  +.321400 02 * 1PWGFSTR +.510000 02 * 1BFDSTRA +.510000 02 * 1BFDSTRB
             +.119020 03 * 1PSMILK  +.228000 03 * 1PHOG     -.100000 01 * 1FCORN    -.950000 00 * 1FGRSO    -.100000 01 * 1BUYFDGR
             <=          0.0

32  1RALFH   0.50000 00 * 1PCALF   +.450000 00 * 1PWSTR   +.230000 00 * 1PWFSTR  +.150000 00 * 1PWGFSTR +.230000 00 * 1BFDSTRA
             +.230000 00 * 1BFDSTRB +.600000 01 * 1PSMILK  -.350000 01 * 1PSIL     -.100000 01 * 1FALFH    +.850000 01 * 1FNATH
             -.100000 01 * ALFH2>1  -.100000 01 * ALFH3>1  -.100000 01 * ALFH4>1  -.100000 01 * ALFH5>1  -.100000 01 * ALFH6>1
             -.100000 01 * ALFH7>1  -.100000 01 * ALFH8>1  +.100000 01 * 1ALF>FOR
             <=          0.0

33  1RFORREQ 0.18300 01 * 1PCALF   +.360000 00 * 1PWSTR   -.100000 01 * 1ALF>FOR -.100000 01 * 1TNM>FOR
             <=          0.0

34  1RWPASTU 0.92000 00 * 1PCALF   +.180000 00 * 1PWSTR   -.300000 00 * 1PWMT     -.300000 00 * 1PCORN    -.300000 00 * 1PGRSOR
             -.100000 01 * 1TNM>WPU
             <=          0.0

35  1OPCAP   0.20000 02 * 1PCALF   +.100000 02 * 1PWSTR   +.100000 02 * 1PGSTRFS +.100000 02 * 1PGSTR   +.120000 02 * 1PWFSTR
             +.120000 02 * 1PWGFSTR +.150000 02 * 1BFDSTRA +.150000 02 * 1BFDSTRB +.200000 03 * 1PSMILK  +.300000 03 * 1PHOG
             +.135000 02 * 1PWMT    +.227500 02 * 1PCORN   +.185000 02 * 1PGRSOR  +.161000 02 * 1PSOY    +.232500 02 * 1PSIL
             +.200000 02 * 1PALFH   +.130000 02 * 1PNATH    -.100000 01 * 1OPCAPR
             <=          0.0

36  1LSKCAP  0.25000 03 * 1BFDSTRA +.250000 03 * 1BFDSTRB +.600000 02 * 1PSMILK  +.100000 02 * 1PHOG    +.180000 03 * 2CALF1
             +.180300 03 * 3CALF1   +.180300 03 * 4CALF1   +.180300 03 * 5CALF1   +.180000 03 * 6CALF1   +.180300 03 * 7CALF1
             +.180000 03 * 8CALF1   +.295000 03 * 2GSTR1   +.295000 03 * 3GSTR1   +.295000 03 * 4GSTR1   +.295000 03 * 5GSTR1
             +.295000 03 * 6GSTR1   +.295000 03 * 7GSTR1   +.295000 03 * 8GSTR1   +.285000 03 * 2FSTR1   +.285000 03 * 3FSTR1
             +.285000 03 * 4FSTR1   +.285000 03 * 5FSTR1   +.285000 03 * 6FSTR1   +.285000 03 * 8FSTR1   +.295000 03 * 2FDST1
             +.295000 03 * 3FDST1   +.295000 03 * 4FDST1   +.295000 03 * 5FDST1   +.295000 03 * 6FDST1   +.295000 03 * 7FDST1
             +.295000 03 * 8FDST1   -.100000 01 * 1LSKCAPR
             <=          0.0
37  1DEPREC  0.11500 02 * 1PCALF   +.300000 01 * 1PWSTR   +.500000 00 * 1PGSTRFS +.500000 00 * 1PGSTR   +.500000 00 * 1PWFSTR
             +.500000 00 * 1PWGFSTR +.900000 01 * 1BFDSTRA +.900000 01 * 1BFDSTRB +.830000 02 * 1PSMILK  +.590000 02 * 1PHOG
             +.130000 02 * 1PWMT    +.180300 02 * 1PCORN   +.160000 02 * 1PGRSOR  +.130000 02 * 1PSOY    +.315000 02 * 1PSIL
             +.250000 02 * 1PALFH   +.250000 02 * 1PNATH    -.100000 01 * 1DEPR     -.300000 01 * 1CHVWMT   -.400000 01 * 1CHVCORN
             -.300000 01 * 1CHVGRSO -.300000 01 * 1CHVSOY
             <=          0.0

38  1SFDGRAI -.10000 01 * 1SCORN   -.950000 00 * 1SGRSO   +.100000 01 * 1BUYFDGR +.100000 01 * FDGR1>2  +.100000 01 * FDGR1>3
             +.100000 01 * FDGR1>4  +.100000 01 * FDGR1>5  +.100000 01 * FDGR1>6  +.100000 01 * FDGR1>7  +.100000 01 * FDGR1>8
             -.100000 01 * FDGR2>1  -.100000 01 * FDGR3>1  -.100000 01 * FDGR4>1  -.100000 01 * FDGR5>1  -.100000 01 * FDGR6>1
             -.100000 01 * FDGR7>1  -.100000 01 * FDGR8>1
             <=          0.0

39  1SALFH   -.10000 01 * 1SALFH   -.850000 00 * 1SNATH   +.100000 01 * ALFH1>2  +.100000 01 * ALFH1>3  +.100000 01 * ALFH1>4
             +.100000 01 * ALFH1>5  +.100000 01 * ALFH1>6  +.100000 01 * ALFH1>7  +.100000 01 * ALFH1>8
             =           0.0

40  1FDLOTCP 0.10000 01 * 1PWFSTR  +.100000 01 * 1PWGFSTR +.100000 01 * 1BFDSTRA +.100000 01 * 1BFDSTRB -.100000 01 * 1FDLOTDE
             <=    100000.00000

41  1FUEL    0.35000 01 * 1PCALF   +.100000 01 * 1PWSTR   +.100000 01 * 1PGSTRFS +.500000 00 * 1PGSTR   +.100000 01 * 1PWFSTR
             +.100000 01 * 1PWGFSTR +.100000 01 * 1BFDSTRA +.100000 01 * 1BFDSTRB +.930000 01 * 1PSMILK  +.104100 02 * 1PHOG
             +.550000 01 * 1PWMT    +.625000 01 * 1PCORN   +.600000 01 * 1PGRSOR  +.500000 01 * 1PSOY    +.150000 02 * 1PSIL
             +.100000 02 * 1PALFH   +.500000 01 * 1PNATH    -.100000 01 * 1FUELCST
             <=          0.0

42  1FERT    0.17000 02 * 1PWMT    +.320000 02 * 1PCORN   +.250000 02 * 1PGRSOR  +.800000 01 * 1PSOY    +.250000 02 * 1PSIL
             +.450000 01 * 1PALFH   -.100000 01 * 1FERTCST
             <=          0.0

43  2CPLD1   0.10000 01 * 2PWMT    +.100000 01 * 2PGRSOR  +.100000 01 * 2PSIL    +.100000 01 * 2PLTALF  +.100000 01 * 2DEVIRR
             +.100000 01 * 2IDLECPL +.100300 01 * 2PLTPAS
             <=  5606736.00000

44  2CPLD2   0.10000 01 * 2PCORN   -.100000 01 * 2DEVIRR
             <=    180000.00000
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45  2PASTMAT 0.45000 01 * 2PCALF    +.350000 01 * 2PGSTRFS +.200000 01 * 2PGSTR   +.150000 01 * 2PSMILK  -.100000 01 * 2TPAST
             <=  2900000.00000

46  2PASTTAN 0.15000 01 * 2PSMILK   +.466000 00 * 2TPAST   -.100000 01 * 2PLTTPAS
             <=   195000.00000

47  2NATMAY  0.10000 01 * 2PNATH
             <=   143700.00000
48  2ALFMAY  0.10000 01 * 2PALFM    -.100000 01 * 2PLTALF
             <=   292400.00000

49  2LAB-J,F 0.26000 01 * 2PCALF    +.225000 01 * 2PWSTR   +.140000 01 * 2PWGFSTR +.140000 01 * 2BFDSTRA +.950000 01 * 2PSMILK
             +.680000 01 * 2PHOG     +.20000D-01 * 2PWHT     -.300000 03 * 2HLABFT
             <=  2036478.00000

50  2LAB-M,A 0.26000 01 * 2PCALF    +.700000 00 * 2PWSTR   +.140000 01 * 2BFDSTRA +.110000 02 * 2PSMILK +.560000 01 * 2PHOG
             +.710000 00 * 2PCORN    +.550000 00 * 2PGRSOR   +.610000 00 * 2PSIL     +.800000-01 * 2PALFM    -.300000 03 * 2HLABFT
             <=  2606564.00000

51  2LAB-M,J 0.10000 00 * 2PCALF    +.200000 00 * 2PGSTRFS +.200000 00 * 2PGSTR   +.150000 01 * 2PWFSTR +.150000 01 * 2BFDSTRB
             +.133000 02 * 2PSMILK   +.470000 01 * 2PHOG     +.820000 00 * 2PWHT     +.560000 00 * 2PCORN    +.750000 00 * 2PGRSOR
             +.260000 00 * 2PSIL     +.185000 01 * 2PALFM    -.400000 03 * 2HLABFT   -.330000 01 * 2HLABSU   -.410000 00 * 2CHVWHT
             +.500000 00 * 2PLTALF
             <=  7517653.00000

52  2LAB-J,A 0.20000 00 * 2PCALF    +.200000 00 * 2PGSTRFS +.100000 00 * 2PGSTR   +.140000 01 * 2PWFSTR +.140000 01 * 2BFDSTRB
             +.140000 02 * 2PSMILK   +.890000 01 * 2PHOG     +.120000 01 * 2PWHT     +.480000 00 * 2PCORN    +.120000 01 * 2PGRSOR
             +.610000 00 * 2PSIL     +.377000 01 * 2PALFM    +.377000 01 * 2PNATH    -.350000 03 * 2HLABFT   -.660000 01 * 2HLABSU
             -.270000 00 * 2CHVWHT   +.800000 00 * 2PLTALF
             <=  7620030.00000

53  2LAB-S,O 0.60000 00 * 2PCALF    +.670000 00 * 2PWSTR   +.200000 00 * 2PGSTRFS +.140000 01 * 2PWFSTR +.150000 01 * 2PWGFSTR
             +.140000 01 * 2BFDSTRB  +.700000 01 * 2PSMILK   +.440000 01 * 2PHOG     +.420000 00 * 2PWHT     +.240000 01 * 2PCORN
             +.780000 00 * 2PGRSOR   +.240000 01 * 2PSIL     +.400000 00 * 2PALFM    -.300000 03 * 2HLABFT   -.120000 01 * 2CHVCORN
             -.390000 00 * 2CHVGRSO
             <=  7174883.00000

54  2LAB-N,D 0.10000 01 * 2PCALF    +.225000 01 * 2PWSTR   +.140000 01 * 2PWGFSTR +.150000 01 * 2BFDSTRA +.830000 01 * 2PSMILK
             +.560000 01 * 2PHOG     +.159000 01 * 2PCORN    +.620000 00 * 2PGRSOR   +.120000 01 * 2PSIL     -.300000 03 * 2HLABFT
             -.520000 00 * 2CHVCORN  -.310000 00 * 2CHVGRSO
             <=  2444651.00000

55  2FWH-MAY 0.20000 00 * 2PCORN    +.380000 00 * 2PGRSOR  -.150000 03 * 2HLABFT +.300000 00 * 2PLTALF +.100000 01 * 2TFWHMJM
             -.100000 01 * 2TFWHJJM
             <=  1927419.00000

56  2FWH-JUN 0.82000 00 * 2PWHT     +.540000 00 * 2PCORN   +.370000 00 * 2PGRSOR  +.185000 01 * 2PALFM   -.150000 03 * 2HLABFT
             -.250000 01 * 2HLABSU   -.410000 00 * 2CHVWHT   +.200000 00 * 2PLTALF   -.100000 01 * 2TFWHMJM +.100000 01 * 2TFWHJJM
             <=  2015989.00000

57  2FWH-SEP 0.33000 00 * 2PWHT     +.104000 01 * 2PCORN   +.780000 00 * 2PGRSOR  -.150000 03 * 2HLABFT  -.520000 00 * 2CHVCORN
             -.390000 00 * 2CHVGRSO
             <=  2161929.00000

58  2FWH-OCT 0.90000-01 * 2PWHT     +.136000 01 * 2PCORN   +.620000 00 * 2PGRSOR  +.360000 01 * 2PSIL     -.100000 03 * 2HLABFT
             -.680000 00 * 2CHVCORN  -.310000 00 * 2CHVGRSO
             <=  2303725.00000
59  2WHTPD   -.3100D 02 * 2PWHT     +.100000 01 * 2SWHT
             <=         0.0

60  2CORNPD  -.1040D 03 * 2PCORN    +.100000 01 * 2SCORN   +.100000 01 * 2FCORN
             <=         0.0

61  2GRSOPD  -.4800D 02 * 2PGRSOR   +.100000 01 * 2SGRSO   +.100000 01 * 2FGRSO
             <=         0.0

62  2ALFPD   -.2500D 01 * 2PALFM    +.105000 01 * 2SALFM   +.105000 01 * 2FALFM
             <=         0.0

63  2NATHPD  -.1250D 01 * 2PNATH    +.100000 01 * 2FNATH   +.105000 01 * 2SNATH   +.100000 01 * 2TNNXFOR +.100000 01 * 2TNNXWPU
             <=         0.0

64  2BESCALF -.1000D 01 * 2SCALF    +.100000 01 * 2CALF1   +.100000 01 * 2CALF3   +.100000 01 * 2CALF4   +.100000 01 * 2CALF5
             +.100000 01 * 2CALF6    +.100000 01 * 2CALF7    +.100000 01 * 2CALF8
             <=         0.0

65  2BESWSTR -.1000D 01 * 2SWSTR    +.100000 01 * 2GSTR1   +.100000 01 * 2GSTR3   +.100000 01 * 2GSTR4   +.100000 01 * 2GSTR5
             +.100000 01 * 2GSTR6    +.100000 01 * 2GSTR7    +.100000 01 * 2GSTR8    +.100000 01 * 2FDST1    +.100000 01 * 2FDST3
             +.100000 01 * 2FDST4    +.100000 01 * 2FDST5    +.100000 01 * 2FDST6    +.100000 01 * 2FDST7    +.100000 01 * 2FDST8
             <=         0.0

66  2BESGSTR -.1000D 01 * 2SGSTR    +.100000 01 * 2FSTR1   +.100000 01 * 2FSTR3   +.100000 01 * 2FSTR4   +.100000 01 * 2FSTR5
             +.100000 01 * 2FSTR6    +.100000 01 * 2FSTR7    +.100000 01 * 2FSTR8
             <=         0.0

67  2TCALF   -.7500D 00 * 2PCALF    +.100000 01 * 2SCALF   +.100000 01 * 2TWSTR
             <=         0.0

68  2TWSTR   -.9950D 00 * 2TWSTR    +.100000 01 * 2PWSTR   -.990000 00 * 1CALF2   -.990000 00 * 3CALF2   -.990000 00 * 4CALF2
             -.990000 00 * 5CALF2    -.990000 00 * 6CALF2    -.990000 00 * 7CALF2    -.990000 00 * 8CALF2
             <=         0.0

69  2WSTR    -.9950D 00 * 2PWSTR    +.100000 01 * 2SWSTR   +.100000 01 * 2TGSTR   +.100000 01 * 2PWFSTR
             <=         0.0

