

KANSAS FARMER

For the improvement of the Farm and Home

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TEST LAMBS RETURN PROFIT

Best Results From Shelled Corn, Linseed Meal, Silage and Alfalfa

THE lamb feeding test at the Kansas Experiment Station the past season the feed combination giving the greatest profit was silage, alfalfa hay and shelled corn with linseed meal as a protein supplement. Two hundred five Idaho lambs were fed in the test. They were purchased on the Kansas City market at \$16 a hundred and at the end of a forty-nine day feeding period for prices ranging from \$17.75 to \$19 a hundred. The lambs were divided into seven lots of thirty-five each, each lot being taken to sort them so that each lot was uniform in weight, age, and quality.

One of the purposes of the test was to compare the efficiency and economy of linseed oil meal, cottonseed meal, and gluten feed as protein supplements when fed with shelled corn, alfalfa hay, and corn silage. Another point was to determine the value of protein supplements in a ration of shelled corn, alfalfa hay, and corn silage. Then there was a comparison of the efficiency and economy of shelled corn and hominy feed, being fed with alfalfa hay and corn silage. The value of adding corn silage to a ration of shelled corn and alfalfa was one of the points of the test. Another was to determine whether or not linseed oil meal could be satisfactorily used as the only concentrate when alfalfa and corn silage are fed as silage.

A summary of the results of this test states:

First, that linseed meal is more efficient than cottonseed meal and cottonseed meal more efficient than corn gluten meal as a protein supplement for fattening lambs when fed with shelled corn, alfalfa hay and corn silage.

Second, that the addition of linseed meal or cottonseed meal as a protein supplement to a ration of shelled corn, alfalfa hay and corn silage increased gains, reduced the cost of a hundred pounds of gain, increased selling price and the ultimate profit. The addition of corn gluten feed as a protein supplement to a ration of shelled corn, alfalfa hay and corn silage increased gains, reduced slightly the cost of a hundred pounds of gain, but failed to produce the desired finish and made less profit when no protein supplement was added.

Third, that the substitution of hominy feed for shelled corn fed with alfalfa hay and silage increased slightly gains, but increased the cost of gains. It also failed to produce as high a finish as did corn, making the ultimate profits less.

Fourth, that corn silage added to the ration of shelled corn and alfalfa hay did not prove profitable except when fed with the silage, alfalfa hay and linseed meal as a protein supplement. This combination gave the greatest profits.

Fifth, that linseed meal substituted

for corn and fed with alfalfa hay and corn silage produced slightly larger gains than when corn was fed with alfalfa hay and corn silage, but the linseed meal, alfalfa hay and corn silage ration failed to produce the necessary finish and sold for so much less per hundredweight that each lamb made a loss.

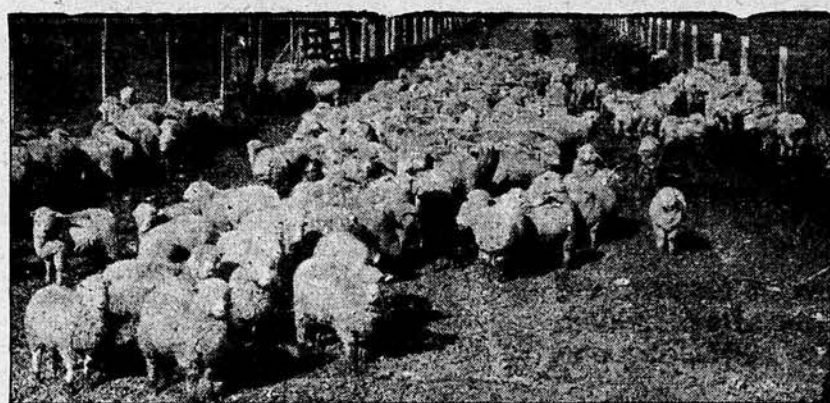
RESULTS IN LOT ONE

A careful study of the figures in detail as furnished by A. M. Paterson of the animal husbandry department of the experiment station, who had charge of the test, shows that the lambs in Lot 1 weighed on an average 64.56 pounds at the beginning of the test. They consumed an average daily ration of 1.24 pounds shelled corn, .16 pound linseed oil meal, 1.04 pounds alfalfa hay, and 1.52 pounds of silage. At the end of the feeding period they weighed an

average of 81.14 pounds, which was the selling weight at the Kansas City market, making an average total gain of 15.74 pounds, or an average daily gain of .32 pounds per lamb.