70  2TGSTR   -.9950D 00 * 2TGSTR    +.100000 01 * 2PGSTRFS +.100000 01 * 2PGSTR   -.995000 00 * 1GSTR2   -.995000 00 * 3GSTR2
             -.995000 00 * 4GSTR2    -.995000 00 * 5GSTR2    -.995000 00 * 6GSTR2    -.995000 00 * 7GSTR2    -.995000 00 * 8GSTR2
             <=         0.0
```

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71  2GSTR    0.10000 01 * 2SGSTR   +.100000 01 * 2TFSTR   -.998000 00 * 2PGSTR
             <=          0.0
72  2TFSTR   -.99800 00 * 2TFSTR   +.100000 01 * 2PWGFSTR -.995000 00 * 1FSTR2   -.995000 00 * 3FSTR2   -.995000 00 * 4FSTR2
             -.995000 00 * 5FSTR2   -.995000 00 * 6FSTR2   -.995000 00 * 7FSTR2   -.995000 00 * 8FSTR2   -.995000 00 * 1FDST2
             -.990000 00 * 3FDST2   -.990000 00 * 4FDST2   -.990000 00 * 5FDST2   -.990000 00 * 6FDST2   -.990000 00 * 7FDST2
             -.990000 00 * 8FDST2
             <=          0.0

73  2RCORN   0.13000 02 * 2PWSTR   +.510000 02 * 2PWFSTR +.321400 02 * 2PWGFSTR +.510000 02 * 2BFDSTRA +.510000 02 * 2BFDSTRB
             +.110020 03 * 2PSMILK   +.228000 03 * 2PMOG     -.100000 01 * 2FCORN    -.950000 00 * 2FGRSO    -.100000 01 * 2BUYFOGR
             <=          0.0

74  2RALFM   0.50000 00 * 2PCALF   +.450000 00 * 2PWSTR   +.230000 00 * 2PWFSTR  +.150000 00 * 2PWGFSTR +.230000 00 * 2BFDSTRA
             +.230000 00 * 2BFDSTRB  +.604000 01 * 2PSMILK   -.320000 01 * 2PSIL     -.100000 01 * 2FALFM    -.850000 00 * 2FNATM
             -.100000 01 * ALFM1>2   -.100000 01 * ALFM3>2   -.100000 01 * ALFM4>2   -.100000 01 * ALFM5>2   -.100000 01 * ALFM6>2
             -.100000 01 * ALFM7>2   -.100000 01 * ALFM8>2   +.100000 01 * 2ALF>FOR
             <=          0.0

75  2RFORREQ 0.18300 01 * 2PCALF   +.360000 00 * 2PWSTR   -.100000 01 * 2ALF>FOR -.100000 01 * 2TNM>FOR
             <=          0.0

76  2RWPASTU 0.92000 00 * 2PCALF   +.180000 00 * 2PWSTR   -.250000 00 * 2PWMT     -.250000 00 * 2PCORN    -.250000 00 * 2PGRSOR
             -.100000 01 * 2TNM>WPU
             <=          0.0

77  2OPCAP   0.20000 02 * 2PCALF   +.100000 02 * 2PWSTR   +.100000 02 * 2PGSTRFS +.100000 02 * 2PGSTR   +.120000 02 * 2PWFSTR
             +.120000 02 * 2PWGFSTR  +.150000 02 * 2BFDSTRA  +.150000 02 * 2BFDSTRB  +.200000 03 * 2PSMILK   +.300000 03 * 2PMOG
             +.900000 01 * 2PWMT     +.360000 02 * 2PCORN    +.120000 02 * 2PGRSOR   +.230000 02 * 2PSIL     +.200000 02 * 2PALFM
             +.150000 02 * 2PNATM    -.100000 01 * 2OPCAPR
             <=          0.0

78  2LSRCAP  0.25000 03 * 2BFDSTRA +.250000 03 * 2BFDSTRB +.600000 02 * 2PSMILK  +.100000 02 * 2PMOG     +.180000 03 * 1CALF2
             +.180000 03 * 3CALF2    +.180000 03 * 4CALF2    +.180000 03 * 5CALF2    +.180000 03 * 6CALF2    +.180000 03 * 7CALF2
             +.180000 03 * 8CALF2    +.295000 03 * 1GSTR2    +.295000 03 * 1GSTR3    +.295000 03 * 3GSTR2    +.295000 03 * 4GSTR2
             +.295000 03 * 5GSTR2    +.295000 03 * 6GSTR2    +.295000 03 * 7GSTR2    +.295000 03 * 8GSTR2    +.295000 03 * 1FSTR2
             +.285000 03 * 3FSTR2    +.285000 03 * 4FSTR2    +.285000 03 * 5FSTR2    +.285000 03 * 6FSTR2    +.285000 03 * 7FSTR2
             +.285000 03 * 8FSTR2    +.295000 03 * 1FDST2    +.295000 03 * 3FDST2    +.295000 03 * 4FDST2    +.295000 03 * 5FDST2
             +.295000 03 * 6FDST2    +.295000 03 * 7FDST2    +.295000 03 * 8FDST2    -.100000 01 * 2LSRCAPR
             <=          0.0

79  2DEPREC  0.11500 02 * 2PCALF   +.300000 01 * 2PWSTR   +.500000 00 * 2PGSTRFS +.500000 00 * 2PGSTR   +.500000 00 * 2PWFSTR
             +.500000 00 * 2PWGFSTR  +.900000 01 * 2BFDSTRA  +.900000 01 * 2BFDSTRB  +.630000 02 * 2PSMILK   +.590000 02 * 2PMOG
             +.130000 02 * 2PWMT     +.200000 02 * 2PCORN    +.120000 02 * 2PGRSOR   +.250000 02 * 2PSIL     +.215000 02 * 2PALFM
             +.180000 02 * 2PNATM    -.100000 01 * 2DEPR     -.250000 01 * 2CHVWMT   -.350000 01 * 2CHVCORN  -.250000 01 * 2CHVGRSO
             <=          0.0

80  2SFDGRAI -.10000 01 * 2SCORN   -.950000 00 * 2SGRSO   +.100000 01 * 2BUYFOGR -.100000 01 * FDGR1>2  +.100000 01 * FDGR2>1
             +.100000 01 * FDGR2>3   +.100000 01 * FDGR2>4   +.100000 01 * FDGR2>5   +.100000 01 * FDGR2>6   +.100000 01 * FDGR2>7
             +.100000 01 * FDGR2>8   -.100000 01 * FDGR3>2   -.100000 01 * FDGR4>2   -.100000 01 * FDGR5>2   -.100000 01 * FDGR6>2

             -.100000 01 * FDGR7>2   -.100000 01 * FDGR8>2
             <=          0.0
81  2SALFM   -.10500 01 * 2SALFM   -.850000 00 * 2SNATM   +.100000 01 * ALFM2>1  +.100000 01 * ALFM2>3  +.100000 01 * ALFM2>4
             +.100000 01 * ALFM2>5   +.100000 01 * ALFM2>6   +.100000 01 * ALFM2>7   +.100000 01 * ALFM2>8
             =           0.0

82  2FDLCTCP 0.10000 01 * 2PWFSTR  +.100000 01 * 2PWGFSTR +.100000 01 * 2BFDSTRA +.100000 01 * 2BFDSTRB -.100000 01 * 2FCLOTDE
             <=    225000.00000

83  2FUEL    0.35000 01 * 2PCALF   +.100000 01 * 2PWSTR   +.100000 01 * 2PGSTRFS +.500000 00 * 2PGSTR   +.100000 01 * 2PWFSTR
             +.100000 01 * 2PWGFSTR  +.100000 01 * 2BFDSTRA  +.100000 01 * 2BFDSTRB  +.930000 01 * 2PSMILK   +.104100 02 * 2PMOG
             +.450000 01 * 2PWMT     +.115000 02 * 2PCORN    +.425000 01 * 2PGRSOR   +.950000 01 * 2PSIL     +.105000 02 * 2PALFM
             +.550000 01 * 2PNATM    -.100000 01 * 2FUELCST
             <=          0.0

84  2FERT    0.14500 02 * 2PWMT     +.380000 02 * 2PCORN    +.297500 02 * 2PGRSOR   +.250000 02 * 2PSIL     +.450000 01 * 2PALFM
             -.100000 01 * 2FERTCST
             <=          0.0

85  3CPLD1   0.10000 01 * 3PWMT     +.100000 01 * 3PGRSOR   +.100000 01 * 3PFGRAGE +.200000 01 * 3PWMTFAL +.100000 01 * 3DEVIRR
             +.100000 01 * 31DLECPL
             <=   6616835.00000

86  3CPLD2   0.10000 01 * 3PCORN    +.100000 01 * 3PSILIR   +.100000 01 * 3PWMTIRR +.100000 01 * 3PGSIRR  +.100000 01 * 3PLTALF
             -.100000 01 * 3DEVIRR
             <=    400000.00000

87  3PASTNAT 0.45000 01 * 3PCALF   +.350000 01 * 3PGSTRFS +.150000 01 * 3PSMILK  +.400000 01 * 3PGSTR   -.100000 01 * 3TPAST
             <=   4190000.00000

88  3PASTTAN 0.15000 01 * 3PSMILK  +.466000 00 * 3TPAST
             <=    149000.00000

89  3ALFMAY  0.10000 01 * 3PALFM   -.100000 01 * 3PLTALF
             <=    227000.00000

90  3LAB-J,F 0.26000 01 * 3PCALF   +.225000 01 * 3PWSTR   +.140000 01 * 3PWGFSTR +.140000 01 * 3BFDSTRA +.950000 01 * 3PSMILK
             +.680000 01 * 3PMOG     -.300000 03 * 3MLABFT
             <=   1415553.00000

91  3LAB-M,A 0.26000 01 * 3PCALF   +.700000 00 * 3PWSTR   +.140000 01 * 3BFDSTRA +.110000 02 * 3PSMILK  +.560000 01 * 3PMOG
             +.710000 00 * 3PCORN    +.460000 00 * 3PGRSOR   +.530000 00 * 3PSILIR   +.120000 00 * 3PALFM    -.300000 03 * 3MLABFT
             +.430000 00 * 3PFGRAGE  +.170000 00 * 3PWMTFAL  +.480000 00 * 3PGSIRR
             <=   1811818.00000

92  3LAB-M,J 0.10000 00 * 3PCALF   +.200000 00 * 3PGSTRFS +.150000 01 * 3PWFSTR  +.150000 01 * 3BFDSTRB +.133000 02 * 3PSMILK
             +.470000 01 * 3PMOG     +.200000 00 * 3PGSTR    +.620000 00 * 3PWMT     +.560000 00 * 3PCORN    +.200000 00 * 3PGRSOR
             +.970000 00 * 3PSILIR   +.196000 01 * 3PALFM    -.400000 03 * 3MLABFT   -.330000 01 * 3MLABSU   +.900000-01 * 3PFGRAGE
             +.620000 00 * 3PWMTFAL  +.650000 00 * 3PWMTIRR  +.570000 00 * 3PGSIRR  -.310000 00 * 3CHVWMT   +.400000 00 * 3PLTALF
             <=   5225509.00000
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 93  3LAB-J,A 0.20000 00 * 3PCALF   +.200000 00 * 3PGSTRFS +.140000 01 * 3PWFSTR  +.140000 01 * 3BFDSTRB +.140000 02 * 3PSMILK
          +.890000 01 * 3PHOG     +.100000 00 * 3PGSTR    +.980000 00 * 3PWHT     +.490000 00 * 3PCORN    +.530000 00 * 3PGRSOR
          +.420000 00 * 3PSILIR   +.124000 01 * 3PALFH    -.460000 03 * 3HLABFT   -.660000 01 * 3HLABSU   +.280000 00 * 3PFORAGE
          +.620000 00 * 3PWHTFAL  +.100000 01 * 3PWHTIRR  +.230000 00 * 3PGSIRR  -.310000 00 * 3CHVWHT   +.600000 00 * 3PLTALF
          <=  5296671.00000

 94  3LAB-S,D 0.60000 00 * 3PCALF   +.670000 00 * 3PWSTR   +.200000 00 * 3PGSTRFS +.140000 01 * 3PWFSTR  +.150000 01 * 3PWGFSTR
          +.140000 01 * 3BFDSTRB  +.700000 01 * 3PSMILK   +.440000 01 * 3PHOG     +.490000 00 * 3PWHT     +.104000 01 * 3PCORN
          +.580000 00 * 3PGRSOR   +.254000 01 * 3PSILIR   +.680000 00 * 3PALFH    -.350000 03 * 3HLABFT   +.100000 01 * 3PFORAGE
          +.290000 00 * 3PWHTFAL  +.580000 00 * 3PWHTIRR  +.650000 00 * 3PGSIRR  -.520000 00 * 3CHVCURN  -.290000 00 * 3CHVGRSO
          <=  4987251.00000

 95  3LAB-N,D 0.10000 01 * 3PCALF   +.225000 01 * 3PWSTR   +.140000 01 * 3PWGFSTR +.150000 01 * 3BFDSTRA +.830000 01 * 3PSMILK
          +.560000 01 * 3PHOG     +.112000 01 * 3PCORN    +.580000 00 * 3PGRSOR   +.126000 01 * 3PSILIR   -.300000 03 * 3HLABFT
          +.750000 00 * 3PFORAGE  +.650000 00 * 3PGSIRR   -.340000 00 * 3CHVCURN  -.290000 00 * 3CHVGRSO
          <=  1699273.00000

 96  3PWH-MAY 0.20000 00 * 3PCORN   +.100000 00 * 3PGRSOR  +.110000 00 * 3PSILIR  +.920000 00 * 3PALFH   -.150000 03 * 3HLABFT
          +.400000-01 * 3PFORAGE  +.110000 00 * 3PGSIRR   +.200000 00 * 3PLTALF   +.100000 01 * 3IFWMKJ   -.100000 01 * 3IFWMKR
          <=  1591597.00000

 97  3PWH-JUN 0.62000 00 * 3PWHT    +.540000 00 * 3PCORN    +.100000 00 * 3PGRSOR  +.460000 00 * 3PSILIR  +.104000 01 * 3PALFH
          -.150000 03 * 3HLABFT   -.250000 01 * 3HLABSU   +.500000-01 * 3PFORAGE  +.620000 00 * 3PWHTFAL  +.650000 00 * 3PWHTIRR
          +.460000 00 * 3PGSIRR   -.310000 00 * 3CHVWHT   +.200000 00 * 3PLTALF   -.100000 01 * 3IFWMKJ   +.100000 01 * 3IFWMKR
          <=  1753611.00000

 98  3PWH-SEP 0.43000 00 * 3PWHT    +.500000 00 * 3PCORN    +.580000 00 * 3PGRSOR  +.860000 00 * 3PSILIR  +.660000 00 * 3PALFH
          -.150000 03 * 3HLABFT   +.500000 00 * 3PFORAGE  +.190000 00 * 3PWHTFAL  +.520000 00 * 3PWHTIRR  +.650000 00 * 3PGSIRR
          -.250000 00 * 3CHVCURN  -.290000 00 * 3CHVGRSO
          <=  1670562.00000

 99  3PWH-OCT 0.54000 00 * 3PCORN   +.580000 00 * 3PGRSOR  +.153000 01 * 3PSILIR  +.620000 00 * 3PALFH   -.100000 03 * 3HLABFT
          +.125000 01 * 3PFORAGE  +.100000 00 * 3PWHTFAL  +.600000-01 * 3PWHTIRR  +.650000 00 * 3PGSIRR   -.270000 00 * 3CHVCURN
          -.290000 00 * 3CHVGRSO
          <=  1760206.00000

100  3WHTPD   -.24000 02 * 3PWHT    +.100000 01 * 3SWHT    -.320000 02 * 3PWHTFAL -.400000 02 * 3PWHTIRR
               <=          0.0

101  3CORNPD  -.10400 03 * 3PCORN   +.100000 01 * 3SCORN   +.100000 01 * 3FCORN
               <=          0.0

102  3GRSOPD  -.36000 02 * 3PGRSOR  +.100000 01 * 3SGRSO   +.100000 01 * 3FGRSO   -.750000 02 * 3PGSIRR
               <=          0.0

103  3ALFPD   -.35000 01 * 3PALFH   +.105000 01 * 3SALFH   +.105000 01 * 3FALFH
               <=          0.0
104  3BESCALF -.10000 01 * 3SCALF   +.100000 01 * 3CALF1   +.100000 01 * 3CALF2   +.100000 01 * 3CALF4   +.100000 01 * 3CALF5
          +.100000 01 * 3CALF6    +.100000 01 * 3CALF7    +.100000 01 * 3CALF8
               <=          0.0

105  3BESWSTR -.10000 01 * 3SWSTR   +.100000 01 * 3GSTR1   +.100000 01 * 3GSTR2   +.100000 01 * 3GSTR4   +.100000 01 * 3GSTR5
          +.100000 01 * 3GSTR6    +.100000 01 * 3GSTR7    +.100000 01 * 3GSTR8    +.100000 01 * 3FDST1    +.100000 01 * 3FDST2
          +.100000 01 * 3FDST4    +.100000 01 * 3FDST5    +.100000 01 * 3FDST6    +.100000 01 * 3FDST7    +.100000 01 * 3FDST8
               <=          0.0

106  3BESGSTR -.10000 01 * 3SGSTR   +.100000 01 * 3FSTR1   +.100000 01 * 3FSTR2   +.100000 01 * 3FSTR4   +.100000 01 * 3FSTR5
          +.100000 01 * 3FSTR6    +.100000 01 * 3FSTR7    +.100000 01 * 3FSTR8
               <=          0.0

107  3TCALF   -.75000 00 * 3PCALF   +.100000 01 * 3SCALF   +.100000 01 * 3TWSTR
               <=          0.0

108  3TWSTR   -.99500 00 * 3TWSTR   +.100000 01 * 3PWSTR   -.550000 00 * 1CALF3   -.990000 00 * 2CALF3   -.990000 00 * 4CALF3
          -.990000 00 * 5CALF3    -.990000 00 * 6CALF3    -.990000 00 * 7CALF3    -.990000 00 * 8CALF3
               <=          0.0

109  3WSTR    -.99500 00 * 3PWSTR   +.100000 01 * 3SWSTR   +.100000 01 * 3TGSTR   +.100000 01 * 3PWFSTR
               <=          0.0

110  3TGSTR   -.99500 00 * 3TGSTR   +.100000 01 * 3PGSTRFS +.100000 01 * 3PGSTR   -.995000 00 * 1GSTR3   -.995000 00 * 2GSTR3
          -.995000 00 * 4GSTR3    -.995000 00 * 5GSTR3    -.995000 00 * 6GSTR3    -.995000 00 * 7GSTR3    -.995000 00 * 8GSTR3
               <=          0.0

111  3GSTR    0.10000 01 * 3SGSTR   +.100000 01 * 3TFSTR   -.998000 00 * 3PGSTR
               <=          0.0

112  3TFSTR   -.99800 00 * 3TFSTR   +.100000 01 * 3PWGFSTR -.995000 00 * 1FSTR3   -.995000 00 * 2FSTR3   -.995000 00 * 4FSTR3
          -.995000 00 * 5FSTR3    -.995000 00 * 6FSTR3    -.995000 00 * 7FSTR3    -.995000 00 * 8FSTR3    -.990000 00 * 1FDST3
          -.990000 00 * 2FDST3    -.990000 00 * 4FDST3    -.990000 00 * 5FDST3    -.990000 00 * 6FDST3    -.990000 00 * 7FDST3
          -.990000 00 * 8FDST3
               <=          0.0

113  3RCORN   0.13000 02 * 3PWSTR   +.510000 02 * 3PWFSTR  +.321400 02 * 3PWGFSTR +.510000 02 * 3BFDSTRA +.510000 02 * 3BFDSTRB
          +.110020 03 * 3PSMILK   +.228000 03 * 3PHOG     -.100000 01 * 3FCORN    -.950000 00 * 3FGRSO    -.100000 01 * 3BUYFDGR
               <=          0.0

114  3RALFH   0.50000 00 * 3PCALF   +.450000 00 * 3PWSTR   +.230000 00 * 3PWFSTR  +.150000 00 * 3PWGFSTR +.230000 00 * 3BFDSTRA
          +.230000 00 * 3BFDSTRB  +.604000 01 * 3PSMILK   -.400000 01 * 3PSILIR   -.100000 01 * 3FALFH    -.100000 01 * ALFH1>3
          -.100000 01 * ALFH2>3   -.100000 01 * ALFH4>3   -.100000 01 * ALFH5>3   -.100000 01 * ALFH6>3   -.100000 01 * ALFH7>3
          -.100000 01 * ALFH8>3   +.100000 01 * 3ALF>FOR
               <=          0.0
115  3RFORREQ 0.18300 01 * 3PCALF   +.360000 00 * 3PWSTR   -.150000 01 * 3PFORAGE -.100000 01 * 3ALF>FOR
               <=          0.0

116  3RWPASTU 0.42000 00 * 3PCALF   +.180000 00 * 3PWSTR   -.300000 00 * 3PCORN   -.150000 00 * 3PGRSOR -.150000 00 * 3PWHTFAL
          -.100000 00 * 3PWHTIRR  -.300000 00 * 3PGSIRR
               <=          0.0
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117  3DPCAP   0.20000 02 * 3PCALF   +.100000 02 * 3PWSTR   +.100000 02 * 3PGSTRFS +.120000 02 * 3PWFSTR  +.120000 02 * 3PWGFSTR
               +.150000 02 * 3BFDSTRA  +.140000 02 * 3BFDSTRB  +.200000 03 * 3FSMILK   +.300000 03 * 3PHOG     +.100000 02 * 3PGSTR
               +.600000 01 * 3PWMT     +.360000 02 * 3PGORN    +.110000 02 * 3PGRSOR   +.210000 02 * 3PSILIR   +.200000 02 * 3PALFM
               +.125000 02 * 3PFORAGE  +.750000 01 * 3PWMTFAL  +.160000 02 * 3PWMTIRR  +.190000 02 * 3PGSIRR   -.100000 01 * 3GPCAPR
               <=          0.0

118  3LSRCAP  0.25000 03 * 3BFDSTRA +.250000 03 * 3BFDSTRB +.600000 02 * 3PSMILK  +.100000 02 * 3PHOG    +.180000 03 * 1CALF3
               +.180000 03 * 2CALF3    +.180000 03 * 4CALF3    +.180000 03 * 5CALF3    +.180000 03 * 6CALF3    +.180000 03 * 7CALF3
               +.180000 03 * 8CALF3    +.295000 03 * 2GSTR3    +.295000 03 * 4GSTR3    +.295000 03 * 5GSTR3    +.295000 03 * 6GSTR3
               +.295000 03 * 7GSTR3    +.295000 03 * 8GSTR3    +.285000 03 * 1FSTR3    +.285000 03 * 2FSTR3    +.285000 03 * 4FSTR3
               +.285000 03 * 5FSTR3    +.285000 03 * 6FSTR3    +.285000 03 * 7FSTR3    +.285000 03 * 8FSTR3    +.295000 03 * 1FDST3
               +.295000 03 * 2FDST3    +.295000 03 * 4FDST3    +.295000 03 * 5FDST3    +.295000 03 * 6FDST3    +.295000 03 * 7FDST3
               +.295000 03 * 8FDST3    -.100000 01 * 3LSRCAPR
               <=          0.0

119  3DEPREC  0.11500 02 * 3PCALF   +.300000 01 * 3PWSTR   +.500000 00 * 3PGSTRFS +.900000 00 * 3PWFSTR  +.500000 00 * 3PWGFSTR
               +.900000 01 * 3BFDSTRA  +.900000 01 * 3BFDSTRB  +.630000 02 * 3PSMILK   +.590000 02 * 3PHOG     +.500000 00 * 3PGSTR
               +.600000 01 * 3PWMT     +.200000 02 * 3PCORN    +.120000 02 * 3PGRSOR   +.350000 02 * 3PSILIR   +.215000 02 * 3PALFM
               +.120000 02 * 3PFORAGE  -.100000 01 * 3DEPR     +.600000 01 * 3PWMTFAL  +.120000 02 * 3PWMTIRR  +.170000 02 * 3PGSIRR
               -.300000 01 * 3CMVWMT   -.400000 01 * 3CMVCORN  -.350000 01 * 3CMVGRSO
               <=          0.0

120  3SFDGRAI -.10000 01 * 3SCORN   -.100000 01 * 3SGRSO   -.100000 01 * 3SALFM   +.100000 01 * 3BUYFDGR -.100000 01 * FDGR1>3
               -.100000 01 * FDGR2>3   +.100000 01 * FDGR3>1   +.100000 01 * FDGR3>2   +.100000 01 * FDGR3>4   +.100000 01 * FDGR3>5
               +.100000 01 * FDGR3>6   +.100000 01 * FDGR3>7   +.100000 01 * FDGR3>8   -.100000 01 * FDGR4>3   -.100000 01 * FDGR5>3
               -.100000 01 * FDGR6>3   -.100000 01 * FDGR7>3   -.100000 01 * FDGR8>3
               <=          0.0

121  3SALFM   0.10000 01 * ALFM3>1  +.100000 01 * ALFM3>2  +.100000 01 * ALFM3>4  +.100000 01 * ALFM3>5  +.100000 01 * ALFM3>6
               +.100000 01 * ALFM3>7   +.100000 01 * ALFM3>8
               =           0.0

122  3FDLOTCP 0.10000 01 * 3PWFSTR  +.100000 01 * 3PWGFSTR +.100000 01 * 3BFDSTRA +.100000 01 * 3BFDSTRB -.100000 01 * 3FDLOTDE
               <=    350000.00000

123  3FUEL    0.35000 01 * 3PCALF   +.100000 01 * 3PWSTR   +.100000 01 * 3PGSTRFS +.100000 01 * 3PWFSTR  +.100000 01 * 3PWGFSTR
               +.100000 01 * 3BFDSTRA  +.100000 01 * 3BFDSTRB  +.930000 01 * 3PSMILK   +.134100 02 * 3PHOG     +.500000 00 * 3PGSTR
               +.200000 01 * 3PWMT     +.115000 02 * 3PCORN    +.500000 01 * 3PGRSOR   +.110000 02 * 3PSILIR   +.105000 02 * 3PALFM
               +.500000 01 * 3PFORAGE  -.100000 01 * 3FUELCST  +.300000 01 * 3PWMTFAL  +.575000 01 * 3PWMTIRR  +.850000 01 * 3PGSIRR
               <=          0.0
124  3FERT    0.38000 02 * 3PCORN   +.500000 01 * 3PGRSOR  +.350000 02 * 3PSILIR  +.450000 01 * 3PALFM   -.100000 01 * 3FERTCST
               +.117000 02 * 3PWMTIRR  +.350000 02 * 3PGSIRR
               <=          0.0

125  4CPLD1   0.10000 01 * 4PWMT    +.100000 01 * 4PGRSOR  +.100000 01 * 4PFORAGE +.200000 01 * 4PWMTFAL +.100000 01 * 4CEVIRR
               +.100000 01 * 41DLECPL  -.100000 01 * 4TAM>CP1
               <=  5000000.00000

126  4CPLD2   0.10000 01 * 4PCORN   +.100000 01 * 4PSIL    +.100000 01 * 4WMTIRR  +.100000 01 * 4GSIRR   +.100000 01 * 4PLTALF
               -.100000 01 * 4DEVIRR
               <=  1300000.00000

127  4PASTNAT 0.45000 01 * 4PCALF   +.350000 01 * 4PGSTRFS +.600000 01 * 4PGSTR   +.150000 01 * 4PSMILK  -.100000 01 * 4TPAST
               <=  1910000.00000

128  4PASTTAR 0.15000 01 * 4PSMILK  +.466000 00 * 4TPAST   +.100000 01 * 4TAM>CP1
               <=    54000.00000

129  4ALFMAX  0.10000 01 * 4PALFM   -.100000 01 * 4PLTALF
               <=    91300.00000

130  4LAB-J,F 0.26000 01 * 4PCALF   +.225000 01 * 4PWSTR   +.140000 01 * 4PWGFSTR +.140000 01 * 4BFDSTRA +.950000 01 * 4PSMILK
               +.680000 01 * 4PHOG     -.300000 03 * 4HLABFT
               <=  230319.00000

131  4LAB-M,A 0.26000 01 * 4PCALF   +.700000 00 * 4PWSTR   +.140000 01 * 4BFDSTRA +.110000 02 * 4PSMILK  +.560000 01 * 4PHOG
               +.730000 00 * 4PCORN    +.410000 00 * 4PGRSOR   +.530000 00 * 4PSIL     +.120000 00 * 4PALFM    -.300000 03 * 4HLABFT
               +.430000 00 * 4PFORAGE  +.110000 00 * 4PWMTFAL  +.420000 00 * 4GSIRR
               <=  294793.00000

132  4LAB-M,J 0.10000 00 * 4PCALF   +.200000 00 * 4PGSTRFS +.200000 00 * 4PGSTR   +.150000 01 * 4PWFSTR  +.150000 01 * 4BFDSTRB
               +.133000 02 * 4PSMILK   +.470000 01 * 4PHOG     +.800000 00 * 4PWMT     +.530000 00 * 4PCORN    +.150000 00 * 4PGRSOR
               +.570000 00 * 4PSIL     +.196000 01 * 4PALFM    -.400000 03 * 4HLABFT   +.900000-01 * 4PFORAGE  +.880000 00 * 4PWMTFAL
               +.950000 00 * 4WMTIRR   +.720000 00 * 4GSIRR    -.440000 00 * 4CMVWMT   +.600000 00 * 4PLTALF
               <=  2031078.00000

133  4LAB-J,A 0.20000 00 * 4PCALF   +.200000 00 * 4PGSTRFS +.100000 00 * 4PGSTR   +.140000 01 * 4PWFSTR  +.140000 01 * 4BFDSTRB
               +.140000 02 * 4PSMILK   +.890000 01 * 4PHOG     +.730000 00 * 4PWMT     +.440000 00 * 4PCORN    +.370000 00 * 4PGRSOR
               +.420000 00 * 4PSIL     +.124000 01 * 4PALFM    -.400000 03 * 4HLABFT   -.660000 01 * 4HLABSU   +.280000 00 * 4PFORAGE
               +.580000 00 * 4PWMTFAL  +.108000 01 * 4WMTIRR   +.420000 00 * 4GSIRR    -.290000 00 * 4CMVWMT   +.800000 00 * 4PLTALF
               <=  2058738.00000

134  4LAB-S,O 0.60000 00 * 4PCALF   +.670000 00 * 4PWSTR   +.200000 00 * 4PGSTRFS +.140000 01 * 4PWFSTR  +.150000 01 * 4PWGFSTR
               +.140000 01 * 4BFDSTRB  +.700000 01 * 4PSMILK   +.440000 01 * 4PHOG     +.140000 00 * 4PWMT     +.118000 01 * 4PCORN
               +.620000 00 * 4PGRSOR   +.256000 01 * 4PSIL     +.680000 00 * 4PALFM    -.350000 03 * 4HLABFT   +.100000 01 * 4PFORAGE
               +.140000 00 * 4PWMTFAL  +.580000 00 * 4WMTIRR   +.650000 00 * 4GSIRR    -.590000 00 * 4CMVCORN  -.310000 00 * 4CMVGRSO
               <=  1938472.00000
135  4LAB-M,D 0.10000 01 * 4PCALF   +.225000 01 * 4PWSTR   +.140000 01 * 4PWGFSTR +.150000 01 * 4BFDSTRA +.830000 01 * 4PSMILK
               +.560000 01 * 4PHOG     +.142000 01 * 4PCORN    +.720000 00 * 4PGRSOR   +.120000 01 * 4PSIL     -.300000 03 * 4HLABFT
               +.750000 00 * 4PFORAGE  +.122000 01 * 4GSIRR    -.390000 00 * 4CMVCORN  -.360000 00 * 4CMVGRSO
               <=  276481.00000

136  4PWM-MAY 0.80000-01 * 4PCORN   +.700000-01 * 4PGRSOR  +.110000 00 * 4PSIL    +.920000 00 * 4PALFM   -.150000 03 * 4HLABFT
               +.400000-01 * 4PFORAGE  +.110000 00 * 4GSIRR    +.400000 00 * 4PLTALF   +.100000 01 * 4TFWMM>J  -.100000 01 * 4TFWM>JM
               <=  715512.00000

137  4PWM-JUN 0.80000 00 * 4PWMT    +.450000 00 * 4PCORN   +.700000-01 * 4PGRSOR  +.460000 00 * 4PSIL    +.104000 01 * 4PALFM
               -.150000 03 * 4HLABFT   -.250000 01 * 4HLABSU   +.500000-01 * 4PFORAGE  +.880000 00 * 4PWMTFAL  +.950000 00 * 4WMTIRR
               +.460000 00 * 4GSIRR    -.440000 00 * 4CMVWMT   +.200000 00 * 4PLTALF   -.100000 01 * 4TFWMM>J  +.100000 01 * 4TFWM>JM
               <=  749048.00000
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138  4PWH-SEP 0.10000 00 * 4PWHT     +.200000 00 * 4PCORN    +.400000-01 * 4PGRSOR  +.860000 00 * 4PSIL    +.660000 03 * 4PALFH
              -.150000 03 * 4HLABFT   +.500000 00 * 4PFORAGE  +.500000-01 * 4PWHTFAL +.520000 00 * 4WHTIRR  +.500000-01 * 4GSIRR
              -.100000 00 * 4CHVCORN  -.200000-01 * 4CHVGRSO
              <=   876148.00000

139  4PWH-OCT 0.40000-01 * 4PWHT     +.980000 00 * 4PCORN    +.600000 00 * 4PGRSOR  +.153000 01 * 4PSIL    +.200000-01 * 4PALFH
              -.100000 03 * 4HLABFT   +.125000 01 * 4PFORAGE  +.600000-01 * 4WHTIRR  +.650000 00 * 4GSIRR    -.490000 00 * 4CHVCORN
              -.290000 00 * 4CHVGRSO
              <=   840492.00000

140  4WHTPD   -.15000 02 * 4PWHT     +.100000 01 * 4SWHT     -.270000 02 * 4PWHTFAL -.400000 02 * 4WHTIRR
              <=          0.0

141  4CORNPD  -.11500 03 * 4PCORN    +.100000 01 * 4SCORN    +.100000 01 * 4FCORN
              <=          0.0

142  4GRSOPD  -.32000 02 * 4PGRSOR   +.100000 01 * 4SGRSO    +.100000 01 * 4FGRSO    -.790000 02 * 4GSIRR
              <=          0.0

143  4ALFPD   -.39000 01 * 4PALFH    +.105000 01 * 4SALFH    +.105000 01 * 4FALFH
              <=          0.0

144  4BESCALF -.10000 01 * 4SCALF    +.100000 01 * 4CALF1    +.100000 01 * 4CALF2    +.100000 01 * 4CALF3    +.100000 01 * 4CALF5
              +.100000 01 * 4CALF6    +.100000 01 * 4CALF7    +.100000 01 * 4CALF8
              <=          0.0

145  4BESWSTR -.10000 01 * 4SWSTR    +.100000 01 * 4GSTR1    +.100000 01 * 4GSTR2    +.100000 01 * 4GSTR3    +.100000 01 * 4GSTR5
              +.100000 01 * 4GSTR6    +.100000 01 * 4GSTR7    +.100000 01 * 4GSTR8    +.100000 01 * 4FDST1    +.100000 01 * 4FDST2
              +.100000 01 * 4FDST3    +.100000 01 * 4FDST5    +.100000 01 * 4FDST6    +.100000 01 * 4FDST7    +.100000 01 * 4FDST8
              <=          0.0

146  4BESGSTR -.10000 01 * 4SGSTR    +.100000 01 * 4FSTR1    +.100000 01 * 4FSTR2    +.100000 01 * 4FSTR3    +.100000 01 * 4FSTR5
              +.100000 01 * 4FSTR6    +.100000 01 * 4FSTR7    +.100000 01 * 4FSTR8
              <=          0.0
147  4TCALF   -.75000 00 * 4PCALF    +.100000 01 * 4SCALF    +.100000 01 * 4TWSTR
              <=          0.0

148  4TWSTR   -.99500 00 * 4TWSTR    +.100000 01 * 4PWSTR    -.990000 00 * 1CALF4    -.990000 00 * 2CALF4    -.990000 00 * 3CALF4
              -.990000 00 * 5CALF4    -.990000 00 * 6CALF4    -.990000 00 * 7CALF4    -.990000 00 * 8CALF4
              <=          0.0

149  4WSTR    -.99500 00 * 4PWSTR    +.100000 01 * 4SWSTR    +.100000 01 * 4TGSTR    +.100000 01 * 4PWFSTR
              <=          0.0

150  4TGSTR   -.99500 00 * 4TGSTR    +.100000 01 * 4PGSTRFS +.100000 01 * 4PGSTR    -.995000 00 * 1GSTR4    -.995000 00 * 2GSTR4
              -.995000 00 * 3GSTR4    -.995000 00 * 5GSTR4    -.995000 00 * 6GSTR4    -.995000 00 * 7GSTR4    -.995000 00 * 8GSTR4
              <=          0.0

151  4GSTR    0.10000 01 * 4SGSTR    +.100000 01 * 4TFSTR    -.998000 00 * 4PGSTR
              <=          0.0

152  4TFSTR   -.99800 00 * 4TFSTR    +.100000 01 * 4PWGFSTR -.995000 00 * 1FSTR4    -.995000 00 * 2FSTR4    -.995000 00 * 3FSTR4
              -.995000 00 * 5FSTR4    -.995000 00 * 6FSTR4    -.995000 00 * 7FSTR4    -.995000 00 * 8FSTR4    -.990000 00 * 1FDST4
              -.990000 00 * 2FDST4    -.990000 00 * 3FDST4    -.990000 00 * 5FDST4    -.990000 00 * 6FDST4    -.990000 00 * 7FDST4
              -.990000 00 * 8FDST4
              <=          0.0

153  4RCORN   0.13000 02 * 4PWSTR    +.510000 02 * 4PWFSTR  +.321400 02 * 4PWGFSTR +.510000 02 * 4BFDSTRA +.510000 02 * 4BFCSTRB
              +.110020 03 * 4PSMILK   +.228000 03 * 4PHOG     -.100000 01 * 4FCORN    -.950000 00 * 4FGRSO    -.100000 01 * 4BUYFDGR
              <=          0.0

154  4RALFH   0.50000 00 * 4PCALF    +.450000 00 * 4PWSTR    +.230000 00 * 4PWFSTR  +.150000 00 * 4PWGFSTR +.230000 00 * 4BFCSTRA
              +.230000 00 * 4BFDSTRB  +.604000 01 * 4PSMILK   -.400000 01 * 4PSIL     -.100000 01 * 4FALFH    -.100000 01 * ALFH1>4
              -.100000 01 * ALFH2>4   -.100000 01 * ALFH3>4   -.100000 01 * ALFH5>4   -.100000 01 * ALFH6>4   -.100000 01 * ALFH7>4
              -.100000 01 * ALFH8>4   +.100000 01 * 4ALF>FOR
              <=          0.0

155  4RFORREQ 0.18300 01 * 4PCALF    +.360000 00 * 4PWSTR    -.125000 01 * 4PFORAGE -.100000 01 * 4ALF>FOR
              <=          0.0

156  4RWPASTU 0.92000 00 * 4PCALF    +.180000 00 * 4PWSTR    -.300000 00 * 4PCORN    -.100000 00 * 4PGRSOR  -.100000 00 * 4PWHTFAL
              -.250000 00 * 4WHTIRR   -.250000 00 * 4GSIRR
              <=          0.0

157  4OPCAP   0.20000 02 * 4PCALF    +.100000 02 * 4PWSTR    +.100000 02 * 4PGSTRFS +.100000 02 * 4PGSTR    +.120000 02 * 4PWFSTR
              +.120000 02 * 4PWGFSTR  +.150000 02 * 4BFDSTRA  +.150000 02 * 4BFDSTRB  +.200000 03 * 4PSMILK   +.300000 03 * 4PHOG
              +.500000 01 * 4PWHT     +.360000 02 * 4PCORN    +.850000 01 * 4PGRSOR   +.210000 02 * 4PSIL     +.200000 02 * 4PALFH
              +.125000 02 * 4PFORAGE  +.650000 01 * 4PWHTFAL  +.160000 02 * 4WHTIRR  +.190000 02 * 4GSIRR    -.100000 01 * 4CPCAPR
              <=          0.0
158  4LSKCAP  0.25000 03 * 4BFDSTRA +.250000 03 * 4BFDSTRB +.600000 02 * 4PSMILK  +.100000 02 * 4PHOG    +.180000 03 * 1CALF4
              +.180000 03 * 2CALF4    +.180000 03 * 3CALF4    +.180000 03 * 5CALF4    +.180000 03 * 6CALF4    +.180000 03 * 7CALF4
              +.180000 03 * 8CALF4    +.295000 03 * 1GSTR4    +.295000 03 * 2GSTR4    +.295000 03 * 3GSTR4    +.295000 03 * 5GSTR4
              +.295000 03 * 6GSTR4    +.295000 03 * 7GSTR4    +.295000 03 * 8GSTR4    +.285000 03 * 1FSTR4    +.285000 03 * 2FSTR4
              +.285000 03 * 3FSTR4    +.285000 03 * 5FSTR4    +.285000 03 * 6FSTR4    +.285000 03 * 7FSTR4    +.285000 03 * 8FSTR4
              +.295000 03 * 1FDST4    +.295000 03 * 2FDST4    +.295000 03 * 3FDST4    +.295000 03 * 5FDST4    +.295000 03 * 6FDST4
              +.295000 03 * 7FDST4    +.295000 03 * 8FDST4    -.100000 01 * 4LSKCAPR
              <=          0.0

159  4DEPREC  0.11500 02 * 4PCALF    +.300000 01 * 4PWSTR    +.500000 00 * 4PGSTRFS +.500000 00 * 4PGSTR    +.500000 00 * 4PWFSTR
              +.500000 00 * 4PWGFSTR  +.900000 01 * 4BFDSTRA  +.900000 01 * 4BFDSTRB  +.630000 02 * 4PSMILK   +.590000 02 * 4PHOG
              +.400300 01 * 4PWHT     +.230000 02 * 4PCORN    +.100000 02 * 4PGRSOR   +.350000 02 * 4PSIL     +.215000 02 * 4PALFH
              +.120000 02 * 4PFORAGE  -.100000 01 * 4DEPR     +.400000 01 * 4PWHTFAL  +.170000 02 * 4WHTIRR  +.170000 02 * 4GSIRR
              -.300000 01 * 4CHVWHT   -.450000 01 * 4CHVCORN  -.400000 01 * 4CHVGRSO
              <=          0.0

160  4SFDGRAI -.10000 01 * 4SCORN    -.100000 01 * 4SGRSO    +.100000 01 * 4BUYFDGR -.100000 01 * FDGR1>4  -.100000 01 * FDGR2>4
              -.100000 01 * FDGR3>4   +.100000 01 * FDGR4>1   +.100000 01 * FDGR4>2   +.100000 01 * FDGR4>3   +.100000 01 * FDGR4>5
              +.100000 01 * FDGR4>6   +.100000 01 * FDGR4>7   +.100000 01 * FDGR4>8   -.100000 01 * FDGR5>4   -.100000 01 * FDGR6>4
              -.100000 01 * FDGR7>4   -.100000 01 * FDGR8>4
              <=          0.0
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161  4SALFH   -.10000 01 * 4SALFH   +.100000 01 * ALFH4>1 +.10000D 01 * ALFH4>2 +.100000 01 * ALFH4>3 +.100000 01 * ALFH4>5
              +.100000 01 * ALFH4>6   +.100000 01 * ALFH4>7   +.100000 01 * ALFH4>8
              =         0.0

162  4FDLOTCP 0.10000 01 * 4PWFSTR +.100000 01 * 4PWGFSTR +.100000 01 * 4BFDSTRA +.100000 01 * 4BFDSTRB -.100000 01 * 4FCLDICE
              <=    750000.00000

163  4FUEL    0.35000 01 * 4PCALF   +.100000 01 * 4PWSTR   +.100000 01 * 4PGSTRFS +.500000 00 * 4PGSTR   +.100000 01 * 4PWFSTR
              +.100000 01 * 4PWGFSTR +.100000 01 * 4BFDSTRA +.100000 01 * 4BFDSTRB +.930000 01 * 4PSMILK +.100000 02 * 4PHOG
              +.200000 01 * 4PWHT   +.115000 02 * 4PCORN   +.400000 01 * 4PGRSOR  +.120000 02 * 4PSIL    +.115000 02 * 4PALFH
              +.500000 01 * 4FEDRAGE -.100000 01 * 4FUELCST +.250000 01 * 4PWHTFAL +.900000 01 * 4WHTIRR +.650000 01 * 4GSIRR
              <=         0.0

164  4FERT    0.38000 02 * 4PCORN   +.350000 02 * 4PSIL    +.450000 01 * 4PALFH   -.100000 01 * 4FERTCST +.350000 02 * 4WHTIRR
              +.300000 02 * 4GSIRR
              <=         0.0

165  5CPLD1   0.10000 01 * 5PWHT    +.100000 01 * 5PCORN   +.10000D 01 * 5PGRSOR +.100000 01 * 5PSOY    +.100000 01 * 5PSIL
              +.100000 01 * 5PLTALF  +.100000 01 * 5IDLECPL +.100000 01 * 5PLTTPAS
              <=   1500000.00000

166  5PASTNAT 0.45000 01 * 5PCALF   +.350000 01 * 5PGSTRFS +.150000 01 * 5PSMILK +.200000 01 * 5PGSTR   -.100000 01 * 5TPAST
              <=   3350000.00000

167  5PASTTAM 0.15000 01 * 5PSMILK +.466000 00 * 5TPAST   -.100000 01 * 5PLTTPAS
              <=    278000.00000
168  5NATHAY  0.10000 01 * 5PNATH
              <=    170000.00000

169  5ALFHAY  0.10000 01 * 5PALFH   +.100000 01 * 5PLTALF
              <=    142700.00000

170  5LAB-J,F 0.26000 01 * 5PCALF   +.225000 01 * 5PWSTR   +.140000 01 * 5PWGFSTR +.140000 01 * 5BFDSTRA +.950000 01 * 5PSMILK
              +.680000 01 * 5PHOG     -.300000 03 * 5HLABFT
              <=   1010644.00000

171  5LAB-M,A 0.26000 01 * 5PCALF   +.700000 00 * 5PWSTR   +.140000 01 * 5BFDSTRA +.110000 02 * 5PSMILK +.560000 01 * 5PHOG
              +.100000-01 * 5PWHT     +.390000 00 * 5PCORN    +.390000 00 * 5PGRSOR   +.230000 00 * 5PSOY     +.290000 00 * 5PSIL
              -.300000 03 * 5HLABFT
              <=   1293560.00000

172  5LAB-M,J 0.10000 00 * 5PCALF   +.200000 00 * 5PGSTRFS +.150000 01 * 5PWFSTR  +.150000 01 * 5BFDSTRB +.133000 02 * 5PSMILK
              +.470000 01 * 5PHOG     +.200000 00 * 5PGSTR    +.710000 00 * 5PWHT     +.800000 00 * 5PCORN    +.720000 00 * 5PGRSOR
              +.940000 00 * 5PSOY     +.720000 00 * 5PSIL     +.282000 01 * 5PALFH    -.400000 03 * 5HLABFT   -.330000 01 * 5HLABSU
              -.360000 00 * 5CHVWHT   +.600000 00 * 5PLTALF
              <=   2864713.00000

173  5LAB-J,A 0.20000 00 * 5PCALF   +.200000 00 * 5PGSTRFS +.140000 01 * 5PWFSTR  +.140000 01 * 5BFDSTRB +.140000 02 * 5PSMILK

              +.890000 01 * 5PHOG     +.100000 00 * 5PGSTR    +.133000 01 * 5PWHT     +.190000 00 * 5PCORN    +.210000 00 * 5PGRSOR
              +.700000-01 * 5PSOY     +.210000 00 * 5PSIL     +.576000 01 * 5PALFH    -.350000 03 * 5HLABFT   -.660000 01 * 5HLABSU
              -.370000 00 * 5CHVWHT   +.800000 00 * 5PLTALF
              <=   2903725.00000

174  5LAB-S,D 0.60000 00 * 5PCALF   +.670000 00 * 5PWSTR   +.200000 00 * 5PGSTRFS +.140000 01 * 5PWFSTR  +.150000 01 * 5PWGFSTR
              +.140000 01 * 5BFDSTRB +.700000 01 * 5PSMILK   +.440000 01 * 5PHOG     +.510000 00 * 5PWHT     +.121000 01 * 5PCORN
              +.109000 01 * 5PGRSOR  +.115000 01 * 5PSOY     +.269000 01 * 5PSIL     +.460000 00 * 5PALFH    +.310000 01 * 5PWATN
              -.300000 03 * 5HLABFT   +.610000 00 * 5CHVCORN -.540000 00 * 5CHVGRSO -.580000 00 * 5CHVSOY
              <=   2734095.00000

175  5LAB-N,D 0.10000 01 * 5PCALF   +.225000 01 * 5PWSTR   +.140000 01 * 5PWGFSTR +.150000 01 * 5BFDSTRA +.830000 01 * 5PSMILK
              +.560000 01 * 5PHOG     +.102000 01 * 5PCORN    +.540000 00 * 5PGRSOR   +.850000 00 * 5PSOY     +.134000 01 * 5PSIL
              -.150000 03 * 5HLABFT   -.220000 00 * 5CHVGRSO -.220000 00 * 5CHVSOY
              <=   1213208.00000

176  5PWH-MAY 0.48000 00 * 5PCORN   +.400000 00 * 5PGRSOR +.330000 00 * 5PSOY    +.400000 00 * 5PSIL    -.150000 03 * 5HLABFT
              +.400000 00 * 5PLTALF   +.100000 01 * 5TPWHM>J -.100000 01 * 5TPWHJ>M
              <=    596403.00000

177  5PWH-JUN 0.71000 00 * 5PWHT    +.320000 00 * 5PCORN   +.320000 00 * 5PGRSOR +.610000 00 * 5PSOY    +.320000 00 * 5PSIL
              +.282000 01 * 5PALFH    -.150000 03 * 5HLABFT   -.500000 01 * 5HL-BSU   -.360000 00 * 5CHVWHT   +.200000 00 * 5PLTALF
              -.100000 01 * 5TPWHM>J +.100000 01 * 5TPWHJ>M
              <=    556348.00000
178  5PWH-SEP 0.37000 00 * 5PWHT    +.430000 00 * 5PCORN   +.530000 00 * 5PSIL    +.460000 00 * 5PALFH   -.160000 03 * 5HLABFT
              <=    641219.00000

179  5PWH-OCT 0.14000 00 * 5PWHT    +.770000 00 * 5PCORN   +.109000 01 * 5PGRSOR +.115000 01 * 5PSOY    +.252000 01 * 5PSIL
              -.540000 00 * 5CHVGRSO -.580000 00 * 5CHVSOY
              <=    702295.00000

180  5WHTPD   -.33000 02 * 5PWHT    +.100000 01 * 5SWHT
              <=         0.0

181  5CORNPD  -.62900 02 * 5PCORN   +.100000 01 * 5SCORN   +.100000 01 * 5PCORN
              <=         0.0

182  5GRSOPD  -.52000 02 * 5PGRSOR +.100000 01 * 5SGRSO   +.100000 01 * 5PGRSO
              <=         0.0

183  5ALFPD   -.26000 01 * 5PALFH   +.105000 01 * 5SALFH   +.105000 01 * 5PALFH
              <=         0.0

184  5NATHPD  -.11300 01 * 5PNATH   +.100000 01 * 5PNATH   +.105000 01 * 5SNATH   +.100000 01 * 5TNH>FOR +.100000 01 * 5TNH>NPU
              <=         0.0

185  5BESCALF -.10000 01 * 5SCALF   +.100000 01 * 5CALF1   +.100000 01 * 5CALF2   +.100000 01 * 5CALF3   +.100000 01 * 5CALF4
              +.100000 01 * 5CALF6   +.100000 01 * 5CALF7   +.100000 01 * 5CALF8
              <=         0.0
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186  SBCSWSTR -.10000 01 * SSWSTR   +.100000 01 * SGSTR1   +.100000 01 * SGSTR2   +.100000 01 * SGSTR3   +.100000 01 * SGSTR4
              +.100000 01 * SGSTR5   +.100000 01 * SGSTR7   +.100000 01 * SGSTR8   +.100000 01 * SFDST1   +.100000 01 * SFDST2
              +.100000 01 * SFDST3   +.100000 01 * SFDST4   +.100000 01 * SFDST6   +.100000 01 * SFDST7   +.100000 01 * SFDST8
              <=          0.0

187  SBCSGSTR -.10000 01 * SSGSTR   +.100000 01 * SFSTR1   +.100000 01 * SFSTR2   +.100000 01 * SFSTR3   +.100000 01 * SFSTR4
              +.100000 01 * SFSTR5   +.100000 01 * SFSTR7   +.100000 01 * SFSTR8
              <=          0.0

188  STCALF   -.75000 00 * SPCALF   +.100000 01 * SSCALF   +.100000 01 * STWSTR
              <=          0.0

189  STWSTR   -.99500 00 * STWSTR   +.100000 01 * SPWSTR   -.990000 00 * 1CALFS   -.990000 00 * 2CALFS   -.990000 00 * 3CALFS
              -.990000 00 * 4CALFS   -.990000 00 * 6CALFS   -.990000 00 * 7CALFS   -.990000 00 * 8CALFS
              <=          0.0

190  SWSTR    -.99500 00 * SPWSTR   +.100000 01 * SSWSTR   +.100000 01 * STGSTR   +.100000 01 * SPWFSTR
              <=          0.0
191  STGSTR   -.99500 00 * STGSTR   +.100000 01 * SPGSTRFS +.100000 01 * SPGSTR   -.995000 00 * 1GSTRS   -.995000 00 * 2GSTRS
              -.995000 00 * 3GSTRS   -.995000 00 * 4GSTRS   -.995000 00 * 6GSTRS   -.995000 00 * 7GSTRS   -.995000 00 * 8GSTRS
              <=          0.0

192  SGSTR    0.10000 01 * SSGSTR   +.100000 01 * STFSTR   -.998000 00 * SPGSTR
              <=          0.0

193  STFSTR   -.99800 00 * STFSTR   +.100000 01 * SPWFSTR -.995000 00 * 1FSTRS   -.995000 00 * 2FSTRS   -.995000 00 * 3FSTRS
              -.995000 00 * 4FSTRS   -.995000 00 * 6FSTRS   -.995000 00 * 7FSTRS   -.995000 00 * 8FSTRS   -.990000 00 * 1FDSTS
              -.990000 00 * 2FDSTS   -.990000 00 * 3FDSTS   -.990000 00 * 4FDSTS   -.990000 00 * 6FDSTS   -.990000 00 * 7FDSTS
              -.990000 00 * 8FDSTS
              <=          0.0

194  SRCORN   0.13000 02 * SPWSTR   +.510000 02 * SPWFSTR +.321400 02 * SPWGFSTR +.510000 02 * SBFDSTRA +.510000 02 * SBFDSTRB
              +.110020 03 * SPSMILK  +.228000 03 * SPMOG     -.100000 01 * SFCORN    -.950000 00 * SFGRSO    -.100000 01 * SBUYFDGR
              <=          0.0

195  SRALFM   0.50000 00 * SPCALF   +.450000 00 * SPWSTR   +.230000 00 * SPWFSTR  +.150000 00 * SPWGFSTR +.230000 00 * SBFDSTRA
              +.230000 00 * SBFDSTRB +.604000 01 * SPSMILK  -.340000 01 * SPSIL     -.100000 01 * SFALFM    -.850000 00 * SFNATH
              -.100000 01 * ALFM1>5  -.100000 01 * ALFM2>5  -.100000 01 * ALFM3>5  -.100000 01 * ALFM4>5  -.100000 01 * ALFM6>5
              -.100000 01 * ALFM7>5  -.100000 01 * ALFM8>5  +.100000 01 * SALF>FOR
              <=          0.0

196  SRFORREQ 0.18300 01 * SPCALF   +.360000 00 * SPWSTR   -.100000 01 * SALF>FOR -.100000 01 * STNM>FOR
              <=          0.0

197  SRMPASTU 0.92000 00 * SPCALF   +.180000 00 * SPWSTR   -.300000 00 * SPWHT    -.300000 00 * SPCORN   -.300000 00 * SPGRSOR
              -.100000 01 * STNM>MPU
              <=          0.0

198  SDPCAP   0.20000 02 * SPCALF   +.100000 02 * SPWSTR   +.100000 02 * SPGSTRFS +.120000 02 * SPWFSTR  +.120000 02 * SPWGFSTR
              +.150000 02 * SBFDSTRA +.150000 02 * SBFDSTRB +.200000 03 * SPSMILK  +.300000 03 * SPMOG     +.100000 02 * SPGSTR
              +.135000 02 * SPWHT    +.227000 02 * SPCORN   +.170000 02 * SPGRSOR  +.160000 02 * SPSOY     +.232500 02 * SPSIL
              +.200000 02 * SPALFM   +.130000 02 * SPNATH   -.100000 01 * SCPCAPR
              <=          0.0

199  SLSKCAP  0.25000 03 * SBFDSTRA +.250000 03 * SBFDSTRB +.600000 02 * SPSMILK  +.100000 02 * SPMOG     +.180000 03 * 1CALFS
              +.180000 03 * 2CALFS   +.180000 03 * 3CALFS   +.180000 03 * 4CALFS   +.180000 03 * 6CALFS   +.180000 03 * 7CALFS
              +.180000 03 * 8CALFS   +.295000 03 * 1GSTRS   +.295000 03 * 2GSTRS   +.295000 03 * 3GSTRS   +.295000 03 * 4GSTRS
              +.295000 03 * 6GSTRS   +.295000 03 * 7GSTRS   +.295000 03 * 8GSTRS   +.285000 03 * 1FSTRS   +.285000 03 * 2FSTRS
              +.285000 03 * 3FSTRS   +.285000 03 * 4FSTRS   +.285000 03 * 6FSTRS   +.285000 03 * 7FSTRS   +.285000 03 * 8FSTRS
              +.295000 03 * 1FDSTS   +.295000 03 * 2FDSTS   +.295000 03 * 3FDSTS   +.295000 03 * 4FDSTS   +.295000 03 * 6FDSTS
              +.295000 03 * 7FDSTS   +.295000 03 * 8FDSTS   -.100000 01 * SLSKCAPR
              <=          0.0

200  SDEPREC  0.11500 02 * SPCALF   +.300000 01 * SPWSTR   +.500000 00 * SPGSTRFS +.500000 00 * SPWFSTR  +.500000 00 * SPWGFSTR
              +.900000 01 * SBFDSTRA +.900000 01 * SBFDSTRB +.830000 02 * SPSMILK  +.590000 02 * SPMOG     +.500000 00 * SPGSTR
              +.130000 02 * SPWHT    +.180000 02 * SPCORN   +.160000 02 * SPGRSOR  +.130000 02 * SPSOY     +.310000 02 * SPSIL
              +.250000 02 * SPALFM   +.250000 02 * SPNATH   -.100000 01 * SDEPR     -.300000 01 * SCHVWHT   -.400000 01 * SCHVCORN
              -.300000 01 * SCHVGRSO -.300000 01 * SCHVSOY
              <=          0.0
201  SSFDGRAI -.10000 01 * SSCORN   -.950000 00 * SSGRSO   +.100000 01 * SBJYFDGR -.100000 01 * FDGR1>5  -.100000 01 * FDGR2>5
              -.100000 01 * FDGR3>5  -.100000 01 * FDGR4>5  +.100000 01 * FDGR5>1  +.100000 01 * FDGR5>2  +.100000 01 * FDGR5>3
              +.100000 01 * FDGR5>4  +.100000 01 * FDGR5>6  +.100000 01 * FDGR5>7  +.100000 01 * FDGR5>8  -.100000 01 * FDGR6>5
              -.100000 01 * FDGR7>5  -.100000 01 * FDGR8>5
              <=          0.0

202  SSALFM   -.10000 01 * SSALFM   -.850000 00 * SSNATH   +.100000 01 * ALFM5>1  +.100000 01 * ALFM5>2  +.100000 01 * ALFM5>3
              +.100000 01 * ALFM5>4  +.100000 01 * ALFM5>6  +.100000 01 * ALFM5>7  +.100000 01 * ALFM5>8
              =           0.0

203  SFOLOTCP 0.10000 01 * SPWFSTR  +.100000 01 * SPWGFSTR +.100000 01 * SBFDSTRA +.100000 01 * SBFDSTRB -.100000 01 * SFOLOTDE
              <=    309000.00000

204  SFUEL    0.35000 01 * SPCALF   +.100000 01 * SPWSTR   +.100000 01 * SPGSTRFS +.100000 01 * SPWFSTR  +.100000 01 * SPWGFSTR
              +.100000 01 * SBFDSTRA +.100000 01 * SBFDSTRB +.930000 01 * SPSMILK  +.104100 02 * SPMOG     +.500000 00 * SPGSTR
              +.550000 01 * SPWHT    +.625000 01 * SPCORN   +.600000 01 * SPGRSOR  +.450000 01 * SPSOY     +.150000 02 * SPSIL
              +.100000 02 * SPALFM   +.500000 01 * SPNATH   -.100000 01 * SFUELCST
              <=          0.0

205  SFERT    0.17000 02 * SPWHT     +.320000 02 * SPCORN   +.250000 02 * SPGRSOR  +.850000 01 * SPSOY     +.250000 02 * SPSIL
              +.450000 01 * SPALFM   -.100000 01 * SFERTCST
              <=          0.0

206  6CPLD1   0.10000 01 * 6PWHT     +.100000 01 * 6PGRSOR  +.100000 01 * 6PFCRAGE +.200000 01 * 6PWHTFAL +.100000 01 * 6CEVIRR
              +.100000 01 * 61DLECPL -.100000 01 * 6TAM>CPL
              <=  3500000.00000

207  6CPLD2   0.10000 01 * 6PCORN    +.100000 01 * 6PSIL     +.100000 01 * 6PWHTIRR +.100000 01 * 6PGSIRR  +.100000 01 * 6PLTALP
              -.100000 01 * 6DEVIRR
              <=   450000.00000
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208 6PASTMAY 0.45000 01 * 6PCALF   +.350000 01 * 6PGSTRFS +.150000 01 * 6PSMILK  +.600000 01 * 6PGSTR   -.100000 01 * 6TPAST
             <=  1980000.00000

209 6PASTTAR 0.15000 01 * 6PSMILK  +.666000 00 * 6TPAST   +.100000 01 * 6TAMDGPL
             <=    15000.00000

210 6MLPMAY  0.10000 01 * 6PALFM   -.100000 01 * 6PLTALF
             <=    50000.00000

211 6LAB-J,F 0.26000 01 * 6PCALF   +.225000 01 * 6PWSTR   +.140000 01 * 6PWGFSTR +.140000 01 * 6BFDSTRA +.950000 01 * 6PSMILK
             +.680000 01 * 6PHOG     -.300000 03 * 6MLABFT
             <=   621869.00000

212 6LAB-M,A 0.26000 01 * 6PCALF   +.700000 00 * 6PWSTR   +.140000 01 * 6BFDSTRA +.110000 02 * 6PSMILK  +.560000 01 * 6PHOG
             +.730000 00 * 6PCORN   +.410000 00 * 6PGRSOR   +.430000 00 * 6PFORAGE  +.530000 00 * 6PSIL     +.120000 00 * 6PALFM
             -.300000 03 * 6MLABFT  +.110000 00 * 6PWMTFAL  +.420000 00 * 6PGSIRR
             <=   745954.00000
213 6LAB-M,J 0.10000 00 * 6PCALF   +.200000 00 * 6PGSTRFS +.150000 01 * 6PWFSTR  +.150000 01 * 6BFDSTRB +.133000 02 * 6PSMILK
             +.470000 01 * 6PHOG     +.200000 00 * 6PGSTR    +.200000 00 * 6PWHT    +.530000 00 * 6PCORN    +.150000 00 * 6PGRSOR
             +.900000-01 * 6PFORAGE  +.575000 00 * 6PSIL     +.196000 01 * 6PALFM   -.400000 03 * 6MLABFT   +.260000 00 * 6PWMTFAL
             +.300000 00 * 6PWMTIRR  +.720000 00 * 6PGSIRR   -.130000 00 * 6CHVWHT  +.600000 00 * 6PLTALF
             <=  1794765.00000

214 6LAB-J,A 0.20000 00 * 6PCALF   +.200000 00 * 6PGSTRFS +.140000 01 * 6PWFSTR  +.140000 01 * 6BFDSTRB +.140000 02 * 6PSMILK
             +.890000 01 * 6PHOG     +.100000 00 * 6PGSTR    +.115000 01 * 6PWHT    +.480000 00 * 6PCORN    +.370000 00 * 6PGRSOR
             +.260000 00 * 6PFORAGE  +.420000 00 * 6PSIL     +.124000 01 * 6PALFM   -.400000 03 * 6MLABFT   -.660000 01 * 6MLABSU
             +.100000 01 * 6PWMTFAL  +.120000 01 * 6PWMTIRR  +.420000 00 * 6PGSIRR  -.540000 00 * 6CHVWHT  +.800000 00 * 6PLTALF
             <=  1819207.00000

215 6LAB-S,O 0.60000 00 * 6PCALF   +.670000 00 * 6PWSTR   +.200000 00 * 6PGSTRFS +.140000 01 * 6PWFSTR  +.150000 01 * 6PWGFSTR
             +.140000 01 * 6BFDSTRB  +.700000 01 * 6PSMILK  +.440000 01 * 6PHOG     +.140000 00 * 6PWHT    +.800000 00 * 6PCORN
             +.680000 00 * 6PGRSOR   +.100000 01 * 6PFORAGE  +.254000 01 * 6PSIL     +.680000 00 * 6PALFM   -.350000 03 * 6MLABFT
             +.140000 00 * 6PWMTFAL  +.580000 00 * 6PWMTIRR  +.720000 00 * 6PGSIRR  -.390000 00 * 6CHVCORN  -.340000 00 * 6CHVGRSO
             <=  1712932.00000

216 6LAB-M,D 0.10000 01 * 6PCALF   +.225000 01 * 6PWSTR   +.140000 01 * 6PWGFSTR +.150000 01 * 6BFDSTRA +.830000 01 * 6PSMILK
             +.560000 01 * 6PHOG     +.170000 01 * 6PCORN    +.680000 00 * 6PGRSOR   +.750000 00 * 6PFORAGE  +.126000 01 * 6PSIL
             -.300000 03 * 6MLABFT   +.720000 00 * 6PGSIRR   -.590000 00 * 6CHVCORN  -.340000 00 * 6CHVGRSO
             <=   746512.00000

217 6FWH-MAY 0.80000-01 * 6PCORN   +.800000-01 * 6PGRSOR  +.400000-01 * 6PFORAGE +.110000 00 * 6PSIL    +.920000 00 * 6PALFM
             -.150000 03 * 6MLABFT   +.110000 00 * 6PGSIRR   +.400000 00 * 6PLTALF   +.100000 01 * 6TFWHMJJ  -.100000 01 * 6TFWHJJR
             <=   632264.00000

218 6FWH-JUN 0.20000 00 * 6PWHT    +.450000 00 * 6PCORN   +.800000-01 * 6PGRSOR  +.500000-01 * 6PFORAGE +.460000 00 * 6PSIL
             +.104000 01 * 6PALFM   -.150000 03 * 6MLABFT   -.250000 01 * 6MLABSU   +.260000 00 * 6PWMTFAL  +.300000 00 * 6PWMTIRR
             +.460000 00 * 6PGSIRR   -.130000 00 * 6CHVWHT   +.200000 00 * 6PLTALF   -.100000 01 * 6TFWHMJJ  +.100000 01 * 6TFWHJJR
             <=   661897.00000



219 6FWH-SEP 0.10000 00 * 6PWHT    +.200000 00 * 6PCORN   +.500000 00 * 6PFORAGE +.860000 00 * 6PSIL    +.660000 00 * 6PALFM
             -.150000 03 * 6MLABFT   +.500000-01 * 6PWMTFAL  +.520000 00 * 6PWMTIRR  -.100000 00 * 6CHVCORN
             <=   774209.00000

220 6FWH-OCT 0.40000-01 * 6PWHT    +.600000 00 * 6PCORN   +.680000 00 * 6PGRSOR  +.125000 01 * 6PFORAGE +.153000 01 * 6PSIL
             +.200000-01 * 6PALFM   -.100000 03 * 6MLABFT   +.600000-01 * 6PWMTIRR  +.720000 00 * 6PGSIRR   -.330000 00 * 6CHVCORN
             -.340000 00 * 6CHVGRSO
             <=   741869.00000

221 6WHTPD   -.20000 02 * 6PWHT    +.100000 01 * 6SWHT    -.330000 02 * 6PWMTFAL -.410000 02 * 6PWMTIRR
             <=         0.0

222 6CORNPD  -.11000 03 * 6PCORN   +.100000 01 * 6SCORN   +.100000 01 * 6FCORN
             <=         0.0
223 6GRSOPD  -.38000 02 * 6PGRSOR  +.100000 01 * 6SGRSO   +.100000 01 * 6FGRSO   -.750000 02 * 6PGSIRR
             <=         0.0

224 6ALFPD   -.35000 01 * 6PALFM   +.105000 01 * 6SALFM   +.105000 01 * 6FALFM
             <=         0.0

225 6BESCALF -.10000 01 * 6SCALF   +.100000 01 * 6CALF1   +.100000 01 * 6CALF2   +.100000 01 * 6CALF3   +.100000 01 * 6CALF4
             +.100000 01 * 6CALF5   +.100000 01 * 6CALF7   +.100000 01 * 6CALF8
             <=         0.0

226 6BESWSTR -.10000 01 * 6SWSTR   +.100000 01 * 6GSTR1   +.100000 01 * 6GSTR2   +.100000 01 * 6GSTR3   +.100000 01 * 6GSTR4
             +.100000 01 * 6GSTR5   +.100000 01 * 6GSTR7   +.100000 01 * 6GSTR8   +.100000 01 * 6FOST1   +.100000 01 * 6FOST2
             +.100000 01 * 6FOST3   +.100000 01 * 6FOST4   +.100000 01 * 6FOST5   +.100000 01 * 6FOST7   +.100000 01 * 6FOST8
             <=         0.0

227 6BESGSTR -.10000 01 * 6SGSTR   +.100000 01 * 6FSTR1   +.100000 01 * 6FSTR2   +.100000 01 * 6FSTR3   +.100000 01 * 6FSTR4
             +.100000 01 * 6FSTR5   +.100000 01 * 6FSTR7   +.100000 01 * 6FSTR8
             <=         0.0

228 6TCALF   -.75000 00 * 6PCALF   +.100000 01 * 6SCALF   +.10000D 01 * 6TWSTR
             <=         0.0

229 6TWSTR   -.99500 00 * 6TWSTR   +.100000 01 * 6PWSTR   -.990000 00 * 1CALF6   -.990000 00 * 2CALF6   -.990000 00 * 3CALF6
             -.990000 00 * 4CALF6   -.990000 00 * 5CALF6   -.990000 00 * 7CALF6   -.990000 00 * 8CALF6
             <=         0.0

230 6WSTR    -.99500 00 * 6PWSTR   +.100000 01 * 6SWSTR   +.100000 01 * 6TGSTR   +.100000 01 * 6PWFSTR
             <=         0.0

231 6TGSTR   -.99500 00 * 6TGSTR   +.100000 01 * 6PGSTRFS +.100000 01 * 6PGSTR   -.995000 00 * 1GSTR6   -.995000 00 * 2GSTR6
             -.995000 00 * 3GSTR6   -.995000 00 * 4GSTR6   -.559000 00 * 5GSTR6   -.995000 00 * 7GSTR6   -.995000 00 * 8GSTR6
             <=         0.0

232 6GSTR    0.10000 01 * 6SGSTR   +.100000 01 * 6TFSTR   -.998000 00 * 6PGSTR
             <=         0.0
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233  6TFSTR   -.99600 00 * 6TFSTR   +.100000 01 * 6PWGFSTR -.995000 00 * 1FSTR6   -.995000 00 * 2FSTR6   -.995000 00 * 3FSTR6
               -.995000 00 * 4FSTR6   -.995000 00 * 5FSTR6   -.995000 00 * 7FSTR6   -.995000 00 * 8FSTR6   -.995000 00 * 1FDST6
               -.990000 00 * 2FDST6   -.990000 00 * 3FDST6   -.990000 00 * 4FDST6   -.990000 00 * 5FDST6   -.990000 00 * 7FDST6
               -.990000 00 * 8FDST6
               <=          0.0

236  6RCORN   0.13000 02 * 6PWSTR   +.510000 02 * 6PWFSTR  +.321000 02 * 6PWGFSTR +.510000 02 * 6BFDSTRA +.510000 02 * 6BFDSTRB
               +.110000 03 * 6PSMILK  +.228000 03 * 6PMDG     -.100000 01 * 6PCORN    -.950000 00 * 6PGRSOR   -.100000 01 * 6PGSTR
               <=          0.0
235  6RALFM   0.50000 00 * 6PCALF   +.450000 00 * 6PWSTR   +.230000 03 * 6PWFSTR  +.150000 00 * 6PWGFSTR +.230000 00 * 6BFDSTRA
               +.230000 00 * 6BFDSTRB +.600000 01 * 6PSMILK  -.400000 01 * 6PSIL     -.100000 01 * 6FALFM    -.100000 01 * ALFM1>6
               -.100000 01 * ALFM2>6  -.100000 01 * ALFM3>6  -.100000 01 * ALFM4>6  -.100000 01 * ALFM5>6  -.100000 01 * ALFM7>6
               -.100000 01 * ALFM8>6  +.100000 01 * 6ALF>FOR
               <=          0.0

236  6RFORREQ 0.18300 01 * 6PCALF   +.360000 00 * 6PWSTR   -.125000 01 * 6PFORAGE -.100000 01 * 6ALF>FOR
               <=          0.0

237  6RMPASTU 0.92000 02 * 6PCALF   +.180000 00 * 6PWSTR   -.250000 00 * 6PCORN   -.100000 00 * 6PGRSOR  -.100000 00 * 6PWMTFAL
               -.250000 00 * 6PWMTIRR -.250000 00 * 6PGSIRR
               <=          0.0

238  6OPCAP   0.20000 02 * 6PCALF   +.100000 02 * 6PWSTR   +.100000 02 * 6PGSTRFS +.120000 02 * 6PWFSTR  +.120000 02 * 6PWGFSTR
               +.150000 02 * 6BFDSTRA +.150000 02 * 6BFDSTRB +.200000 03 * 6PSMILK  +.800000 03 * 6PMDG     +.110000 02 * 6PGSTR
               +.500000 01 * 6PWMT    +.360000 02 * 6PCORN   +.850000 01 * 6PGRSOR  +.125000 02 * 6PFORAGE +.210000 02 * 6PSIL
               +.200000 02 * 6PALFM   +.850000 01 * 6PWMTFAL +.160000 02 * 6PWMTIRR +.190000 02 * 6PGSIRR  -.100000 01 * 6OPLAPR
               <=          0.0

239  6LSKCAP  0.25000 03 * 6BFDSTRA +.250000 03 * 6BFDSTRB +.600000 02 * 6PSMILK  +.100000 02 * 6PMDG     +.180000 03 * 1CALF6
               +.180000 03 * 2CALF6   +.180000 03 * 3CALF6   +.180000 03 * 4CALF6   +.180000 03 * 5CALF6   +.180000 03 * 7CALF6
               +.180000 03 * 8CALF6   +.295000 03 * 1GSTR6   +.295000 03 * 2GSTR6   +.295000 03 * 3GSTR6   +.295000 03 * 4GSTR6
               +.295000 03 * 5GSTR6   +.295000 03 * 7GSTR6   +.295000 03 * 8GSTR6   +.285000 03 * 1FSTR6   +.285000 03 * 2FSTR6
               +.285000 03 * 3FSTR6   +.285000 03 * 4FSTR6   +.285000 03 * 5FSTR6   +.285000 03 * 7FSTR6   +.285000 03 * 8FSTR6
               +.295000 03 * 1FDST6   +.295000 03 * 2FDST6   +.295000 03 * 3FDST6   +.295000 03 * 4FDST6   +.295000 03 * 5FDST6
               +.295000 03 * 7FDST6   +.295000 03 * 8FDST6   -.100000 01 * 6LSKCAPR
               <=          0.0

240  6DEPREC  0.11500 02 * 6PCALF   +.300000 01 * 6PWSTR   +.500000 00 * 6PGSTRFS +.500000 00 * 6PWFSTR  +.500000 00 * 6PWGFSTR
               +.900000 01 * 6BFDSTRA +.900000 01 * 6BFDSTRB +.630000 02 * 6PSMILK  +.590000 02 * 6PMDG     +.500000 00 * 6PGSTR
               +.400000 01 * 6PWMT    +.200000 02 * 6PCORN   +.100000 02 * 6PGRSOR  +.120000 02 * 6PFORAGE +.350000 02 * 6PSIL
               +.215000 02 * 6PALFM   -.100000 01 * 6DEPR    +.400000 01 * 6PWMTFAL +.170000 02 * 6PWMTIRR +.170000 02 * 6PGSIRR
               -.300000 01 * 6CHVWMT  -.450000 01 * 6CHVCORN -.400000 01 * 6CHVGRSO
               <=          0.0

241  6SFDGRA1 -.10000 01 * 6SCORN   -.100000 01 * 6SGRSO   +.100000 01 * 6BUYFOGR -.100000 01 * FOGR1>6  -.100000 01 * FOGR2>6
               -.100000 01 * FOGR3>6  -.100000 01 * FOGR4>6  -.100000 01 * FOGR5>6  +.100000 01 * FOGR6>1  +.100000 01 * FOGR6>2
               +.100000 01 * FOGR6>3  +.100000 01 * FOGR6>4  +.100000 01 * FOGR6>5  +.100000 01 * FOGR6>7  +.100000 01 * FOGR6>8
               -.100000 01 * FOGR7>6  -.100000 01 * FOGR8>6
               <=          0.0

242  6SALFM   -.10000 01 * 6SALFM   +.100000 01 * ALFM6>1  +.100000 01 * ALFM6>2  +.100000 01 * ALFM6>3  +.100000 01 * ALFM6>4
               +.100000 01 * ALFM6>5  +.100000 01 * ALFM6>7  +.100000 01 * ALFM6>8
               =           0.0

243  6FDLOTCP 0.10000 01 * 6PWFSTR  +.100000 01 * 6PWGFSTR +.100000 01 * 6BFDSTRA +.100000 01 * 6BFDSTRB -.100000 01 * 6FDLC1DE
               <=    110000.00000
244  6FUEL    0.35000 01 * 6PCALF   +.100000 01 * 6PWSTR   +.100000 01 * 6PGSTRFS +.100000 01 * 6PWFSTR  +.100000 01 * 6PWGFSTR
               +.100000 01 * 6BFDSTRA +.100000 01 * 6BFDSTRB +.930000 01 * 6PSMILK  +.104100 02 * 6PMDG     +.500000 00 * 6PGSTR
               +.200000 01 * 6PWMT    +.115000 02 * 6PCORN   +.420000 01 * 6PGRSOR  +.500000 01 * 6PFORAGE +.120000 02 * 6PSIL
               +.115000 02 * 6PALFM   -.100000 01 * 6FUELCST +.250000 01 * 6PWMTFAL +.900000 01 * 6PWMTIRR +.950000 01 * 6PGSIRR
               <=          0.0

245  6FERT    0.38000 02 * 6PCORN   +.350000 02 * 6PSIL    +.450000 01 * 6PALFM   -.100000 01 * 6FERTCST +.350000 02 * 6PWMTIRR
               +.300000 02 * 6PGSIRR
               <=          0.0

246  7CPLD1   0.10000 01 * 7PWMT    +.100000 01 * 7PCORN   +.100000 01 * 7PGRSOR  +.100000 01 * 7PSOY    +.100000 01 * 7PSIL
               +.100000 01 * 7PLTALF  +.100000 01 * 7IDLECPL +.100000 01 * 7PLTTPAS
               <=  1030000.00000

247  7PASTNAT 0.45000 01 * 7PCALF   +.350000 01 * 7PGSTRFS +.150000 01 * 7PSMILK  +.200000 01 * 7PGSTR   -.100000 01 * 7TPAST
               <=  1210000.00000

248  7PASTTAM 0.15000 01 * 7PSMILK  +.466000 00 * 7TPAST   -.100000 01 * 7PLTTPAS
               <=   262000.00000

249  7NATHAY  0.10000 01 * 7PNATH
               <=   162000.00000

250  7ALFHAY  0.10000 01 * 7PALFM   -.100000 01 * 7PLTALF
               <=    50800.00000

251  7LAB-J,F 0.26000 01 * 7PCALF   +.225000 01 * 7PWSTR   +.140000 01 * 7PWGFSTR +.140000 01 * 7BFDSTRA +.950000 01 * 7PSMILK
               +.680000 01 * 7PMDG    -.300000 03 * 7HLABFT
               <=   904043.00000

252  7LAB-M,A 0.26000 01 * 7PCALF   +.700000 00 * 7PWSTR   +.140000 01 * 7BFDSTRA +.110000 02 * 7PSMILK  +.560000 01 * 7PMDG
               +.100000-01 * 7PWMT    +.390000 00 * 7PCORN   +.390000 00 * 7PGRSOR  +.230000 00 * 7PSOY    +.290000 00 * 7PSIL
               -.300000 03 * 7HLABFT
               <=  1157119.00000

253  7LAB-M,J 0.10000 00 * 7PCALF   +.200000 00 * 7PGSTRFS +.150000 01 * 7PWFSTR  +.150000 01 * 7BFDSTRB +.133000 02 * 7PSMILK
               +.470000 01 * 7PMDG    +.200000 00 * 7PWSTR   +.100000 01 * 7PWMT    +.800000 00 * 7PCORN   +.120000 00 * 7PGRSOR
               +.940000 00 * 7PSOY    +.720000 00 * 7PSIL    +.252000 01 * 7PALFM   -.400000 03 * 7HLABFT  -.330000 01 * 7HLABSU
               -.500000 00 * 7CHVWMT  +.600000 00 * 7PLTALF
               <=  2582545.00000
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254  7LAB-J,A 0.20000D 00 * 7PCALF    +.200000 00 * 7PGSTRFS +.140000 01 * 7PWFSTR  +.140000 01 * 7BFDSTRB +.140000 02 * 7PSMILK
              +.890000 01 * 7PHOG      +.100000 00 * 7PSSTR    +.156000 01 * 7PWHT     +.190000 00 * 7PCORN    +.210000 00 * 7PGRSOR
              +.370000 00 * 7PSOY      +.210000 00 * 7PSIL     +.576000 01 * 7PALFH    +.300000 01 * 7PNATH    -.400000 03 * 7HLABFT
              -.660000 01 * 7HLABSU    -.210000 00 * 7CHVWHT   +.800000 00 * 7PLTALF
              <=  2597447.00000
255  7LAB-S,D 0.60000 00 * 7PCALF    +.670000 00 * 7PWSTR    +.200000 00 * 7PGSTRFS +.150000 01 * 7PWGFSTR +.140000 01 * 7PWFSTR
              +.140000 01 * 7BFDSTRB +.700000 01 * 7PSMILK   +.440000 01 * 7PHOG     +.510000 00 * 7PWHT     +.154000 01 * 7PCORN
              +.116000 01 * 7PGRSOR  +.108000 01 * 7PSOY     +.269000 01 * 7PSIL     +.460000 00 * 7PALFH    -.350000 03 * 7HLABFT
              -.770000 00 * 7CHVCORN  -.580000 00 * 7CHVGRSO  -.540000 00 * 7CHVSOY
              <=  2445709.00000

256  7LAB-N,D 0.10000 01 * 7PCALF    +.225000 01 * 7PWSTR    +.140000 01 * 7PWGFSTR +.150000 01 * 7BFDSTRA +.830000 01 * 7PSMILK
              +.560000 01 * 7PHOG      +.660000 00 * 7PCORN    +.380000 00 * 7PGRSOR   +.920000 00 * 7PSOY     +.134000 01 * 7PSIL
              -.300000 03 * 7HLABFT    -.220000 00 * 7CHVCORN  -.140000 00 * 7CHVGRSO  -.230000 00 * 7CHVSOY
              <=  1085241.00000

257  7PWH-MAY 0.48000 00 * 7PCORN    +.400000 00 * 7PGRSOR   +.330000 00 * 7PSOY     +.400000 00 * 7PSIL     -.150000 03 * 7HLABFT
              +.400000 00 * 7PLTALF    +.100000 01 * 7TFWMKJ   -.100000 01 * 7TFWMJ>M
              <=   452007.00000

258  7PWH-JUN 0.10000 01 * 7PWHT     +.329000 00 * 7PCORN    +.320000 00 * 7PGRSOR   +.610000 00 * 7PSOY     +.320000 00 * 7PSIL
              +.282000 01 * 7PALFH    -.150000 03 * 7HLABFT   -.500000 01 * 7HLABSU   -.500000 00 * 7CHVWHT   +.200000 00 * 7PLTALF
              -.100000 01 * 7TFWMKJ   +.100000 01 * 7TFWMJ>M
              <=   386787.00000

259  7PWH-SEP 0.37000 00 * 7PWHT     +.800000 00 * 7PCORN    +.530000 00 * 7PSIL     +.460000 00 * 7PALFH    -.150000 03 * 7HLABFT
              -.400000 00 * 7CHVCORN
              <=   409001.00000

260  7PWH-OCT 0.14000 00 * 7PWHT     +.740000 00 * 7PCORN    +.116000 01 * 7PGRSOR   +.108000 01 * 7PSOY     +.252000 01 * 7PSIL
              -.160000 03 * 7HLABFT   -.370000 00 * 7CHVCORN  -.580000 00 * 7CHVGRSO  -.540000 00 * 7CHVSOY
              <=   471164.00000

261  7WHTPD   -.29000 02 * 7PWHT     +.100000 01 * 7SWHT
              <=          0.0

262  7CORNPD  -.55400 02 * 7PCORN    +.100000 01 * 7SCORN    +.100000 01 * 7FCORN
              <=          0.0

263  7GRSOPD  -.53000 02 * 7PGRSOR   +.100000 01 * 7SGRSO    +.100000 01 * 7FGRSO
              <=          0.0

264  7ALFPD   -.25500 01 * 7PALFH    +.105000 01 * 7SALFH    +.105000 01 * 7FALFH
              <=          0.0

265  7NATHPD  -.12000 01 * 7PNATH    +.100000 01 * 7FNATH    +.105000 01 * 7SNATH    +.100000 01 * 7TNH>FOR +.100000 01 * 7TNH>WPU
              <=          0.0

266  7BGSCALF -.10000 01 * 7SCALF    +.100000 01 * 7CALF1    +.100000 01 * 7CALF2    +.100000 01 * 7CALF3    +.100000 01 * 7CALF4
              +.100000 01 * 7CALF5    +.100000 01 * 7CALF6    +.100000 01 * 7CALF8
              <=          0.0

267  7BGSWSTR -.10000 01 * 7SWSTR    +.100000 01 * 7GSTR1    +.100000 01 * 7GSTR2    +.100000 01 * 7GSTR3    +.100000 01 * 7GSTR4
              +.100000 01 * 7GSTR5    +.100000 01 * 7GSTR6    +.100000 01 * 7GSTR8    +.100000 01 * 7FDST1    +.100000 01 * 7FDST2
              +.100000 01 * 7FDST3    +.100000 01 * 7FDST4    +.100000 01 * 7FDST5    +.100000 01 * 7FDST6    +.100000 01 * 7FDST8
              <=          0.0

268  7BGSGSTR -.10000 01 * 7SGSTR    +.100000 01 * 7FSTR1    +.100000 01 * 7FSTR2    +.100000 01 * 7FSTR3    +.100000 01 * 7FSTR4
              +.100000 01 * 7FSTR5    +.100000 01 * 7FSTR6    +.100000 01 * 7FSTR8
              <=          0.0

269  7TCALF   -.75000 00 * 7PCALF    +.100000 01 * 7SCALF    +.100000 01 * 7TWSTR
              <=          0.0

270  7TWSTR   -.99500 00 * 7TWSTR    +.100000 01 * 7PWSTR    -.990000 00 * 1CALF7    -.990000 00 * 2CALF7    -.990000 00 * 3CALF7
              -.990000 00 * 4CALF7    -.990000 00 * 5CALF7    -.990000 00 * 6CALF7    -.990000 00 * 8CALF7
              <=          0.0

271  7WSTR    -.99500 00 * 7PWSTR    +.100000 01 * 7SWSTR    +.100000 01 * 7TGSTR    +.100000 01 * 7PWFSTR
              <=          0.0

272  7TGSTR   -.99500 00 * 7TGSTR    +.100000 01 * 7PGSTRFS +.100000 01 * 7PGSTR    -.995000 00 * 1GSTR7    -.995000 00 * 2GSTR7
              -.995000 00 * 3GSTR7    -.995000 00 * 4GSTR7    -.995000 00 * 5GS.R7    -.995000 00 * 6GSTR7    -.995000 00 * 8GSTR7
              <=          0.0

273  7GSTR    0.10000 01 * 7SGSTR    +.100000 01 * 7TFSTR    -.998000 00 * 7PGSTR
              <=          0.0

274  7TFSTR   -.99800 00 * 7TFSTR    +.100000 01 * 7PWGFSTR -.995000 00 * 1FSTR7    -.995000 00 * 2FSTR7    -.995000 00 * 3FSTR7
              -.995000 00 * 4FSTR7    -.995000 00 * 5FSTR7    -.995000 00 * 6FSTR7    -.995000 00 * 8FSTR7    -.990000 00 * 1FDST7
              -.990000 00 * 2FDST7    -.990000 00 * 3FDST7    -.990000 00 * 4FDST7    -.990000 00 * 5FDST7    -.990000 00 * 6FDST7
              -.990000 00 * 8FDST7
              <=          0.0

275  7RCORN   0.13000 02 * 7PWSTR    +.321400 02 * 7PWGFSTR +.510000 02 * 7PWFSTR  +.510000 02 * 7BFDSTRA +.510000 02 * 7BFDSTRB
              +.110020 03 * 7PSMILK    +.228000 03 * 7PHOG     -.100000 01 * 7FCORN    -.950000 00 * 7FGRSO    -.100000 01 * 7BUYFDGR
              <=          0.0

276  7RALFH   0.50000 00 * 7PCALF    +.450000 00 * 7PWSTR    +.150000 00 * 7PWGFSTR +.230000 00 * 7PWFSTR  +.230000 00 * 7BFDSTRA
              +.230000 00 * 7BFDSTRB  +.604000 01 * 7PSMILK   -.320000 01 * 7PSIL     -.100000 01 * 7FALFH    -.850000 00 * 7FNATH
              -.100000 01 * ALFH1>7   -.100000 01 * ALFH2>7   -.100000 01 * ALFH3>7   -.100000 01 * ALFH4>7   -.100000 01 * ALFH5>7
              -.100000 01 * ALFH6>7   -.100000 01 * ALFH8>7   +.100000 01 * 7ALF>FOR
              <=          0.0

277  7RFORREQ 0.18300 01 * 7PCALF    +.360000 00 * 7PWSTR    -.100000 01 * 7ALF>FOR -.100000 01 * 7TNH>FOR
              <=          0.0

278  7RWPASTU 0.92000 00 * 7PCALF    +.180000 00 * 7PWSTR    -.300000 00 * 7PWHT     -.300000 00 * 7PCORN    -.300000 00 * 7PGRSOR
              -.100000 01 * 7TNH>WPU
              <=          0.0
```