The feed required to make 100 pounds of gain was 386.02 pounds shelled corn, 49.81 pounds corn gluten feed, 323.77 pounds alfalfa hay and 473.19 pounds corn silage, at a cost of \$18.74 per hundred pounds gain.

The lambs in this lot cost an average of \$10.71 a head at the feed lot, the cost of feed consumed was \$2.95 to the lamb, labor cost 28 cents, interest on investment was 11 cents, interest on equipment 12 cents, and shipping and market expense to market 43 cents, or a total cost of \$14.60 per lamb.



EXPERIMENT STATION LAMBS HEADED FOR MARKET

average of 84.27 pounds, which was the selling weight at the Kansas City market, this making an average total gain of 19.71 pounds per lamb or an average daily gain of .40 pound per lamb.

The feed required to make 100 pounds gain was 308.20 pounds shelled corn, 39.77 pounds linseed meal, 258.55 pounds alfalfa hay, and 377.87 pounds corn silage, at a cost of \$15.02 to the hundred pounds of gain.

The lambs cost an average of \$10.57 a head at the feed lots. The cost of feed consumed was \$2.96 per lamb, labor cost 28 cents, interest on investment 11.3 cents, interest on equipment 12 cents, shipping and market expense to market was 43 cents, or a total cost of \$14.47 per lamb.

The selling price of this lot was \$19 a hundred, or \$16.01 per lamb, returning a net profit of \$1.54 per lamb.

RESULTS IN LOT TWO

The lambs in Lot 2 weighed an average of 65.40 pounds a head at the beginning of the test. They consumed an average daily ration of 1.24 pounds of shelled corn, .16 pound of corn gluten feed, 1.04 pounds of alfalfa hay and

1.52 pounds of silage. At the close of the feeding period they weighed an average of 81.14 pounds, which was the selling weight at the Kansas City market, making an average total gain of 15.74 pounds, or an average daily gain of .32 pounds per lamb.

RESULTS IN LOT THREE

The lambs in Lot 3 weighed an average of 66.08 pounds a head at the beginning of the feeding period. They consumed an average daily ration of 1.24 pounds of corn, .16 pound of cottonseed meal, 1.04 pounds of alfalfa hay and 1.52 pounds of corn silage. At the close of the test they weighed an average of 82.94 pounds, which was the selling weight at the Kansas City market, making an average total gain of 16.86 pounds, or an average daily gain of .34 pound per lamb.

The feed required to make 100 pounds gain in this lot was 360.38 pounds of shelled corn, 46.50 pounds of cottonseed meal, 302.25 pounds of alfalfa hay, and 441.76 pounds silage at a cost of \$17.56 to the hundred pounds of gain.

The lambs cost an average of \$10.82 a head in the feed lot. The cost of feed consumed was \$2.96, labor 28 cents, interest on investment was 11.6 cents, interest on equipment was 12 cents, ship-

ping and marketing expense 43 cents, or a total of \$14.58 per lamb.

The selling price of the lambs in this lot was \$18.75 a hundred, or \$15.55 per lamb, returning a net profit of 82 cents per lamb.

RESULTS IN LOT FOUR

In Lot 4 the lambs weighed an average of 65.23 pounds at the beginning of the test. They consumed an average daily ration of 1.24 pounds shelled corn, 1.04 pounds alfalfa hay, and 1.52 pounds of corn silage. At the end of the feeding period they weighed an average of 79.12 pounds on the Kansas City market, making an average total gain of 13.89 pounds, or an average daily gain of .28 pound per lamb.

The feed required to make 100 pounds gain was 437.44 pounds corn, 366.88 pounds alfalfa hay, and 536.21 pounds of silage at a cost of \$19.44 per hundred pounds of gain.

The lambs cost an average of \$10.68 in the feed lot, the average cost of feed being \$2.70, labor cost 28 cents, interest on investment 11 cents, interest on equipment 12 cents, shipping and market expense 43 cents, making a total cost of \$14.32 per lamb.