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279  7DPCAP   0.20000 02 * 7PCALF   +.100000 02 * 7PWSTR   +.160000 02 * 7PGSTRFS +.120000 02 * 7PWGFSTR +.120000 02 * 7PWFSTR
              +.150000 02 * 7BFDSTRA +.150000 02 * 7BFDSTRB +.250000 03 * 7PSMILK  +.500000 03 * 7PHOG     +.130000 02 * 7PGSTR
              +.135000 02 * 7PWHT    +.227500 02 * 7PCORN   +.185000 02 * 7PGRSOR  +.160000 02 * 7PSOY     +.232500 02 * 7PSIL
              +.200000 02 * 7PALFM   +.130000 02 * 7PNATM   -.130000 01 * 7DPCAPR
              <=        0.0

280  7LSRCAP  0.25000 03 * 7BFDSTRA +.250000 03 * 7BFDSTRB +.660000 02 * 7PSMILK  +.100000 02 * 7PHOG     +.180000 03 * 1CALF7
              +.180000 03 * 2CALF7   +.180000 03 * 3CALF7   +.180000 03 * 4CALF7   +.180000 03 * 5CALF7   +.180000 03 * 6CALF7
              +.180000 03 * 8CALF7   +.295000 03 * 1GSTR7   +.295000 03 * 2GSTR7   +.295000 03 * 3GSTR7   +.295000 03 * 4GSTR7
              +.295000 03 * 5GSTR7   +.295000 03 * 6GSTR7   +.295000 03 * 8GSTR7   +.295000 03 * 1FSTR7   +.285000 03 * 2FSTR7
              +.285000 03 * 3FSTR7   +.285000 03 * 4FSTR7   +.285000 03 * 5FSTR7   +.285000 03 * 6FSTR7   +.285000 03 * 7FSTR7
              +.285000 03 * 8FSTR7   +.295000 03 * 1FDST7   +.295000 03 * 2FDST7   +.295000 03 * 3FDST7   +.295000 03 * 4FDST7
              +.295000 03 * 5FDST7   +.295000 03 * 6FDST7   +.295000 03 * 8FDST7   -.100000 01 * 7LSRCAPR
              <=        0.0

281  7DEPREC  0.11500 02 * 7PCALF   +.330000 01 * 7PWSTR   +.560000 00 * 7PGSTRFS +.500000 00 * 7PWGFSTR +.560000 00 * 7PWFSTR
              +.900000 01 * 7BFDSTRA +.900000 01 * 7BFDSTRB +.630000 02 * 7PSMILK  +.590000 02 * 7PHOG     +.500000 00 * 7PGSTR
              +.130000 02 * 7PWHT    +.180000 02 * 7PCORN   +.160000 02 * 7PGRSOR  +.130000 02 * 7PSOY     +.310000 02 * 7PSIL
              +.250000 02 * 7PALFM   +.250000 02 * 7PNATM   -.100000 01 * 7DEPR     -.300000 01 * 7CMVWHT   -.400000 01 * 7CMVCORN
              -.300000 01 * 7CMVGRSO -.300000 01 * 7CMVSOY
              <=        0.0

282  7FDGRA1  -.10000 01 * 7SCORN   -.950000 00 * 7SGRSO   +.100000 01 * 7BUYFDGR -.100000 01 * FDGR1>7  -.100000 01 * FDGR2>7
              -.100000 01 * FDGR3>7  -.100000 01 * FDGR4>7  -.100000 01 * FDGR5>7  -.100000 01 * FDGR6>7  +.100000 01 * FDGR7>1
              +.100000 01 * FDGR7>2  +.100000 01 * FDGR7>3  +.100000 01 * FDGR7>4  +.100000 01 * FDGR7>5  +.100000 01 * FDGR7>6
              +.100000 01 * FDGR7>8  -.100000 01 * FDGR8>7
              <=        0.0

283  7SALFM   -.10000 01 * 7SALFM   -.850000 00 * 7SNATM   +.100000 01 * ALFM7>1  +.100000 01 * ALFM7>2  +.100000 01 * ALFM7>3
              +.100000 01 * ALFM7>4  +.100000 01 * ALFM7>5  -.100000 01 * ALFM7>6  +.100000 01 * ALFM7>8
              =         0.0

284  7FDLOTCP 0.10000 01 * 7PWGFSTR +.100000 01 * 7PWFSTR  +.100000 01 * 7BFDSTRA +.100000 01 * 7BFDSTRB -.100000 01 * 7FDLOTDE
              <=    77000.00000

285  7FUEL    0.35000 01 * 7PCALF   +.100000 01 * 7PWSTR   +.100000 01 * 7PGSTRFS +.100000 01 * 7PWGFSTR +.100000 01 * 7PWFSTR
              +.100000 01 * 7BFDSTRA +.100000 01 * 7BFDSTRB +.930000 01 * 7PSMILK  +.104100 02 * 7PHOG     +.500000 00 * 7PGSTR
              +.550000 01 * 7PWHT    +.625000 01 * 7PCORN   +.630000 01 * 7PGRSOR  +.450000 01 * 7PSOY     +.150000 02 * 7PSIL
              +.100000 02 * 7PALFM   +.500000 01 * 7PNATM   -.100000 01 * 7FUELCST
              <=        0.0

286  7FERT    0.17000 02 * 7PWHT    +.290000 02 * 7PCORN   +.250000 02 * 7PGRSOR  +.850000 01 * 7PSOY     +.250000 02 * 7PSIL
              +.450000 01 * 7PALFM   -.100000 01 * 7FERTCST
              <=        0.0

287  8CPLD1   0.10000 01 * 8PWHT    +.100000 01 * 8PCORN   +.100000 01 * 8PGRSOR  +.100000 01 * 8PSOY     +.100000 01 * 8PSIL
              +.100000 01 * 8PLTALF  +.100000 01 * 8IDLECPL +.100000 01 * 8PLTTPAS
              <=  1500000.00000
288  8PASTNAT 0.45000 01 * 8PCALF   +.350000 01 * 8PGSTRFS +.150000 01 * 8PSMILK  +.200000 01 * 8PGSTR   -.100000 01 * 8TPAST
              <=   850000.00000

289  8PASTTAK 0.15000 01 * 8PSMILK  +.466000 00 * 8TPAST   -.100000 01 * 8PLTTPAS
              <=   268000.00000

290  8NATMAY  0.10000 01 * 8PNATM
              <=    54400.00000

291  8ALFMAY  0.10000 01 * 8PALFM   -.100000 01 * 8PLTALF
              <=    82000.00000

292  8LAB-J,F 0.26000 01 * 8PCALF   +.225000 01 * 8PWSTR   +.140000 01 * 8PWGFSTR +.140000 01 * 8BFDSTRA +.950000 01 * 8PSMILK
              +.680000 01 * 8PHOG    -.300000 03 * 8MLABFT
              <=   966144.00000

293  8LAB-M,A 0.26000 01 * 8PCALF   +.700000 00 * 8PWSTR   +.140000 01 * 8BFDSTRA +.110000 02 * 8PSMILK  +.560000 01 * 8PHOG
              +.100000-01 * 8PWHT    +.390000 00 * 8PCORN   +.390000 00 * 8PGRSOR  +.230000 00 * 8PSOY     +.290000 00 * 8PSIL
              -.300000 03 * 8MLABFT
              <=  1275002.00000

294  8LAB-M,J 0.10000 00 * 8PCALF   +.200000 00 * 8PGSTRFS +.150000 01 * 8PWFSTR  +.150000 01 * 8BFDSTRB +.133000 02 * 8PSMILK
              +.470000 01 * 8PHOG    +.200000 00 * 8PGSTR   +.500000 00 * 8PWHT    +.800000 00 * 8PCORN   +.720000 00 * 8PGRSOR
              +.940000 00 * 8PSOY    +.720000 00 * 8PSIL    +.282000 01 * 8PALFM   -.400000 03 * 8MLABFT  -.330000 01 * 8MLAESU
              -.250000 00 * 8CMVWHT  +.600000 00 * 8PLTALF
              <=  2823615.00000

295  8LAB-J,A 0.20000 00 * 8PCALF   +.200000 00 * 8PGSTRFS +.140000 01 * 8PWFSTR  +.140000 01 * 8BFDSTRB +.140000 02 * 8PSMILK
              +.890000 01 * 8PHOG    +.100000 00 * 8PGSTR   +.164000 01 * 8PWHT    +.190000 00 * 8PCORN   +.210000 00 * 8PGRSOR
              +.700000-01 * 8PSOY    +.210000 00 * 8PSIL    +.576000 01 * 8PALFM   +.305000 01 * 8PNATM   -.400000 03 * 8MLABFT
              -.660000 01 * 8MLABSU  -.500000 00 * 8CMVWHT  +.800000 00 * 8PLTALF
              <=  2982067.00000

296  8LAB-S,D 0.60000 00 * 8PCALF   +.670000 00 * 8PWSTR   +.200000 00 * 8PGSTRFS +.140000 01 * 8PWFSTR  +.150000 01 * 8PWGFSTR
              +.140000 01 * 8BFDSTRB +.700000 01 * 8PSMILK  +.440000 01 * 8PHOG    +.510000 00 * 8PWHT    +.860000 00 * 8PCORN
              +.100000 01 * 8PGRSOR  +.119000 01 * 8PSOY    +.269000 01 * 8PSIL    +.460000 00 * 8PALFM   -.356000 03 * 8MLABFT
              -.430000 00 * 8CMVCORN -.500000 00 * 8CMVGRSO -.540000 00 * 8CMVSOY
              <=  2694872.00000

297  8LAB-M,D 0.10000 01 * 8PCALF   +.225000 01 * 8PWSTR   +.140000 01 * 8PWGFSTR +.150000 01 * 8BFDSTRA +.630000 01 * 8PSMILK
              +.560000 01 * 8PHOG    +.140000 01 * 8PCORN   +.540000 00 * 8PGRSOR  +.850000 00 * 8PSOY     +.134000 01 * 8PSIL
              -.300000 03 * 8MLABFT  -.560000 00 * 8CMVCORN -.220000 00 * 8CMVGRSO -.220000 00 * 8CMVSOY
              <=  1195803.00000

298  8FWH-MAY 0.48000 00 * 8PCORN   +.400000 00 * 8PGRSOR  +.330000 00 * 8PSOY    +.400000 00 * 8PSIL    -.150000 03 * 8MLABFT
              +.460000 00 * 8PLTALF  +.100000 01 * 8TFWHMJ>J -.100000 01 * 8TFWHMJ>M
              <=   542951.00000
299  8FWH-JUN 0.50000 00 * 8PWHT    +.320000 00 * 8PCORN   +.320000 00 * 8PGRSOR  +.610000 00 * 8PSOY    +.320000 00 * 8PSIL
              +.282000 01 * 8PALFM   -.150000 03 * 8MLABFT  -.500000 01 * 8MLABSU  -.250000 00 * 8CMVWHT  +.200000 00 * 8PLTALF
              -.100000 01 * 8TFWHMJ>J +.100000 01 * 8TFWHMJ>M
              <=   615138.00000
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300  BPWH-SEP 0.37000 00 * BPWHT    +.280000 00 * BPCORN   +.530000 00 * BPSIL    +.460000 00 * BPALFH   -.150000 03 * BHLABFT
              -.140000 00 * BCHVCORN
              <=   406008.00000

301  BFWH-OCT 0.14000 00 * BPWHT    +.560000 00 * BPCORN   +.100000 01 * BPGRSOR  +.108000 01 * BPSOY    +.252000 01 * BFSIL
              -.160000 03 * BHLABFT  -.280000 00 * BCHVCORN -.500000 00 * BCHVGRSO -.540000 00 * BCHVSOY
              <=   562093.00000

302  BWHTPD   -.34000 02 * BPWHT    +.100000 01 * BSWHT
              <=         0.0

303  BCORNPD  -.71400 02 * BPCORN   +.100000 01 * BSCORN   +.100000 01 * BFCORN
              <=         0.0

304  BGRSOPD  -.59000 02 * BPGRSOR  +.100000 01 * BSGRSO   +.100000 01 * BFGRSO
              <=         0.0

305  BALFPD   -.26000 01 * BPALFH   +.105000 01 * BSALFH   +.105000 01 * BFALFH   +.105000 01 * BSNATH
              <=         0.0

306  BNATHPD  -.11800 01 * BPNATH   +.100000 01 * BFNATH   +.100000 01 * BTNH>FOR +.100000 01 * BTNH>WPU
              <=         0.0

307  BBESCALF -.10000 01 * BSCALF   +.100000 01 * BCALF1   +.100000 01 * BCALF2   +.100000 01 * BCALF3   +.100000 01 * BCALF4
              +.100000 01 * BCALF5   +.100000 01 * BCALF6   +.100000 01 * BCALF7
              <=         0.0

308  BBESWSTR -.10000 01 * BSWSTR   +.100000 01 * BGSTR1   +.100000 01 * BGSTR2   +.100000 01 * BGSTR3   +.100000 01 * BGSTR4
              +.100000 01 * BGSTR5   +.100000 01 * BGSTR6   +.100000 01 * BGSTR7   +.100000 01 * BFDST1   +.100000 01 * BFDST2
              +.100000 01 * BFDST3   +.100000 01 * BFDST4   +.100000 01 * BFDST5   +.100000 01 * BFDST6   +.100000 01 * BFDST7
              <=         0.0

309  BBESGSTR -.10000 01 * BSGSTR   +.100000 01 * BFSTR1   +.100000 01 * BFSTR2   +.100000 01 * BFSTR3   +.100000 01 * BFSTR4
              +.100000 01 * BFSTR5   +.100000 01 * BFSTR6   +.100000 01 * BFSTR7
              <=         0.0

310  BTCALF   -.75000 00 * BPCALF   +.100000 01 * BSCALF   +.100000 01 * BTWSTR
              <=         0.0

311  BTWSTR   -.99500 00 * BTWSTR   +.100000 01 * BPWSTR   -.995000 00 * 1CALF8   -.995000 00 * 2CALF8   -.995000 00 * 3CALF8
              -.995000 00 * 4CALF8   -.995000 00 * 5CALF8   -.995000 00 * 6CALF8   -.995000 00 * 7CALF8
              <=         0.0
312  BWSTR    -.99500 00 * BPWSTR   +.100000 01 * BSWSTR   +.100000 01 * BTGSTR   +.100000 01 * BPWFSTR
              <=         0.0

313  BTGSTR   -.99500 00 * BTGSTR   +.100000 01 * BPGSTRFS +.100000 01 * BPGSTR   -.995000 00 * 1GSTR8   -.995000 00 * 2GSTR8
              -.995000 00 * 3GSTR8   -.995000 00 * 4GSTR8   -.995000 00 * 5GSTR8   -.995000 00 * 6GSTR8   -.995000 00 * 7GSTR8
              <=         0.0

314  BGSTR    0.10000 01 * BSGSTR   +.100000 01 * BTFSTR   -.998000 00 * BPGSTR
              <=         0.0

315  BTFSTR   -.99800 00 * BTFSTR   +.100000 01 * BPWGFSTR -.995000 00 * 1FSTR8   -.995000 00 * 2FSTR8   -.995000 00 * 3FSTR8
              -.995000 00 * 4FSTR8   -.995000 00 * 5FSTR8   -.995000 00 * 6FSTR8   -.995000 00 * 7FSTR8   -.990000 00 * 1FDST8
              -.990000 00 * 2FDST8   -.990000 00 * 3FDST8   -.990000 00 * 4FDST8   -.990000 00 * 5FDST8   -.990000 00 * 6FDST8
              -.990000 00 * 7FDST8
              <=         0.0

316  BRCORN   0.13000 02 * BPWSTR   +.510000 02 * BPWFSTR +.321400 02 * BPWGFSTR +.510000 02 * BBFDSTRA +.510000 02 * BBFDSTRB
              +.110020 03 * BPSMILK  +.228000 03 * BPHOG    -.100000 01 * BFCORN   -.950000 00 * BFGRSO   -.100000 01 * BBUYFDGR
              <=         0.0

317  BRALFH   0.50000 00 * BPCALF   +.450000 00 * BPWSTR   +.230000 00 * BPWFSTR  +.150000 00 * BPWGFSTR +.230000 00 * BBFDSTRA
              +.230000 00 * BBFDSTRB  +.604000 01 * BPSMILK  -.350000 01 * BPSIL    -.100000 01 * BFALFH   -.850000 00 * BFNATH
              -.100000 01 * ALFH1>8   -.100000 01 * ALFH2>8   -.100000 01 * ALFH3>8   -.100000 01 * ALFH4>8   -.100000 01 * ALFH5>8
              -.100000 01 * ALFH6>8   -.100000 01 * ALFH7>8   +.100000 01 * BALF>FOR
              <=         0.0

318  BRFDRREQ 0.18300 01 * BPCALF   +.360000 00 * BPWSTR   -.100000 01 * BALF>FOR -.100000 01 * BTNH>FOR
              <=         0.0

319  BRWPASTU 0.92000 00 * BPCALF   +.180000 00 * BPWSTR   -.300000 00 * BPWHT    -.300000 00 * BPCORN   -.300000 00 * BPGRSOR
              -.100000 01 * BTNH>WPU
              <=         0.0

320  BOPCAP   0.20000 02 * BPCALF   +.100000 02 * BPWSTR   +.100000 02 * BPGSTRFS +.120000 02 * BPWFSTR  +.120000 02 * BPWGFSTR
              +.150000 02 * BBFDSTRA  +.150000 02 * BBFDSTRB  +.200000 03 * BPSMILK   +.300000 03 * BPHOG    +.100000 02 * BPGSTR
              +.135000 02 * BPWHT    +.230000 02 * BPCORN   +.200000 02 * BPGRSOR  +.160000 02 * BPSOY    +.232500 02 * BPSIL
              +.200000 02 * BPALFH   +.130000 02 * BPNATH   -.100000 01 * BOPCAPR
              <=         0.0

321  BLSKCAP  0.25000 03 * BBFDSTRA +.250000 03 * BBFDSTRB +.600000 02 * BPSMILK  +.100000 02 * BPHOG    +.180000 03 * 1CALF8
              +.180000 03 * 2CALF8    +.180000 03 * 3CALF8    +.180000 03 * 4CALF8    +.180000 03 * 5CALF8    +.180000 03 * 6CALF8
              +.180000 03 * 7CALF8    +.295000 03 * 1GSTR8    +.295000 03 * 2GSTR8    +.295000 03 * 3GSTR8    +.295000 03 * 4GSTR8
              +.295000 03 * 5GSTR8    +.295000 03 * 6GSTR8    +.295000 03 * 7GSTR8    +.285000 03 * 1FSTR8    +.285000 03 * 2FSTR8
              +.285000 03 * 3FSTR8    +.285000 03 * 4FSTR8    +.285000 03 * 5FSTR8    +.285000 03 * 6FSTR8    +.285000 03 * 7FSTR8
              +.295000 03 * 1FDST8    +.295000 03 * 2FDST8    +.295000 03 * 3FDST8    +.295000 03 * 4FDST8    +.295000 03 * 5FDST8
              +.295000 03 * 6FDST8    +.295000 03 * 7FDST8    -.100000 01 * BLSKCAPR
              <=         0.0
322  BDEPREC  0.11500 02 * BPCALF   +.300000 01 * BPWSTR   +.500000 00 * BPGSTRFS +.500000 00 * BPWFSTR  +.500000 00 * BPWGFSTR
              +.900000 01 * BBFDSTRA  +.900000 01 * BBFDSTRB  +.630000 02 * BPSMILK   +.590000 02 * BPHOG    +.500000 00 * BPGSTR
              +.130000 02 * BPWHT    +.180000 02 * BPCORN   +.160000 02 * BPGRSOR  +.130000 02 * BPSOY    +.315000 02 * BPSIL
              +.250000 02 * BPALFH   +.250000 02 * BPNATH   -.100000 01 * BDEPR     -.300000 01 * BCHVWHT   -.400000 01 * BCHVCORN
              -.300000 01 * BCHVGRSO  -.300000 01 * BCHVSOY
              <=         0.0

323  BSFDGRAI -.10000 01 * BSCORN   -.950000 00 * BSGRSO   +.100000 01 * BBUYFDGR -.100000 01 * FDGR1>8  -.100000 01 * FDGR2>8
              -.100000 01 * FDGR3>8   -.100000 01 * FDGR4>8   -.100000 01 * FDGR5>8   -.100000 01 * FDGR6>8   -.100000 01 * FDGR7>8
              +.100000 01 * FDGR8>1   +.100000 01 * FDGR8>2   +.100000 01 * FDGR8>3   +.100000 01 * FDGR8>4   +.100000 01 * FDGR8>5
              +.100000 01 * FDGR8>6   +.100000 01 * FDGR8>7
              <=         0.0
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324  BSALFM   -.10000 01 * BSALFM   -.850000 00 * BSNATM   +.100000 01 * ALFMB>1  +.100000 01 * ALFMB>2  +.100000 01 * ALFMB>3
              +.100000 01 * ALFMB>4  +.100000 01 * ALFMB>5  +.100000 01 * ALFMB>6  +.100000 01 * ALFMB>7
              =        0.0

325  BFDLDTCP 0.10000 01 * BPWFSTR +.100007 01 * BPWGFSTR +.100000 01 * BBFDSTRA +.100000 01 * BBFDSTRB -.100000 01 * BFDLDTCP
              <=     69000.00000

326  BFUEL    0.35000 01 * BPCALF   +.100000 01 * BPWSTR   +.100000 01 * BPGSTRFS +.100000 01 * BPWFSTR  +.100000 01 * BPWGFSTR
              +.100000 01 * BBFDSTRA +.100000 01 * BBFDSTRB +.930000 01 * BPGMILK  +.134100 02 * BPMOG    +.500000 00 * BPCSTR
              +.550000 01 * BPWHT    +.625000 01 * BPCORN   +.600000 01 * BPGRSOR  +.500000 01 * BPSOY    +.150000 02 * BPSIL
              +.100000 02 * BPALFM   +.500000 01 * BPNATM   -.100000 01 * BFUELCST
              <=       0.0

327  BFERT    0.17000 02 * BPWHT    +.320000 02 * BPCORN   +.250000 02 * BPGRSOR  +.850000 01 * BPSOY    +.250000 02 * BPSIL
              +.450000 01 * BPALFM   -.100000 01 * BFERTCST
              <=       0.0

328  1CUSTWHT -.10000 01 * 1PWHT    +.100000 01 * 1CHVWHT
              <=       0.0

329  1CUSTCOR -.10000 01 * 1PCORN   +.100000 01 * 1CHVCORN
              <=       0.0

330  1CUSTGS  -.10000 01 * 1PGRSOR  +.100000 01 * 1CHVGRSO
              <=       0.0

331  1CUSTSOY -.10000 01 * 1PSOY    +.100000 01 * 1CHVSOY
              <=       0.0

332  5CUSTWHT -.10000 01 * 5PWHT    +.100000 01 * 5CHVWHT
              <=       0.0

333  5CUSTCOR -.10000 01 * 5PCORN   +.100000 01 * 5CHVCORN
              <=       0.0
334  5CUSTGS  -.10000 01 * 5PGRSOR  +.100000 01 * 5CHVGRSO
              <=       0.0

335  5CUSTSOY -.10000 01 * 5PSOY    +.100000 01 * 5CHVSOY
              <=       0.0

336  7CUSTWHT -.10000 01 * 7PWHT    +.100000 01 * 7CHVWHT
              <=       0.0

337  7CUSTCOR -.10000 01 * 7PCORN   +.100000 01 * 7CHVCORN
              <=       0.0

338  7CUSTGS  -.10000 01 * 7PGRSOR  +.100000 01 * 7CHVGRSO
              <=       0.0

339  7CUSTSOY -.10000 01 * 7PSOY    +.100000 01 * 7CHVSOY
              <=       0.0

340  8CUSTWHT -.10000 01 * 8PWHT    +.100000 01 * 8CHVWHT
              <=       0.0

341  8CUSTCOR -.10000 01 * 8PCORN   +.100000 01 * 8CHVCORN
              <=       0.0

342  8CUSTGS  -.10000 01 * 8PGRSOR  +.100000 01 * 8CHVGRSO
              <=       0.0

343  8CUSTSOY -.10000 01 * 8PSOY    +.100000 01 * 8CHVSOY
              <=       0.0

344  2CUSTWHT -.10000 01 * 2PWHT    +.100000 01 * 2CHVWHT
              <=       0.0

345  2CUSTCOR -.10000 01 * 2PCORN   +.100000 01 * 2CHVCORN
              <=       0.0

346  2CUSTGS  -.10000 01 * 2PGRSOR  +.100000 01 * 2CHVGRSO
              <=       0.0

347  3CUSTWHT -.10000 01 * 3PWHT    -.100000 01 * 3PCORN   -.100000 01 * 3PWHTFAL -.100000 01 * 3PWHTIRR +.100000 01 * 3CHVWHT
              <=       0.0

348  3CUSTCOR 0.10000 01 * 3CHVCORN
              <=       0.0
349  3CUSTGS  -.10000 01 * 3PGRSOR  -.100000 01 * 3PGSIRR  +.100000 01 * 3CHVGRSO
              <=       0.0

350  4CUSTWHT -.10000 01 * 4PWHT    -.100000 01 * 4PWHTFAL -.100000 01 * 4WHTIRR  +.100000 01 * 4CHVWHT
              <=       0.0

351  4CUSTCOR -.10000 01 * 4PCORN   +.100000 01 * 4CHVCORN
              <=       0.0

352  4CUSTGS  -.10000 01 * 4PGRSOR  -.100000 01 * 4GSIRR   +.100000 01 * 4CHVGRSO
              <=       0.0

353  6CUSTWHT -.10000 01 * 6PWHT    -.100000 01 * 6PWHTFAL -.100000 01 * 6PWHTIRR +.100000 01 * 6CHVWHT
              <=       0.0
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354  &CUSTCOR -.10000 01 * &PCUPR    +.100000 01 * &CMVCORR
              <=          0.0

355  &CUSTGS  -.10000 01 * &PGPSOR   -.100000 01 * &PCSTRR  +.100000 01 * &CMVGRSC
              <=          0.0

356  CONST    0.10000 00 * 1FSTR1    +.100000 00 * 2FSTR2    +.100000 00 * 3FSTR3    +.100000 00 * 4FSTR4    +.100000 00 * 5FSTR5
              +.100000 00 * 6FSTR6    +.100000 00 * 7FSTR7    +.100000 00 * 8FSTR8    +.100000 00 * 1FDST1    +.100000 00 * 2FDST2
              +.100000 00 * 3FDST3    +.100000 00 * 4FDST4    +.100000 00 * 5FDST5    +.100000 00 * 6FDST6    +.100000 00 * 7FDST7
              +.100000 00 * 8FDST8    +.100000 00 * 1DEVIRR   +.100000 00 * 5DEVIRR   +.100000 00 * 7DEVIRR   +.100000 00 * 8DEVIRR
              +.100000 00 * 31NM>1FDR +.100000 00 * 41NM>1FDR +.100000 00 * 61NM>1FDR +.100000 00 * 31NM>1PU  +.100000 00 * 41NM>1PU
              +.100000 00 * 61NM>1PU  +.100000 00 * 3PLTTPAS  +.100000 00 * 4PLTTPAS  +.100000 00 * 6PLTTPAS  +.100000 00 * 1PSSIRR
              +.100000 00 * 5PCSTRR   +.100000 00 * 7PCSTRR   +.100000 00 * 6PCSTRR   +.100000 00 * 2PCSTRR   +.100000 00 * 2CMVSCT
              +.100000 00 * 3CMVSCT   +.100000 00 * 4CMVSCT   +.100000 00 * 6CMVSCT   +.100000-03 * ALFM1>1   +.100000-03 * ALFM2>2
              +.100000-03 * ALFM3>3   +.100000-03 * ALFM4>4   +.100000-03 * ALFM5>5   +.100000-03 * ALFM6>6   +.100000-03 * ALFM7>7
              +.100000-03 * ALFM8>8   +.100000 00 * FDSK1>1   +.100000 00 * FDSK2>2   +.100000 00 * FDSK3>3   +.100000 00 * FDSK4>4
              +.100000 00 * FDSK5>5   +.100000 00 * FDSK6>6   +.100000 00 * FDSK7>7   +.100000 00 * FDSK8>8   +.100000 00 * 1CALF1
              +.100000 00 * 2CALF2    +.100000 00 * 3CALF3    +.100000 00 * 4CALF4    +.100000 00 * 5CALF5    +.100000 00 * 6CALF6
              +.100000 00 * 7CALF7    +.100000 00 * 8CALF8    +.100000 00 * 1GSTR1    +.100000 00 * 2GSTR2    +.100000 00 * 3GSTR3
              +.100000 00 * 4GSTR4    +.100000 00 * 5GSTR5    +.100000 00 * 6GSTR6    +.100000 00 * 7GSTR7    +.100000 00 * 8GSTR8
              >=          0.0
```

APPENDIX II

PROGRAM LISTING TO PRINT MPS-FORMAT EQUATIONS

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Explanations to Run the Program	71
Program Listing	73

INTRODUCTION

MPS/360 Linear and Seperaple programming does not have a procedure to transfer a given LP-Matrix into equation. The only procedure available in MPS is TRANCOL (print out of the matrix) together with BCDOUT, (a listing of cards read into computer).

A program which prints equations given as input in MPS-Format is another useful way to present big matrices. At the Swiss Federal Institute of Technology, Department Wirtschaftslehre des Landbaues such a program was developed for a CDC computer. With the help of the Computing Center at Kansas State University this program was re-written for a IBM computer.

EXPLANATIONS TO RUN THE PROGRAM

INPUT:

Use BCDOUT ('PUNCH') to get the card deck needed as input, remove all header cards such as: ROWS, COLUMNS, RHS and remove the whole BOUNDS- and RANGE-section. Place the card

```
//GO. FT04F001  DD  *
```

between the ROWS and COLUMNS section in the cards and the RHS immediately follows the COLUMNS cards

JCL-CARDS

```
//      JOB
***     PASSWORD (optional)
//      EXEC FORTGG
// STEPLIB DD DSN=DS2C6. EGLI. MPS. AUXLIB, DISP=OLD
// GO. FT22F001  DD SYSOUT=A
```

```
// GO. SYSIN  DD *
```

```
ROWS - cards
```

```
// GO. FT04F001  DD  *
```

```
COLUMNS - cards
RHS - cards
```

OUTPUT:

The first section is a listing of all COLUMNS Names. Besides each column name is an array of the names of rows that have non-zero elements in that column. The sign indicate if the coefficient of the column in that particular row is positive or negative.

The second section gives a numbered list of all equations within the MPS-matrix. The form is as follows:

Row name — Left hand side of the equation listing the coefficient and its sign followed by the name of the variable, the type of equation, and last the quantity of the resource available.

PROGRAM CHANGES

For each problems the DIMENSIONS, the RHS-Name and the OBJECTIVE-Name must be specified as used in the problem. Comment statements in the program explain the necessary changes. The places where these changes have to occur have been well marked with stars. There are six changes necessary, four to specify the size of the MPS-Matrix and two to specify the new Objective- and RHS-name.

Following is a listing of the KAM matrix.

```
C  MATRIX-FORMAT AND TO TRANSFER THE REDUCED MATRIX ON TAPE (DEVELOPED
C  BY WIRTSCHAFTSLEHRE DES LANDBAUES AT THE SWISS FEDERAL INSTITUT OF
C  TECHNOLOGY)
C
C  JOB-SETUP
C
C  1 STANDARD JOBCARD
C  2 JOBCONTROLCARDS
C  3 (EOR)
C  4 PROGRAMCARDS
C  5 (EOR)      (//GO.SYSIN DD *)
C  6 ROWS       (WITHOUT HEADCARD)
C  7 (EOR)      (GO.FT04F001 DD *)
C  8 COLUMNS AND ALSO RHS IMIDIATELY FOLLOWING BOTH WITHOUT HEADCARD
C  9 (EOR)      (EOF   /* )
C
C  NORMAL EXIT OF THE PROGRAM: STOP3
C
C  DIMENSIONS
C     GL(N1,2)           N1 BIGGER OR EQUAL AMOUNT OF EQUATIONS
C                        N1 TOO SMALL: STOP1
C     VA(N2,5,2),NR(N2)  N2 CA. 3TIMES TO 4TIMES N1 SHOULD BE OK
C                        N2 TOO SMALL: STOP 205
C
C
C
C  PUT IN GL(N1 =****,2),VA(N2 =****,5,2),NR(N2 =****)
C  ****************
      DIMENSION GL(400,2),VA(1600,5,2),NR(1600),G(5),W(5)
C  ****************
C
C
      DIMENSION GLE(12),VOR(12)
      DIMENSION FL(7,2)
      INTEGERYES
      INTEGER ROW
      REAL*8 GLE
      REAL*8 NAM
      REAL*8 VA
      REAL*8 E,F,S
      REAL*8 EQ/'=       '/,GE/'>=      '/,LE/'<=      '/
      REAL*8 RHS,GL,V,G
      DATA PLUS/1H+/,AMINUS/1H-/,E/'E       '/,F/'G       '/
     1                                          ,S/'L       '/
C
C  PUT IN N2:     DATA NR/N2*1/
C  *************************
      DATA NR/1600*1/
C  *************************
C
      REAL*8 BLANKS,ONAME                                          TWG
      DATA BLANKS/'        '/                                      TWG
      DATA COLNAM/'COL '/,ROWNAM/'ROW '/
C
C  PUT IN N1 :    N1= ****
C   ************************
```

```
      N1=400
C  ***************************
C
C
C  PUT IN N2     N2= ****
C  ***************************
      N2=1600
C  ***************************
C
C
C  PUT IN NAME OF RHS     RHS/' ******** '/
C  ***************************
      DATARHS/'B        '/                                              TWG
C  ***************************
C
      DIMENSION PRT1(40),PRT2(40)
      DATAPRT1/4H(1H ,4H,I3,,4H2X,A,4H8,1X,4H,F11,4H.5  ,4H  ,3,4HH * ,4
     1HA8,1,4HX,4(,4HA1,  ,4HF10.,4H5,3H,4H * ,,4HA8,1,4HX) ) /
      DATAPRT2/4H(1H ,4H,12X,4H5(2X,4HA1  ,4H,F10,4H.5,3,4HH * ,4H,A8
     1,4H))  /
  130 FORMAT(1X,A1,2X,A8,2X)
  190 FORMAT(1H1)
  230 FORMAT(4X,A8,2X,2(A8,2X,F12.5,3X))
  280 FORMAT(I10,A8,2X)
  281 FORMAT(A8,A1)
  282 FORMAT(7(A8,F11.5))
  290 FORMAT(2H0 ,A8,2X,12(A1,A8,1X))
  291 FORMAT(1H ,11X,12(A1,A8,1X))                                       TWG
  390 FORMAT(1H ,I3,1X,A8,1X,F15.5,3H * ,A8,1X,3(A1,F15.5,3H * ,A8,1X),/
     1)
  391 FORMAT(1H ,19X,4(A1,F15.5,3H * ,A8,2X),/)
C
C
C  PUT IN NAME OF OBJECTIVE
C  ***************************
  392 FORMAT(1H ,14X,    ' OBJECTIV ' )
C  ***************************
C
  393 FORMAT(1H ,14X  ,A2,F15.5)
  394 FORMAT(1H0)
      ROW=0
      PRINT190
C INPUT OF THE ROWS
      DO1 I=1,N1                                                         TWG
      CALLVREADR(GL(I,2),GL(I,1),ENDF)
      IF(ENDF.NE.0.)GOTO200                                              TWG
    1 CONTINUE                                                           TWG
      STOP1                                                              TWG
C NGL= NUMBER OF EQUATIONS IN THE INPUT STREAM
  200 NGL=I-1                                                            TWG
      NN=NGL                                                             TWG
      WRITE(10,280)NGL,RHS
      WRITE(10,281)((GL(I,J),J=1,2),I=1,NGL)
      ASSIGN254TOKD
C INPUT OF COLUMNS
  201 READ(4,230,END=260)V,(G(J),W(J),J=1,2)
      WRITE(10,230)V,(G(J),W(J),J=1,2)
      CALL RANGE(PRT1,PRT2,W(1),W(2))                                    TWG
```

```
      DO2 I=1,2
      IF(W(I).EQ.0.)GOTO2
      DO21 J=1,NGL
      IF(G(I).NE.GL(J,1))GOTO21
      YES=J
      N=NR(YES)
  203 IF(N-6)206,205,204
  204 YES=N
      N=NR(YES)
      GOTO203
C IF N=6 MAKE A CONTINUATION-ARRAY NR(YES) CONTAINS IN THIS CASE THE
C NUMBER OF THAT ARRAY
  205 NN=NN+1
      IF(NN.GT.N2)STOP205
      NR(YES)=NN
      YES=NN
      NR(NN)=1
      N=1
  206 VA(YES,N,1)=V
      VA(YES,N,2)=W(I)
      NR(YES)=NR(YES)+1
      GOTOKD,(254,220)
  220 IF(V.EQ.NAM)GOTO240
      ASSIGN252TOKB
      FL(NFL,1)=V
      FL(NFL,2)=0.
      ASSIGN231TOKC
      GOTO245
  231 IF(NUM.GT.100)GOTO233
      N=NUM
      IF(ROW.LE.58)GOTO232
      ROW=0
C OUTPUT: VARIABLES, NAMES OF THE EQUATIONS, WHERE IT APPEARS
  232 PRINT290,NAM,(VOR(K),GLE(K),K=1,NUM)
      ROW=ROW+2
      GOTOKB,(252,251,340,330)
  233 N=NUM-100
C OUTPUT: NAMES OF THE EQUATIONS WHERE THE VARIABLE APPEARS (CONTINUATION)
      PRINT291,(VOR(K),GLE(K),K=1,N)
      ROW=ROW+1
      GOTOKB,(252,251,340,330)
  240 N=NUM
      FL(NFL,1)=G(I)
      FL(NFL,2)=W(I)
  244 ASSIGN241TOKC
  245 NFL=NFL+1
      IF(NFL.NE.8)GOTOKC,(231,241,253)
      WRITE(10,282)((FL(K,L),L=1,2),K=1,7)
      NFL=1
      GOTOKC,(231,241,253)
  241 IF(N-12)250,242,243
C IF N=13: OUTPUT AND AGAIN FILLING OF THE ARRAY
  242 ASSIGN251TOKB
      GOTO231
  243 N=NUM-100
      GOTO241
  251 NUM=101
      N=1
```

```
      GOTO253
  254 ASSIGN220TOKD
      FL(1,1)=V
      FL(1,2)=0.
      NFL=2
  252 NUM=1
      N=1
      NAM=V
      ASSIGN253TOKC
      FL(NFL,1)=G(I)
      FL(NFL,2)=W(I)
      GOTO245
  250 NUM=NUM+1
      N=N+1
  253 GLE(N)=G(I)
      VOR(N)=PLUS
      IF(W(I).LT.0.)VOR(N)=AMINUS
      GOTO2
   21 CONTINUE
      ONAME=BLANKS                                                    TWG
      DO8 J=1,2                                                       TWG
      DO7 I=1,NGL                                                     TWG
      IF(G(J).EQ.GL(I,1))GOTO8
    7 CONTINUE                                                        TWG
      ONAME=G(J)
      TYPE=ROWNAM                                                     TWG
      GOTO6                                                           TWG
    8 CONTINUE                                                        TWG
    6 IF(ONAME.NE.BLANKS)GOTO996                                      TWG
      ONAME=V                                                         TWG
      TYPE=COLNAM                                                     TWG
  996 WRITE(6,999)TYPE,ONAME                                          TWG
  999 FORMAT(1HO,'*****THE FOLLOWING ',A4,                            TWG
     $'NAME COULD NOT BE FOUND*****',/,                               TWG
     $23X,A8,/,1H ,51(1H*))                                           TWG
      STOP21
    2 CONTINUE
      GOTO201
  260 IF(NUM.GT.100)GOTO261
      PRINT290,NAM,(VOR(I),GLE(I),I=1,NUM)
      GOTO262
  261 N=NUM-100
      PRINT291,(VOR(I),GLE(I),I=1,N)
  262 PRINT190
      IF(NFL.GT.1)WRITE(10,282)((FL(K,L),L=1,2),K=1,NFL)
      ENDFILE10
      ROW=0
      DO3 I=1,NGL
      YES=I
  301 IF (NR(YES).GT.6)GOTO310
      N=NR(YES)
      ASSIGN340TOKB
      IF(VA(YES,N-1,1).EQ.RHS)GOTO302
      N=N-1
      RH=0.
      GOTO303
  302 N=N-2
      RH=VA(YES,N+1,2)
```

```
      GOTO303
  310 N=5
      ASSIGN330TOKB
  303 DO31 J=1,N
      IF(VA(YES,J,2).GT.0.)GOTO311
      W(J)=AMINUS
      G(J)=DABS(VA(YES,J,2))
      GOTO31
  311 W(J)=PLUS
      G(J)=VA(YES,J,2)
   31 CONTINUE
      IF(YES.GT.NGL)GOTO320
      IF(N.EQ.1)GOTO312
C OUTPUT: EQUATIONS WITH SEVERAL VARIABLES
      PRINTPRT1,I,GL(I,1),VA(YES,1,2),VA(YES,1,1)
     1         ,(W(J),G(J),VA(YES,J,1),J=2,N)
      GOTOKB,(252,251,340,330)
C OUTPUT: EQUATIONS WITH A SINGLE VARIABLE
  312 PRINTPRT1,I,GL(I,1),VA(YES,1,2),VA(YES,1,1)
      GOTO340
  320 IF(N.EQ.0)GOTO340
      PRINTPRT2,(W(J),G(J),VA(YES,J,1),J=1,N)
      ROW=ROW+1
      GOTOKB,(252,251,340,330)
  330 YES=NR(YES)
      GOTO301
  340 IF(GL(I,2).EQ.E)GOTO341
      IF(GL(I,2).EQ.F)GOTO342
      IF(GL(I,2).EQ.S)GOTO343
      PRINT392
      GOTO351
  341 V=EQ
      GOTO350
  342 V=GE
      GOTO350
  343 V=LE
C OUTPUT: RHS AND OPERATION SIGN
  350 PRINT393,V,RH
  351 ROW=ROW+4
      IF(ROW.GT.56)GOTO352
      PRINT394
      GOTO3
  352 ROW=0
    3 CONTINUE
      STOP3
      END
```

```
      SUBROUTINE VREADR(X,Y,EOF)
      REAL*8                                                        TWG
     1X,
     2 Y,
     3 VY,
     4 BLK                                                          TWG
      LOGICAL*1 LOGCHR(8),BL,CD(80),LX,T1,T2
      REAL*8 VX,RT1,RT2
      DATA   BL/' '/                                                TWG
      DATA     BLK/'        '/                                      TWG
      DATART1,RT2/2*'        '/
      EQUIVALENCE (LOGCHR(1),VY),(LX,VX),(RT1,T1),(RT2,T2)
   99 FORMAT(80A1)                                                  TWG
      VX=BLK
      EOF=0.                                                        TWG
      READ(5,99,END=66)(CD(I),I=1,80)                               TWG
      DO90I=1,80                                                    TWG
      T1=CD(I)
      T2=BL
      IF(RT1.EQ.RT2)GOTO92
      LX=CD(I)                                                      TWG
      GOTO88                                                        TWG
   92 IF(I.LT.80)GOTO90                                             TWG
   91 VY=BLK                                                        TWG
      GOTO77                                                        TWG
   90 CONTINUE                                                      TWG
   88 ITI=I+1
      DO80 J=ITI,80
      T1=CD(J)
      T2=BL
      IF(RT1.EQ.RT2)GOTO82
      IF(J.GT.73)GOTO91                                             TWG
      DO85M=1,8                                                     TWG
      LOGCHR(M)=CD(J+M-1)                                           TWG
   85 CONTINUE                                                      TWG
      GOTO77                                                        TWG
   82 IF(J.LT.80)GOTO80                                             TWG
      GOTO91                                                        TWG
   80 CONTINUE                                                      TWG
   77 Y=VY
      X=VX
      RETURN                                                        TWG
   66 EOF=1.                                                        TWG
      GOTO91                                                        TWG
      END                                                           TWG
```

```
      SUBRCUTINE RANGE(F1,F2,X1,X2)
      DIMENSION F1(1),F2(1)
      REAL*8 X2,X1
      DATAI/0/,XO1/4H,E10/,XO2/4H.4  /,XP1/4HE10./,XP2/4H5,3H/,YP1/4H,E1
     10/,YP2/4H.5,3/
      IF(I.GT.0)GOTO70
      IF(X2.GT. 9999.)GOTO60
      IF(X1.GT. 9999.)GOTO60
   70 RETURN
   60 F1(5)=XO1
      F1(6)=XO2
      F1(12)=XP1
      F1(13)=XP2
      F2(5)=YP1
      F2(6)=YP2
      I=1
      GOTO70
      END
```

APPENDIX III

PRINT OUT OF RESULTS OF KAM MODEL FOR FIVE PRICE SETS USING MPS REPORT GENERATOR

Page

Results with Normal Price..... 81

Results with High Wheat Price (ZWH)..... 87

Results with High Grain Sorghum Price (ZGH)..... 94

Results with Low Wheat Price (ZWL)..... 101

Results with Low Grain Sorghum Price (ZGL)..... 108

Results with Normal Price

KANSAS-AG R-TAB: 00

PRICE.IN.OBJ.:BU UNIT: 100

PRICE (CONT. R5-R9)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
WHEAT PRICE	2.750	2.630	2.550	2.460
(SWHT)	2.700	2.490	2.690	2.680
CORN PRICE	2.000	1.790	1.790	1.700
(SCORN)	1.940	1.830	1.930	1.920
GRAINSORGHUM PRICE	1.700	1.570	1.490	1.400
(SGRSO)	1.640	1.430	1.630	1.620

KANSAS-AG R-TAB: 01

LIVESTOCK NO UNIT: 100

L.STOCK (CONT. R5-R9)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
BEEFCOW AND CALF	1750	3414	3590	1200
(PCALF)	2575	1800	1559	1173
WEANING CALF SOLD				
(SCALF)	1931		355	
WEANING CALF KEPT	1313	2560	2692	900
(TWSTR)		1350	814	880
CALF.KEPT.IN W.TER	3155	2547	3080	895
(PWSTR)		1343	810	889
WINTERED.CALF.SOLD				
(SWSTR)				
STRS.ON GRS.5MO.	3123	2522	3049	887
(PGSTRFS)		1330	802	880
STRS.ON GRS.3MO.				
(PGSTR)				
W.TER.CALF.TOGRASS	3139	2535	3064	891
(TGSTR)		1337	806	885

KANSAS-AG R-TAB: 01

L.STOCK CONT.NO UNIT: 100

L.STOCK (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
GRAZING STRS.SOLD (SGSTR)				
GRS.STRS.TO.FEEDL. (TFSTR)				
W.TEP.CF.TO.FEEDL. (PWFSTR)				
FEEDER.STRS. . (PWGFSTR)				
F.STRS.PURC. NOV. (BFSTRA)				
F.STRS.PURC. MAY. (BFCSTRB)	145	2250	3308	7500
DAIRY.COW . (PSMILK)	202	394	130	12
SOW.AND TWO.LITRS. (PHCG)	152	60	140	220
DEVELOP FEED LOT (FDLOTDE)	300	1000	300	137
	500	210	270	450

KANSAS-AG R-TAB: C2

CROPS . AC.BU UNIT: 100

CROPS (CONT. RS-R3)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
WHEAT.AC.CONTIN.	4760	45546	27303	300
(PWHT)	10724	2300	3564	8630
BU.WHEATSOLD .	147546	1411912	1251998	708197
(SWHT)	353905	584445	103351	293420
WHEAT.AC.FALLOW			18548	22611
(PWHTFAL)		16155		
WHEAT.AC.IRRIGAT.			260	
(PWHTIRR)		130		
CORN.ACRES .	1000	1800	1758	8401
(PCORN)	450	2417	352	2000
CORN.BU SOLD .		187200		822721
(SCORN)	21071	223761		142800
CORN.BU FED .	65000		182874	143394
(FCORN)	7234	42161	19515	
GR.SORG.DRY.LAND	1500	5800	2070	5000
(PGRSOR)	2500	450	1350	3100
GR.S..AC.IRRIGAT			530	
(PGSIRR)		190		
GR.SORG..BU.SOLD		29098		
(SGRSO)				257
GR.SORG..BU.FED	78000	441302	114270	298250
(FGRSO)	130000	21350	71550	182643
SOYBEAN AC .	5496			
(PSOY)	650		1600	1270
SILAGE.AC.DRYLAND		2709		
(PSIL)	676		261	

KANSAS-AG R-TAB: 02

C.CONT. AC.BU.T.$ UNIT: 100

CROPS (CONT. R5-R8)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
SILA..AC.IRRIGAT. (PSILIR)				
ALFALF.AC . (PALFH)	625 1427	2218 2263	3722 508	1432 820
ALFALF.T.SOLD. (SALFH)	1488	1036 1897		
ALFALF.TFED . (FALFH)	3534	4246 5644	12405 1234	5319 2030
NATIV.HAY.AC . (FNATH)	844		1620	544
NATIV.HAY.T.FED (FNATH)	928			
NATIV.HAY.T.SOLD (SNATH)				
FORAGE.AC.FORFEED (PFORAGE)				
CROPLAND.NOT USED (IDLECPL)	1245	12	3173	
PLANT.ALFALF . (PLTALF)		1763	1452	519
PLANT.TAME.PAST. (PLTTPAS)				
DEVELOP IRRIGAT. (DEVIRR)				

KANSAS-AG R-TAB: 03

EXPENSES....H.$.AC UNIT: 100

OTHER.EX (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
HIRE.FULL.TIME.LAB	28	19	18	55
(HLABFT)	5	12		3
HIRE.SUMMER.LABOR		2000		
(HLABSU)	387	947		63
FUEL.COST	96928	349680	211631	242823
(FUELCST)	119757	115300	65379	109126
FERTILIZER..COST	197189	1098077	115509	459732
(FERTCST)	288051	112295	126964	302695
DEPRECIATION	274946	1012869	524065	463114
(DEPR)	321280	222208	201871	307393
OPERATING.CAP.REQ.	457144	1222423	774564	750443
(OPCAPR)	434060	396033	300278	498717
L.STOCK CAP. REQ.	387673	596152	910583	1877092
(LSKCAPR)	14126	5700	11100	192743
CUSTOM.H.VEST.WHEAT				4325
(CHVWHT)				
CUSTOM.H.VEST.CORN				
(CHVCORN)				
CUSTOM.H.VEST.GR.S				
(CHVGRS)				
CUSTOM.H.VEST.SOYB				1270
(CHVSOY)				
FEED.GRAIN.PURC				
(BLYFDGR)				

KANSAS-AG R-TAB: 04

TRANSFERACT. .F.AC UNIT: 1GO

TRSF.ACT (CONT. R5-F8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
TPAST.SUB.FO R.APA	7610	2916	2779	
(TPAST)	5476		5172	5044
ALFALFA FORR AGE	4338	7164	7678	2518
(ALF>FOR)	4712	3778	1200	1824
NAT.HAY FORR AGE				
(TNF>FOR)			1944	642
NAT.HAY W.TERPAST.				
(TNF>WPU)				
MAYWORK .TRSFJUNE	1086	18039	13744	11210
(TFWHM>J)	4980		2733	
JUNWOR K.TRSF.MAY				
(TFWHJ>M)				

Results with High Wheat Price (ZWH)

KANSAS-AG

R-TAB: 00

PRICE.IN.CBJ.:80 UNIT: 100

PRICE (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
WHEAT PRICE	5.360	5.270	5.190	5.100
(SWHT)	5.340	5.130	5.330	5.320
CORN PRICE	2.660	2.450	2.450	2.360
(SCORN)	2.600	2.490	2.590	2.580
GRAINSORGHUM PRICE	4.140	4.010	3.930	3.840
(SGRSO)	4.080	3.870	4.070	4.050

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 01

LIVESTOCK NO UNIT: 100

L.STOCK (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
BEEFCOW AND CALF	1750	3414	3590	1200
(PCALF)	2575	1800	1559	1173
WEANING CALF SOLD		656		900
(SCALF)	1694	1350		
WEANING CALF KEPT	1313	1904	2652	
(TWSTR)	238		1169	890
CALF.KEPT.IN W.TER	4716	1895	3823	
(PWSTR)	236		1163	875
WINTERED.CALF.SOLD	1553			
(SWSTR)				
STRS.ON GRS.5MO.	3123	1876	3784	
(PGSTPFS)	1780		1152	866
STRS.ON GRS.3MO.				
(PGSTR)				
W.TER.CALF.TOGRASS	3139	1885	3803	
(TGSTR)	235		1157	871

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 01

L.STOCK CONT.NO UNIT: 100

L.STOCK (CONT. R5-R8)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
GRAZING STRS.SOLD (SGSTR)				
GR.S.STRS.TO.FEEDL. (TFSTR)				
WATER.CF.TO.FEEDL. (PWFSTR)				
FEEDER.STRS. . (PWGFSTR)				
F.STRS.PURC. NOV. (BFSTRA)				
F.STRS.PURC. MAY. (BFDSTRB)	1000			
DAIRY.COW . (PSMILK)	202 152	394 60	130 140	12 220
SOW.AND TWO.LITRS. (PHOG)	300 500	1000 210	300 270	137 450
DEVELOP FEED LOT (FDLOTDE)				

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 02

CROPS . AC.BU UNIT: 100

CROPS (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
WHEAT.AC.CONTIN.	1000	45119	45763	300
(PWHT)	5605	2300	1000	1500
BU.WHEATSOLD .	31000	1398702	1166303	354200
(SWHT)	184965	447330	29000	51000
WHEAT.AC.FALLOW			1800	9500
(PWHTFAL)		12000		
WHEAT.AC.IRRIGAT.			260	
(PWHTIRR)		130		
CORN.ACRES .	1000	1800	750	6000
(PCORN)	450	2000	300	2000
CORN.BU SOLD .	65000	187200	78000	690000
(SCORN)	28305	220000	16620	142800
CORN.BU FED .				
(FCORN)				
GR.SORG.DRY.LAND	9600	9800	15806	31222
(PGRSOR)	7808	8760	7400	10230
GR.S..AC.IRRIGAT			2990	
(PGSIRR)		1598		
GR.SORG..BU.SOLD	499200	470400	329256	1368034
(SGRSO)	406024	452703	292200	603570
GR.SORG..BU.FED				
(FGRSO)				
SOYBEAN AC .	2400			
(PSOY)	650		1600	1270
SILAGE.AC.DRYLAND		3148		
(PSIL)	487	17		

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 02

C.CONT. AC.BU.T.$ UNIT: 100

CROPS (CONT. R5-R8)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
SILA..AC.IRRIGAT. (PSILIR)				
ALFALF.AC . (PALFH)	625 1427	2524 1255	2270 508	913 820
ALFALF.T.SOLD. (SALFH)	1488	6962		523
ALFALF.TFED . (FALFH)	3534	4185	7567 1234	2868 2030
NATIV.HAY.AC . (PNATH)	1000 1700	1437	1620	544
NATIV.HAY.T.FED (FNATH)	1100			
NATIV.HAY.T.SOLD (SNATH)				
FORAGE.AC.FORFEED (PFORAGE)				
CROPLAND.NOT USED (IDLECPL)				
PLANT.ALFALF . (PLTALF)		755		
PLANT.TAME.PAST. (PLTTPAS)				
DEVELOP IRRIGAT. (DEVIRR)				

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 03

EXPENSES....H.S.AC UNIT: 100

OTHER.EX (CONT. R5-P8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
HIRE.FULL.TIME.LAB	43	14	75	72
(HLABFT)	7	19	4	9
HIRE.SUMMER.LABOR		2934		
(HLABSU)	291			
FUEL.COST .	112570	363693	264828	259812
(FUELCST)	131134	132672	84038	111973
FERTILIZER..COST	311013	1106038	230436	453759
(FERTCST)	329006	134722	226586	359735
DEPRECIATION .	319959	1033284	616049	472727
(DEPR)	352530	269464	229342	292219
OPERATING.CAP.REQ.	536864	1216288	870178	756452
(OPCAPR)	543059	404859	277370	534431
L.STOCK CAP. REQ.	885165	33652	218709	2091
(LSKCAPR)	472390	5700	11100	17676
CUSTOM.H.VESTWHEAT				
(CHVWHT)				
CUSTOM.H.VEST.CORN	1000			3645
(CHVCORN)			300	
CUSTOM.H.VEST.GR.S				
(CHVGRS)				
CUSTOM.H.VEST.SOYB				
(CHVSOY)	650		1600	1270
FEED.GRAIN.PURC	202977	296002	132396	32590
(BUYFDGR)	133807	54481	92085	138137

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: C4

TRANSFERACT. .H.AC UNIT: 100

TRSF.ACT (CONT. R5-R8)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
TPAST.SUB.FO R.NPA	7610	2916	2779	
(TPAST)	5476		5172	5044
ALFALFA FORR AGE	4900	5133	7946	2196
(ALF>FOR)	2876	3294	1327	1819
NAT.HAY FORR AGE		1796		
(TNH>FOR)	1921		1944	642
NAT.HAY W.TERPAST.				
(TNH>WPU)				
MAYWORK .TRSFJUNE		17350	6671	478
(TFWHM>J)	3198		1353	
JUNWOR K.TRSF.MAY				
(TFWHJ>M)				

Results with High Grain Sorghum Price (ZGH)

KANSAS-AG

R-TAB: 00

PRICE.IN.CRJ.:BU UNIT: 100

PRICE (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
WHEAT PRICE (SWHT)	4.560	4.330	4.250	4.160
	4.400	4.190	4.390	4.380
CORN PRICE (SCORN)	3.380	3.170	3.170	3.080
	3.320	3.210	3.310	3.300
GRAINSORGHUM PRICE (SGRSO)	5.730	5.600	5.520	5.430
	5.670	5.460	5.660	5.650

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 31

LIVESTOCK NO UNIT: 100

L.STOCK (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
BEEFCOW AND CALF	1750	3414	3590	1200
(PCALF)	2575	1800	1559	1173
WEANING CALF SOLD				900
(SCALF)	1931	1350		
WEANING CALF KEPT	1313	2560	2692	
(TWSTR)			1169	880
CALF.KEPT.IN W.TER	5000	2547	2679	
(PWSTR)			1163	875
WINTERED.CALF.SOLD	1836			
(SWSTR)				
STRS.ON GRS.5MO.	3123	2522	2652	
(PGSTRFS)	1827		1152	866
STRS.ON GRS.3MO.				
(PGSTR)				
W.TER.CALF.TOGRASS	3135	2535	2665	
(TGSTR)			1157	871

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 01

L.STOCK CONT.NO UNIT: 100

L.STOCK (CONT. R5-R8)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
GRAZING STRS.SOLD (SGSTR)				
GRS.STRS.TO.FEEDL. (TFSTR)				
W.TER.CF.TO.FEEDL. (PWFSTR)				
FEEDER.STRS. (PWGFSTR)				
F.STRS.PURC. NOV. (BFSTRA)				
F.STRS.PURC. MAY. (BFDSTRB)				
DAIRY.COW (PSMILK)	202 152	394 60	130 140	12 220
SOW.AND TWO.LITRS. (PHOG)	300 500	1000 210	300 270	137 450
DEVELOP FEED LOT (FCLOTDE)				

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 02

CROPS . AC.BU UNIT: 100

CROPS (CONT. R5-P8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
WHEAT.AC.CONTIN.	1000	2600	9000	300
(PWHT)	3500	2300	1000	1500
BU.WHEATSOLD .	31000	80600	284000	354200
(SWHT)	115500	447330	29000	51000
WHEAT.AC.FALLOW			1800	9500
(PWHTFAL)		12000		
WHEAT.AC.IRRIGAT.			260	
(PWHTIRR)		130		
CORN.ACRES .	1000	1800	750	6000
(PCORN)	450	2000	300	2000
CORN.BU SOLD .	65000	187200	78000	690000
(SCORN)	28305	220000	16620	142800
CORN.BU FED .				
(FCORN)				
GR.SORG.DRY.LAND	9600	52949	53568	31222
(PGRSOR)	10251	8760	7400	10135
GR.S..AC.IRRIGAT			2052	
(PGSIRR)		1648		
GR.SORG..BU.SOLD	499200	2541568	2082337	1368034
(SGRSO)	538267	456448	392200	600888
GR.SORG..BU.FED				
(FGRSO)				
SOYBEAN AC .	2400			
(PSOY)	650		1600	1270
SILAGE.AC.DRYLAND		1154		
(PSIL)	49	722		45

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 02

C.CONT. AC.BU.T.$ UNIT: 100

CROPS (CONT. R5-P8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
SILA..AC.IRRIGAT.			938	
(PSILIR)				
ALFALF.AC .	625	4288	2270	913
(PALFH)	1427	500	508	820
ALFALF.T.SOLD.	1488	3301		523
(SALFH)				
ALFALF.TFED .		6908	7567	2868
(FALFH)	3534	1667	1234	2030
NATIV.HAY.AC .	1000	1437		
(PNATH)	1700		1620	544
NATIV.HAY.T.FED	1100			
(FNATH)				
NATIV.HAY.T.SOLD				
(SNATH)				
FORAGE.AC.FORFEED				
(PFORAGE)				
CROPLAND.NOT USED				
(IDLECPL)				
PLANT.ALFALF .		1364		
(PLTALF)				
PLANT.TAME.PAST.				
(PLTTPAS)				
DEVELOP IRRIGAT.				
(DEVIRR)				

KANSAS-AG R-TAB: 03

EXPENSES....H.S.AC UNIT: 100

OTHER.EX (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
HIRE.FULL.TIME.LAB	45	87	78	72
(HLABFT)	9	20	4	10
HIRE.SUMMER.LABOR				
(HLABSU)	159			
FUEL.COST	111854	352419	375186	299812
(FUELCST)	128054	132925	84038	112382
FERTILIZER..COST	311013	1729495	414249	453759
(FERTCST)	345846	157512	226586	359735
DEPRECIATION	314482	923394	725958	472727
(DEPR)	343959	271462	229342	293060
OPERATING.CAP.REQ.	524703	1351797	1033112	756452
(OPCAPR)	545795	405515	377370	534579
L.STOCK CAP. REQ.	686793	33652	10800	2091
(LSKCAPR)	555736	5700	11100	17676
CUSTOM.H.VESTWHEAT				
(CHVWHT)				
CUSTOM.H.VEST.CORN	1000	1800		3645
(CHVCORN)			300	
CUSTOM.H.VEST.GR.S				
(CHVGRS)				
CUSTOM.H.VEST.SOYB				
(CHVSOY)	650		1600	1270
FEED.GRAIN.PURC	155668	304487	117530	32590
(BUYFDGR)	130734	54481	92035	138137

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 04

TRANSFERACT. .H.AC UNIT: 100

TRSF.ACT (CONT. R5-R8)	REGICN1	REGICN2	REGICN3	REGICN4
	REGICN5	REGICN6	REGICN7	REGICN8
TPAST.SUB.FO R.NPA (TPAST)	7610	2916	2779	
	5476		5172	5044
ALFALFA FORR AGE (ALF>FOR)	5003	5366	7534	2156
	2791	3294	1327	1819
NAT.HAY FORR AGE (TNH>FOR)		1796		
	1921		1944	642
NAT.HAY W.TERPAST. (TNH>WPU)				
MAYWORK .TRSFJUNE (TFWHM>J)				478
	2695		1353	
JUNWOR K.TRSF.MAY (TFWHJ>M)				

Results with Low Wheat Price (ZWL)

KANSAS-AG R-TAB: C0

PRICE.IN.OBJ.:SU UNIT: 100

PRICE (CONT. R5-R8)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
WHEAT PRICE (SWHT)	1.260 1.210	1.140 1.000	1.060 1.200	.970 1.190
CORN PRICE (SCORN)	1.110 1.050	.900 .940	.900 1.040	.810 1.030
GRAINSORGHUM PRICE (SGRSO)	1.760 1.700	1.630 1.490	1.550 1.690	1.460 1.680

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 01

LIVESTOCK NO UNIT: 100

L.STOCK (CONT. R5-R8)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
BEEFCOW AND CALF	1750	3414	3590	1200
(PCALF)	2575	1800	1559	1173
WEANING CALF SOLD		1637	908	
(SCALF)	1921		355	
WEANING CALF KEPT	1313	923	1785	900
(TWSTR)		1350	814	880
CALF.KEPT.IN W.TER	2920	919	1776	3260
(PWSTR)		1343	819	1680
WINTERED.CALF.SOLD				
(SWSTR)				
STRS.ON GRS.5MO.	2891	909	1758	3227
(PGSTRFS)		1330	802	1663
STRS.ON GRS.3MO.				
(PGSTR)				
W.TER.CALF.TOGRASS	2905	914	1767	3243
(TGSTR)		1337	806	1672

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: C1

L.STOCK CONT.AC UNIT: 100

L.STOCK (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
GRAZING STRS.SOLD (SGSTR)				
GRS.STRS.TO.FEEDL. (TFSTR)				
WTER.CF.TO.FEEDL. (PWFSTR)				
FEEDER.STRS. . (PWGFSTR)				
F.STRS.PURC. NOV. (BFSTRA)				
F.STRS.PURC. MAY. (BFDSTRB)	1000	2250	3500	12059
	2197	2903		690
DAIRY.COW . (PSMILK)	202	394	130	12
	152	60	140	220
SOW.AND TWO.LITRS. (PHOG)	300	1000	300	137
	500	210	270	450
DEVELOP FEED LOT (FDLOTDE)				4559
		1803		

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 02

CROPS . AC.BU UNIT: 100

CROPS (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
WHEAT.AC.CONTIN.	1000	2600	9000	300
(PWHT)	3500	2300	1000	1500
BU.WHEATSOLD .	31000	80600	284000	354200
(SWHT)	115500	447330	29000	51000
WHEAT.AC.FALLOW			1800	9500
(PWHTFAL)		12000		
WHEAT.AC.IRRIGAT.			260	
(PWHTIRR)		130		
CORN.ACRES .	2763	1800	2062	6000
(PCORN)	1856	2000	352	2000
CORN.BU SOLD .				
(SCORN)				
CORN.BU FED .	179627	187200	214446	690000
(FCORN)	119281	220000	19515	142800
GR.SORG.DRY.LAND	2765	5800	16646	5000
(PGRSOR)	2500	1344	1350	3100
GR.S..AC.IRRIGAT			530	
(PGSIRR)		190		
GR.SORG..BU.SOLD	144798	248440	565480	298250
(SGRSO)		65306		139753
GR.SORG..BU.FED		221960	73520	
(FGRSO)	130000		71550	43147
SOYBEAN AC .	3113			
(PSOY)	2042		1613	8400
SILAGE.AC.DRYLAND		1448		
(PSIL)			398	

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 02

C.CONT. AC.BL.T.$ UNIT: 100

CROPS (CONT. R5-R8)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
SILA..AC.IRRIGAT. (PSILIR)				
ALFALF.AC (PALFH)	625 1427	2924 2680	3418 508	3833 820
ALFALF.T.SOLD. (SALFH)	1468	2621		5954
ALFALF.TFED (FALFH)	3534	6962 6312	11393 1234	8283 2330
NATIV.HAY.AC (PNATH)	1000		641	
NATIV.HAY.T.FED (FNATH)	925			
NATIV.HAY.T.SOLD (SNATH)				
FORAGE.AC.FORFEED (PFORAGE)				
CROPLAND.NOT USED (ICLECPL)	4339 5062	44219 7416	36923 5587	26222
PLANT.ALFALF (PLTALF)		2180	1148	2920
PLANT.TAME.PAST. (PLTTPAS)				
DEVELOP IRRIGAT. (DEVIRR)				

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: C3

EXPENSES....H.S.AC UNIT: 100

OTHER.EX (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
HIRE.FULL.TIME.LAB	28	4	19	62
(HLABFT)	5	12		24
HIRE.SUMMER.LABOR				
(HLABSU)		1050		
FUEL.COST .	84235	148613	196162	219310
(FUELCST)	67388	111390	48495	104414
FERTILIZER..COST	202762	447015	198557	379298
(FERTCST)	206458	98310	86912	242090
DEPRECIATION .	258170	433026	496289	476545
(DEPR)	270316	241388	148477	278699
OPERATING.CAP.REQ.	442088	792390	683067	782246
(OPCAPR)	458675	413487	256328	525206
L.STOCK CAP. REQ.	558592	596152	885803	3446818
(LSKCAPR)	563376	731467	11100	336511
CUSTOM.H.VESTWHEAT				
(CHVWHT)				
CUSTOM.H.VEST.CORN				
(CHVCORN)				
CUSTOM.H.VEST.GR.S				
(CHVGRS)				
CUSTOM.H.VEST.SOYB				
(CHVSOY)				7351
FEED.GRAIN.PURC				
(BUYFDGR)				

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 04

TRANSFER ACT. M.AC UNIT: 100

TRSF.ACT (CONT. R5-P8)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
TPAST.SUB.FOR.NPA	7610	2516	2779	
(TPAST)	5476		5172	5044
ALFALFA FORR AGE	4254	6578	7209	3369
(ALF>FOR)	4712	3778	3144	2751
NAT.HAY FORR AGE				
(TNF>FOR)				
NAT.HAY W.TERPAST.	171			
(TNF>WPU)			769	
MAYWORK .TRSFJUNE				2517
(TFMHM>J)	2881		221	
JUNWOR K.TRSF.MAY				
(TFMHJ>M)				

Results with Low Grain Sorghum Price (ZGL)

KANSAS-AG R-TAB: 00

PRICE.IN.OBJ.:BU UNIT: 100

PRICE (CONT. R5-R8)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
WHEAT PRICE (SWHT)	1.290 1.240	1.170 1.030	1.090 1.230	1.000 1.220
CORN PRICE (SCORN)	1.030 .970	.820 .860	.820 .960	.730 .950
GRAINSORGHUM PRICE (SGRSO)	1.580 1.520	1.450 1.310	1.370 1.510	1.280 1.500

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 01

LIVESTOCK NO UNIT: 100

L.STOCK (CONT. R5-R8)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
BEEFCOW AND CALF (PCALF)	1750 2575	3414 1800	3590 1556	1200 1173
WEANING CALF SOLD (SCALF)	1931	1637	730 121	
WEANING CALF KEPT (TWSTR)	1313	923 1350	1962 1048	900 880
CALF.KEPT.IN W.TER (PWSTR)	1427	919 1343	1952 1043	3549 2076
WINTERED.CALF.SOLD (SWSTR)				
STRS.ON GRS.5MO. (PGSTRFS)	1413	909 1330	1933 1032	3509 2056
STRS.ON GRS.3MO. (PGSTR)				
W.TER.CALF.TOGRASS (TGSTR)	1420	914 1337	1943 1033	3929 2066

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 01

L.STOCK CONT.NO UNIT: 100

L.STOCK (CONT. R5-R8)	REGION1 REGION5	REGION2 REGION6	REGION3 REGION7	REGION4 REGION8
GRAZING STRS.SOLD (SGSTR)				
GRS.STRS.TO.FEEDL. (TFSTR)				
WATER.CF.TO.FEEDL. (PWFSTR)				
FEEDER.STRS. . (PWGFSTR)				
F.STRS.PURC. NOV. (BFSTRA)				
F.STRS.PURC. MAY. (BFGSTRB)	1000 2197	2250 2903	13387	14508 690
DAIRY.COW . (PSMILK)	202 152	394 60	130 140	12 220
SOW.AND TWC.LITRS. (PHCG)	300 500	1000 210	300 270	137 450
DEVELOP FEED LOT (FDLOTDE)		1803	9887	7008

EXECUTOR. MPS/360 V2-M11

KANSAS-AG R-TAB: 02

CROPS . AC.BU UNIT: 100

CROPS (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
WHEAT.AC.CONTIN.	1000	2600	9000	300
(PWHT)	3500	2300	1080	1500
BU.WHEATSOLD .	31000	80600	284000	354200
(SWHT)	115500	447330	29000	51000
WHEAT.AC.FALLOW			1800	9500
(PWHTFAL)		12000		
WHEAT.AC.IRRIGAT.			260	
(PWHTIRR)		130		
CORN.ACRES .	2465	1800	967	6000
(PCORN)	1856	2000	407	2000
CORN.BU SOLD .				
(SCORN)				
CORN.BU FED .	160219	187200	100599	650000
(FCORN)	119281	220000	22548	142800
GR.SORG.DRY.LAND	1713	9800	18308	5000
(PGRSOR)	2500	1344	1350	3100
GR.S..AC.IRRIGAT			900	
(PGSIRR)		190		
GR.SORG..BU.SOLD	89085	248440		157392
(SGRSO)		65306		134329
GR.SORG..BU.FED		221960	726550	140858
(FGRSO)	130000		71550	48571
SOYBEAN AC .	2470			
(PSOY)	2042		1600	8400
SILAGE.AC.DRYLAND		1448		
(PSIL)			499	

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KANSAS-AG R-TAB: 02

C.CONT. AC.BU.T.S UNIT: 100

CROPS (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
SILA..AC.IRRIGAT. (PSILIR)				
ALFALF.AC . (PALFH)	625	2924	4143	3833
	1427	2680	508	820
ALFALF.T.SOLD. (SALFH)	1488			4833
		2621		
ALFALF.TFED . (FALFH)		6962	13810	9404
	3534	6312	1234	2030
NATIV.HAY.AC . (PNATH)	1000			
			1620	136
NATIV.HAY.T.FED (FNATH)	787			
NATIV.HAY.T.SOLD (SNATH)				
FORAGE.AC.FORFEED (PFORAGE)				
CROPLAND.NOT USED (ICLECPL)	6352	44219	35261	26222
	5062	7416	5444	
PLANT.ALFALF . (PLTALF)			1873	2920
		2180		
PLANT.TAME.PAST. (PLTTPAS)				
DEVELOP IRRIGAT. (DEVIRR)				

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KANSAS-AG R-TAB: 03

EXPENSES....H.$.AC UNIT: 100

OTHER.EX (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
HIRE.FULL.TIME.LAB	11	4	20	67
(HLABFT)	5	12	2	24
HIRE.SUMMER.LABOR				
(HLABSU)		1050		
FUEL.COST .	69755	148613	212877	223129
(FUELCST)	87388	111390	55646	105882
FERTILIZER..COST	161279	447015	181468	379293
(FERTCST)	206458	98310	90904	242050
DEPRECIATION .	217642	433026	605811	489108
(DEPR)	270316	241388	177703	278588
OPERATING.CAP.REQ.	375416	752390	835282	832678
(OPCAPR)	458875	413487	277076	534858
L.STOCK CAP. REQ.	287149	596152	3357552	4184120
(LSKCAPR)	563376	731467	11100	408579
CUSTOM.H.VEST.WHEAT				3960
(CHVWHT)				
CUSTOM.H.VEST.CORN	1109			
(CHVCORN)				2000
CUSTOM.H.VEST.GR.S				
(CHVGRS)				
CUSTOM.H.VEST.SOYB				
(CHVSOY)				6314
FEED.GRAIN.PURC				
(BLYFDGR)				

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KANSAS-AG R-TAB: 04

TRANSFERACT. .H.AC UNIT: 100

TRSF.ACT (CONT. R5-R8)	REGION1	REGION2	REGION3	REGION4
	REGION5	REGION6	REGION7	REGION8
TPAST.SUB.FO R.NPA	7610	2916	2779	
(TPAST)	5476		5172	5044
ALFALFA FORR AGE	3716	6578	7273	3617
(ALF>FOR)	4712	3778	2079	2733
NAT.HAY FORR AGE			1149	160
(TNH>FOR)				
NAT.HAY W.TERPAST.	313		795	
(TNH>WPU)				
MAYWORK .TRSFJUNE	2881			
(TFWHM>J)				
JUNWOR K.TRSF.MAY				
(TFWFJ>M)				

APPENDIX LV

MACRO DESCRIPTION FOR REPORTING RESULTS WITH MPSRG (Mathematical Programming system Report Generator)

Page

Introduction..... 116

General Description..... 116

List of the Program..... 120

INTRODUCTION

This short description of the MPSRG assumes that the user is familiar with the MPS/360 Application Description, the MPS/360 Control language and the MPS/360 linear and separable Programming.

An efficient way was needed to compare several different solutions obtained by the application of the Kansas Agriculture Model (KAM). This same procedure used to print tables as in Appendix III may be used for other models.

A very short overview over the manual "Mathematical Programming System/360 Report Generator (MPSRG) Program Description Manual" (IBM-GH 20-0560-1) will be given in the following.

GENERAL DESCRIPTION

The manual "MPSRG" describes the MPS/360 Report Generator (RG) as a language in which the user can write programs to produce reports or data files relating to a MPS/360 problem solution. The language consists of three procedures that cause the compilation and execution of the report written program.

The three RG functions are:

ANALYZE

precompiles and analyzes the RG source program, REPFILE

SETREP

Input REPFILE, STETREP completes the compilation of the RG program

REPWORK

REPORT

produces with the current solution the desired report according to the Report Program (RP) on REPWORK.

The MPSRG language is very easy to use even for non-programmers.

SOME LANGUAGE SPECIFICATIONS SUMMARIZED ON THE SAMPLE OF THE KAM

On a sample some MPSRG language specification will be given. Refer to the manual "MPSRG" for specific questions.

Following will be shown a RP used to report results of the KAM. The reports itself are shown in the appendixes III - VII. The numbers besides the comments refer to the numbers within the RP.

Comments on sample problem

1. basically the same control program is used as for MPS/360 linear programming.

2-4. ANALYZE, SETREP and REPORT see above

5. E-Statement - Execution of a Macro, which calls for the execution of a Macro formulated in the RP (see below): The digit or letter behind E identifies to Macro to be executed.

6. M-Statement - Macro Definition - is used to introduce and end a macro skeleton. T is a letter (may also be a digit 0 - 9) that identifies the Macro.

7. H - Statement - Hollerith-causes the printing of the contents of columns 4 - 72 (the 4 before H means: skip four lines before printing).

8. T before H means:

Skip to a new page.

9. $ behind a digit (dummy variable) an E - Statement may have up to 10 arguments with names it it. These arguments are positioned arguments and are referred to by the first character in the dummy variable. The first argument in an E-statement corresponds to those dummy variables whose first character is 1 and so on.

Example:

```
MH
 H                        R-TAB  1$
 H     2$$$$$$$3$$$$

MH
EH     1,05  & 2, TRANSPO   &  3,RT
```

after execution one gets:

```
                                        R-TAB 05

    TRANSPORT
```

10. X is a Solution element. The dummy variable behind X will be "loaded" with a column name and executed by its corresponding E-statement as explained above. Once the dummy variable is loaded X calls the current activity of the specified column, divides it by 100 (E,100) and puts it in the appropriate field (marked with ****) of the report table.

Further general remarks for this specific sample problem:

I There are <u>three types of column names</u> used

A i$$$$$$$

B $$$$$$i (i = 1....8)

C $$$$$i

each of them belongs to a specific Macro, namely MA, MB and MC

II to change a report table: add or take out the specific E-statement which are identified also by A, B and C.

Example:

One introduces a new activity into the KAM, its name is: 1CHICKEN. In order to have it reported with the MPSRG one has to introduce its name also in the RP

- check its name. It is a type A name
- punch the appropriate E-Statement
- add it to the Macro in RP where the E-statements are to which it belongs to.
- Revise the MACRO file.

  //EXEC.SYSIN DD DSN=DSZCG. MACRO,DISP=OLD

  by overreading it with the revised RP cards.

III If an activity is not need in a certain region, make sure that for this region the activity is specified in row CONST (otherwise an error message, activity not found... is printed).

Example:

Suppose in region six there is no chicken production, then add within the KAM-matrix the column

6CHICKEN CONST .1

```
//XPRS6566 JOB (XXXXXXXXX,XXXXXXXX,,5,,1602),EGLI,TIME=(,20)
***PASSWORD    XXXXXXXX
//STEP2   EXEC  MPS
//CPC.SYSIN DD *
```

```
        CONTROL PROGRAM COMPILER - MPS/360 V2-M11                    (1)

0001                    PROGRAM
0002                    INITIALZ
0065                    MOVE(XDATA,'MACRO')
0066                    MOVE(XOLDNAME,'S3')
0067                    MOVE(XPBNAME,'REPORT')
0068                    COPY
0069                    ANALYZE                                      (2)
0070                    SETUP(5,'MAX','SCALE','BOUNDS','PROD')
0071                    SETREP                                       (3)
0072                    MOVE(XOBJ,'Z')
0073                    MOVE(XRHS,'B')
0074                    RESTORE('NAME','BASIS')
0075                    PRIMAL
0076                    SAVE('NAME','BASIS')
0077                    REPORT                                       (4)
0078                    EXIT
0079                    PEND
```

```
//EXEC.SCRATCH1 DD SPACE=(CYL,(7),,CONTIG),UNIT=SYSDA
//EXEC.SCRATCH2 DD SPACE=(CYL,(7),,CONTIG),UNIT=SYSDA
//EXEC.OLDFILE DD DSN=DS2C6.S3,DISP=(OLD,KEEP)
//EXEC.MATRIX1 DD SPACE=(CYL,(4),,CONTIG),UNIT=SYSDA
//EXEC.ETA1 DD SPACE=(CYL,(4),,CONTIG),UNIT=SYSDA
//EXEC.SYSIN DD DSN=DS2C6.MACRO,DISP=OLD
//         DD *
```

```
ET  1.07.11.77 E 2,OBJ. 2GH                                          (5)
E0
E1
 .
 .
 .
 .


/*
```

```
                EXECUTOR.    MPS/360 V2-M11

ANALYZE  MACRO

TIME =   0.05

 MT                                                                    (6)
 H
4H REPORT KANSAS - AG                                                  (7)
 H ==================
 H
 H
 H DATE: 1$$$$$$$  PROBLEM: 2$$$$$$$
 H ---------------------------------
4H
 MT
 MH
2H
TH KANSAS-AG                                                  (8) R-TAB: 1$
 H
 H 2$$$$$$$3$$$$4$$$$ UNIT: 100                                       (9)
 H
 H I-----------------------------------------------------------------I
 H I 5$$$$$$$$              I  REGION1 I  REGION2 I  REGION3 I  REGION4 I
 H I         (CONT. R5-R8)  I  REGION5 I  REGION6 I  REGION7 I  REGION8 I
 H I-----------------------------------------------------------------I
 H I                        I          I          I          I          I
 MH
 MA
 H I 2$$$$$$$3$$$$4$$$$     I ******** I ******** I ******** I ******** I
 I X11$$$$$$$/E,100 ------------------------------------------------------
 I X12$$$$$$$/E,100 ------------------------------------------------------
 I X13$$$$$$$/E,100 ------------------------------------------------------
 I X14$$$$$$$/E,100 ------------------------------------------------------
 H I (5$$$$$$$)             I ******** I ******** I ******** I ******** I
 I X15$$$$$$$/E,100
 I X16$$$$$$$/E,100
 I X17$$$$$$$/E,100
 I X18$$$$$$$/E,100
 H I                        I          I          I          I          I
 MA
 MB
 H I 2$$$$$$$3$$$$4$$$$     I ******** I ******** I ******** I ******** I
 I X1$$$$$$1/E,100
 I X1$$$$$$2/E,100
 I X1$$$$$$3/E,100
 I X1$$$$$$4/E,100
 H I (5$$$$$$$)             I ******** I ******** I ******** I ******** I
 I X1$$$$$$5/E,100
 I X1$$$$$$6/E,100
 I X1$$$$$$7/E,100
 I X1$$$$$$8/E,100
 H I                        I          I          I          I          I
 MB
 MC
 H I 2$$$$$$$3$$$$4$$$$     I ******** I ******** I ******** I ******** I
```

(10)

```
                EXECUTOR.     MPS/360 V2-M11

I X1$$$$$1/E,100
I X1$$$$$2/E,100
I X1$$$$$3/E,100
I X1$$$$$4/E,100
H I (5$$$$$$$)              I ********* I ******** I ******** I ******** I
I X1$$$$$5/E,100
I X1$$$$$6/E,100
I X1$$$$$7/E,100
I X1$$$$$8/E,100
H I                         I           I          I          I          I
MC
MZ
H I WHEAT PRICE             I ****.***  I ****.*** I ****.*** I ****.*** I
I N,P1= (J,1SWHT &I,Z)
I N,P2= (J,2SWHT &I,Z)
I N,P3= (J,3SWHT &I,Z)
I N,P4= (J,4SWHT &I,Z)
H I (SWHT)                  I ****.***  I ****.*** I ****.*** I ****.*** I
I N,P5= (J,5SWHT &I,Z)
I N,P6= (J,6SWHT &I,Z)
I N,P7= (J,7SWHT &I,Z)
I N,P8= (J,8SWHT &I,Z)
H I                         I           I          I          I          I
H I CORN PRICE              I ****.***  I ****.*** I ****.*** I ****.*** I
I N,P1= (J,1SCORN& I,Z)
I N,P2= (J,2SCORN& I,Z)
I N,P3= (J,3SCORN& I,Z)
I N,P4= (J,4SCORN& I,Z)
H I (SCORN)                 I ****.***  I ****.*** I ****.*** I ****.*** I
I N,P5= (J,5SCORN& I,Z)
I N,P6= (J,6SCORN& I,Z)
I N,P7= (J,7SCORN& I,Z)
I N,P8= (J,8SCORN& I,Z)
H I                         I           I          I          I          I
H I GRAINSORGHUM PRICE      I ****.***  I ****.*** I ****.*** I ****.*** I
I N,P1= (J,1SGRSO& I,Z)
I N,P2= (J,2SGRSO& I,Z)
I N,P3= (J,3SGRSO& I,Z)
I N,P4= (J,4SGRSO& I,Z)
H I (SGRSO)                 I ****.***  I ****.*** I ****.*** I ****.*** I
I N,P5= (J,5SGRSO& I,Z)
I N,P6= (J,6SGRSO& I,Z)
I N,P7= (J,7SGRSO& I,Z)
I N,P8= (J,8SGRSO& I,Z)
H I                         I           I          I          I          I
MZ
ME
H I-------------------------------------------------------------------------I
ME
MO
EH 1,00       & 2,PRICE.IN & 3,.CRJ.$.  & 4,:BU      & 5,PRICE
EZ
EE
MO
```

```
                EXECUTOR.     MPS/360 V2-M11

M1
EH 1,01         & 2,LIVESTOC & 3,K        & 4,NO       & 5,L.STOCK
EA 1,PCALF      & 2,BEEFCOW  & 3,AND      & 4,CALF     & 5,PCALF
EA 1,SCALF      & 2,WEANING  & 3,CALF     & 4,SOLD     & 5,SCALF
EA 1,TWSTR      & 2,WEANING  & 3,CALF     & 4,KEPT     & 5,TWSTR
EA 1,PWSTR      & 2,CALF.KEP & 3,T.IN     & 4,W.TER    & 5,PWSTR
EA 1,SWSTR      & 2,WINTERED & 3,.CALF    & 4,.SOLD    & 5,SWSTR
EA 1,PGSTRFS    & 2,STRS.ON  & 3,GRS.5    & 4,MO.      & 5,PGSTRFS
EA 1,PGSTR      & 2,STRS.ON  & 3,GRS.3    & 4,MO.      & 5,PGSTR
EA 1,TGSTR      & 2,W.TER.CA & 3,LF.TO    & 4,GRASS    & 5,TGSTR
EE
M1
M8
EH 1,01         & 2,L.STOCK  & 3,CONT.    & 4,NO       & 5,L.STOCK
EA 1,SGSTR      & 2,GRAZING  & 3,STRS.    & 4,SOLD     & 5,SGSTR
EA 1,TFSTR      & 2,GRS.STRS & 3,.TO.F    & 4,FEDL.    & 5,TFSTR
EA 1,PWFSTR     & 2,W.TER.CF & 3,.TO.F    & 4,FEDL.    & 5,PWFSTR
EA 1,PWGFSTR    & 2,FEEDER.S & 3,TRS.     & 4,.        & 5,PWGFSTR
EA 1,BFSTRA     & 2,F.STRS.P & 3,URC.     & 4,NOV.     & 5,BFSTRA
EA 1,BFDSTRB    & 2,F.STRS.P & 3,URC.     & 4,MAY.     & 5,BFDSTRB
EA 1,PSMILK     & 2,DAIRY.CO & 3,W        & 4,.        & 5,PSMILK
EA 1,PHOG       & 2,SOW.AND  & 3,TWO.L    & 4,ITRS.    & 5,PHOG
EA 1,FDLOTDE    & 2,DEVELOP  & 3,FEED     & 4,LOT      & 5,FDLOTDE
EE
EE
M8
M2
EH 1,02         & 2,CROPS    & 3,.        & 4,AC.BU     & 5,CROPS
EA 1,PWHT       & 2,WHEAT.AC & 3,.CONT   & 4,IN.      & 5,PWHT
EA 1,SWHT       & 2,BU.WHEAT & 3,SOLD     & 4,.        & 5,SWHT
EA 1,PWHTFAL    & 2,WHEAT.AC & 3,.FALL    & 4,OR       & 5,PWHTFAL
EA 1,PWHTIRR    & 2,WHEAT.AC & 3,.IRRI    & 4,GAT.     & 5,PWHTIRR
EA 1,PCORN      & 2,CORN.ACR & 3,ES       & 4,.        & 5,PCORN
EA 1,SCORN      & 2,CORN.BU  & 3,SOLD     & 4,.        & 5,SCORN
EA 1,FCORN      & 2,CORN.BU  & 3,FED      & 4,.        & 5,FCORN
EA 1,PGRSOR     & 2,GR.SORG. & 3,DRY.L    & 4,AND      & 5,PGRSOR
EA 1,PGSIRR     & 2,GR.S..AC & 3,.IRRI    & 4,GAT      & 5,PGSIRR
EA 1,SGRSO      & 2,GR.SORG. & 3,.BU.S    & 4,OLD      & 5,SGRSO
EA 1,FGRSO      & 2,GR.SORG. & 3,.BU.F    & 4,EO       & 5,FGRSO
EA 1,PSOY       & 2,SOYBEAN  & 3,AC       & 4,.        & 5,PSOY
EA 1,PSIL       & 2,SILAGE.A & 3,O.DRY    & 4,LAND     & 5,PSIL
EE
M2
MS
EH 1,02         & 2,C.CONT.   & 3,AC.BU    & 4,.T.S     & 5,CROPS
EA 1,PSILIR     & 2,SILA..AC & 3,.IRRI    & 4,GAT.     & 5,PSILIR
EA 1,PALFH      & 2,ALFALF.A & 3,C         & 4,.        & 5,PALFH
EA 1,SALFH      & 2,ALFALF.T & 3,.SOLD     & 4,.        & 5,SALFH
EA 1,FALFH      & 2,ALFALF.T & 3,FED      & 4,.        & 5,FALFH
EA 1,PNATH      & 2,NATIV.HA & 3,Y.AC     & 4,.        & 5,PNATH
EA 1,FNATH      & 2,NATIV.HA & 3,Y.T.F    & 4,EO       & 5,FNATH
EA 1,SNATH      & 2,NATIV.HA & 3,Y.T.S    & 4,OLD      & 5,SNATH
EA 1,PFORAGE    & 2,FORAGE.A & 3,C.FOR    & 4,FEED     & 5,PFORAGE
EA 1,IDLECPL    & 2,CROPLAND & 3,.NOT     & 4,USED     & 5,IDLECPL
```

```
                EXECUTOR.     MPS/360 V2-M11

EA 1,PLTALF    & 2,PLANT.AL & 3,FALF     & 4,.        & 5,PLTALF
EA 1,PLTTPAS   & 2,PLANT.TA & 3,ME.PA    & 4,ST.      & 5,PLTTPAS
EA 1,DEVIRR    & 2,DEVELOP  & 3,IRRIG    & 4,AT.      & 5,DEVIRR
EE
M9
M3
EH 1,03        & 2,EXPENSES & 3,....H    & 4,.$.AC    & 5,OTHER.EX
EA 1,HLABFT    & 2,HIRE.FUL & 3,L.TIM    & 4,E.LAB    & 5,HLABFT
EA 1,HLABSU    & 2,HIRE.SUM & 3,MER.L    & 4,ABOR     & 5,HLABSU
EA 1,FUELCST   & 2,FUEL.COS & 3,T        & 4,.        & 5,FUELCST
EA 1,FERTCST   & 2,FERTILIZ & 3,ER..C    & 4,DST      & 5,FERTCST
EA 1,DEPR      & 2,DERECIAT & 3,ION      & 4,.        & 5,DEPR
EA 1,CPCAPR    & 2,OPERATIN & 3,G.CAP    & 4,.REC.    & 5,CPCAPR
EA 1,LSKCAPR   & 2,L.STOCK  & 3,CAP.     & 4,REC.     & 5,LSKCAPR
EA 1,CHVWHT    & 2,CUSTOM.H & 3,.VEST    & 4,WHEAT    & 5,CHVWHT
EA 1,CHVCORN   & 2,CUSTOM.H & 3,.VEST    & 4,.CORN    & 5,CHVCORN
EA 1,CHVGRS    & 2,CUSTOM.H & 3,.VEST    & 4,.GR.S    & 5,CHVGRS
EA 1,CHVSOY    & 2,CUSTOM.H & 3,.VEST    & 4,.SOYB    & 5,CHVSOY
EA 1,BUYFDGR   & 2,FEED.GRA & 3,IN.PU    & 4,RC       & 5,BUYFDGR
EE
M3
M4
EH 1,04        & 2,TRANSFER & 3,ACT.     & 4,.F.AC    & 5,TRSF.ACT
EA 1,TPAST     & 2,TPAST.SU & 3,R.FC     & 4,R.NPA    & 5,TPAST
EA 1,ALF>FOR   & 2,ALFALFA  & 3,FORP     & 4,AGE      & 5,ALF>FOR
EA 1,TNH>FOR   & 2,NAT.HAY  & 3,FORP     & 4,AGE      & 5,TNH>FOR
EA 1,TNH>WPU   & 2,NAT.HAY  & 3,W.TER    & 4,PAST.    & 5,TNH>WPU
EA 1,TFWHM>J   & 2,MAYWORK  & 3,.TRSF    & 4,JUNE     & 5,TFWHM>J
EA 1,TFWHJ>M   & 2,JUNWOR   & 3,K.TFS    & 4,F.MAY    & 5,TFWHJ>M
EE
M4
M5
EH 1,05        & 2,TRANSP.   & 3,ACT.     & 4,.T.BU    & 5,TRSP.ACT
EB 1,FDGR1>    & 2,SHIP.FDG & 3,R.FRO    & 4,M.1TO    & 5,FDGR1>
EB 1,FDGR2>    & 2,SHIP.FDG & 3,R.FRO    & 4,M.2TO    & 5,FDGR2>
EB 1,FDGR3>    & 2,SHIP.FDG & 3,R.FRO    & 4,M.3TO    & 5,FDGR3>
EB 1,FDGR4>    & 2,SHIP.FDG & 3,R.FRO    & 4,M.4TO    & 5,FDGR4>
EB 1,FDGR5>    & 2,SHIP.FDG & 3,R.FRO    & 4,M.5TO    & 5,FDGR5>
EB 1,FDGR6>    & 2,SHIP.FDG & 3,R.FRO    & 4,M.6TO    & 5,FDGR6>
EB 1,FDGR7>    & 2,SHIP.FDG & 3,R.FRO    & 4,M.7TO    & 5,FDGR7>
EB 1,FDGR8>    & 2,SHIP.FDG & 3,R.FRO    & 4,M.8TO    & 5,FDGR8>
EE
M5
M6
EH 1,05        & 2,TRANSP.A & 3,CT.CO     & 4,NT.AC    & 5,TRSP.ACT
EC 1,1CALF     & 2,SHIP.CAL & 3,F.FRO    & 4,M.1TO    & 5,1CALF
EC 1,2CALF     & 2,SHIP.CAL & 3,F.FRO    & 4,M.2TO    & 5,2CALF
EC 1,3CALF     & 2,SHIP.CAL & 3,F.FRO    & 4,M.3TO    & 5,3CALF
EC 1,4CALF     & 2,SHIP.CAL & 3,F.FRO    & 4,M.4TO    & 5,4CALF
EC 1,5CALF     & 2,SHIP.CAL & 3,F.FRO    & 4,M.5TO    & 5,5CALF
EC 1,6CALF     & 2,SHIP.CAL & 3,F.FRO    & 4,M.6TO    & 5,6CALF
EC 1,7CALF     & 2,SHIP.CAL & 3,F.FRO    & 4,M.7TO    & 5,7CALF
EC 1,8CALF     & 2,SHIP.CAL & 3,F.FRO    & 4,M.8TO    & 5,8CALF
EE
```

```
                EXECUTOR.     MPS/360 V2-M11

M6
MI
EH 2,05         & 2,TRANSP.A & 3,CT.CO     & 4,NT.NC     & 5,TRSP.ACT
EC 1,1GSTR      & 2,STR..TO  & 3,GRASS     & 4,F.1TC     & 5,1GSTR
EC 1,2GSTR      & 2,STR..TO  & 3,GRASS     & 4,F.2TO     & 5,2GSTR
EC 1,3GSTR      & 2,STR..TO  & 3,GRASS     & 4,F.3TC     & 5,3GSTR
EC 1,4GSTR      & 2,STR..TO  & 3,GRASS     & 4,F.4TC     & 5,4GSTR
EC 1,5GSTR      & 2,STR..TC  & 3,GRASS     & 4,F.5TC     & 5,5GSTR
EC 1,6GSTR      & 2,STR..TO  & 3,GRASS     & 4,F.6TC     & 5,6GSTR
EC 1,7GSTR      & 2,STR..TO  & 3,GRASS     & 4,F.7TO     & 5,7GSTR
EC 1,8GSTR      & 2,STR..TO  & 3,GRASS     & 4,F.8TC     & 5,8GSTR
EE
MI
M7
EH 1,06         & 2,STEER.TC & 3,FEED      & 4,L..NC     & 5,STR.TO.L
EC 1,1FDST      & 2,CALF.TO  & 3,F.LCT     & 4,.1.TO     & 5,1FDST
EC 1,2FDST      & 2,CALF.TC  & 3,F.LCT     & 4,.2.TC     & 5,2FDST
EC 1,3FDST      & 2,CALF.TC  & 3,F.LCT     & 4,.3.TO     & 5,3FDST
EC 1,4FDST      & 2,CALF.TO  & 3,F.LCT     & 4,.4.TO     & 5,4FDST
EC 1,5FDST      & 2,CALF.TO  & 3,F.LCT     & 4,.5.TC     & 5,5FDST
EC 1,6FDST      & 2,CALF.TO  & 3,F.LCT     & 4,.6.TC     & 5,6FDST
EC 1,7FDST      & 2,CALF.TO  & 3,F.LCT     & 4,.7.TC     & 5,7FDST
EC 1,8FDST      & 2,CALF.TO  & 3,F.LCT     & 4,.8.TC     & 5,8FDST
EE
M7
MJ
EH 2,06         & 2,STR.TO.F & 3,L.CON     & 4,T..NO     & 5,TRSP.ACT
EC 1,1FSTR      & 2,F.STR..F & 3,ROM       & 4,.1.TC     & 5,1FSTR
EC 1,2FSTR      & 2,F.STR..F & 3,ROM       & 4,.2.TC     & 5,2FSTR
EC 1,3FSTR      & 2,F.STR..F & 3,ROM       & 4,.3.TO     & 5,3FSTR
EC 1,4FSTR      & 2,F.STR..F & 3,ROM       & 4,.4.TO     & 5,4FSTR
EC 1,5FSTR      & 2,F.STR..F & 3,ROM       & 4,.5.TO     & 5,5FSTR
EC 1,6FSTR      & 2,F.STR..F & 3,ROM       & 4,.6.TC     & 5,6FSTR
EC 1,7FSTR      & 2,F.STR..F & 3,ROM       & 4,.7.TC     & 5,7FSTR
EC 1,8FSTR      & 2,F.STR..F & 3,ROM       & 4,.8.TO     & 5,8FSTR
EE
MJ
ET 1,07.11.77 & 2,OBJ.ZGH
EO
E1
E8
E2
E9
E3
E4
E5
E6
EI
E7
EJ
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INFLUENCE OF CROP PRICE CHANGES ON CROP AND LIVESTOCK PRODUCTION IN KANSAS USING A LINEAR PROGRAMMING MODEL

by

GUSTAVE HEINRICH EGLI

Diploma, Swiss Federal Institute of Technology, 1973

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The objective of this study was to analyze the effect of crop price changes on crop and livestock production in Kansas. Kansas was divided into eight interdependent regions. A linear programming model was used to analyze the acreage and production crops within and between regions as prices were changed.

Five price sets were studied: (1) "normal" prices which were relatively comparable based on historical price relationship; and (2) four sets based on actually reported prices. The four price sets selected were the crop prices when wheat was its highest and lowest price during 1971-77, and when grain sorghum was its highest and lowest price.

The main results using the high price sets compared with "normal" prices:

a) acreage of idle land decreases to zero

b) number of feeder steers decrease

c) grain sorghum production shows the greatest response to higher prices

d) corn production shows smallest response to higher prices

e) decrease in alfalfa acreage

The main results with low prices compared to the "normal" set were:

a) increase in idle land, (land not used for major grain crops

b) increase in number of feeder steers

c) increase in development of feedlot capacity

d) wheat acreage has the largest decline

e) large increase in alfalfa acreage

Two computer programs were developed to facilitate the analysis of large linear programming models. These were: (1) a program to print the equations of a model; and (2) a report generator program to put the linear programming solution in table form. Both programs are listed in Appendixes.