The selling price of this lot was \$18.50 a hundred, or \$14.66 per lamb, making the net profit 31 cents per lamb.

RESULTS IN LOT FIVE

The lambs in Lot 5 weighed an average of 65.62 pounds at the beginning of the test. They consumed an average daily ration of 1.24 pounds of hominy feed, 1.08 pounds of alfalfa hay, and 1.58 pounds of corn silage. At the end of the feeding period they weighed an average of eighty pounds, that being the selling weight at the Kansas City market. They made an average total gain of 14.38 pounds per lamb, or an average daily gain of .29 pound per lamb.

The feed required to make 100 pounds of gain was 422.53 pounds of hominy feed, 368.01 pounds of alfalfa hay, and 538.39 pounds of corn silage at a cost of \$20.38.

The lambs cost an average of \$10.73 in the feed lot, feed \$2.70, labor 28 cents, interest on investment 11 cents, interest on equipment 12 cents, shipping and marketing expense 43 cents, making a total cost of \$14.60 per lamb.

The selling price of the lambs in this lot was \$18.40 a hundred, or \$14.72 per lamb. They made a net profit of 11.5 cents per lamb.

RESULTS IN LOT SIX

In Lot 6 the lambs weighed an average of 65.22 pounds at the beginning of the test. They consumed an average daily ration of 1.14 pounds of linseed meal, 1.16 pounds of alfalfa hay, and 1.78 pounds of silage. At the end of the feeding period they weighed an average of 80.61 pounds on the Kansas City market, making an average total

(Continued on Page Nine)

The Standard Oil Company (Indiana) and the Farmer

THERE is no general class of men who understand so thoroughly, and appreciate so well, the service rendered by the Standard Oil Company (Indiana) as do the farmers of the Middle West

Wherever he may live the farmer is as familiar with the dark green tank wagon as he is with the conveyance which brings the mail carrier. He knows that his requirements of petroleum products will be provided.

He depends upon the service rendered by the Standard Oil Company (Indiana), confident that the company will deliver to him whatever products he needs, when he needs them, and at a price which is fair.

During the past two or three strenuous years the farmer of America has carried the responsibility for feeding the world. Every hour of every day he was busy, and every minute was precious.

To multiply the effectiveness of his own and his employes' labor, he installed modern equipment—tractors, trucks, cultivating and harvesting machinery.

To run these machines gasoline, kerosene, lubricating oils, and greases were absolutely necessary. To get them the farmer would have been forced to take hours of time going to town were it not for the distributing facilities of the Standard Oil Company (Indiana). The Company brought the products he needed to the farm, even to the tractor in the field.

It is this kind of service which has brought the farmer and the Company into such close and such friendly relations. It is this kind of service which emphasizes the usefulness of the Standard Oil Company (Indiana) as a public servant.

Standard Oil Company
(Indiana)
910 S. Michigan Avenue, Chicago, Ill.

1349

MECHANICS ON THE FARM

Items of Interest About Automobiles,
Engines, Tractors and Motorcycles

Give Tractor Good Care

IN TELLING of some of his experiences with a tractor, a Kansas farmer said: "I found it took time to care for the tractor as well as to curry and feed horses."

Right you are, Brother. It may not take as much time each day, but a tractor or any other piece of machinery must have proper care.

If daily attention, during the season when it is used, is given to your tractor, I am quite sure it will not take as much time as it would to curry the number of horses which the tractor will supplant in the field, besides feeding and watering them three times a day and cleaning out the barn.

It is almost criminal the way some men treat a tractor or motor truck. They seem to think that because this machinery is designed to take the place of horses, and because it doesn't eat hay and corn and is not affected by hot weather, that it doesn't need any attention. At least, if they don't think that way their actions indicate it.

If you go into the power house of a manufacturing institution, or a mill, you will usually find the engine clean and bright and you will find the engineer going over it carefully and seeing that all the bearings are getting the required amount of oil—and of the right kind.

As a result of such attention the plant seldom has to shut down for repairs to the engine.

But if engineers of industrial plants were to treat their engines like many men treat the power machinery on the farms, there would be no end of trouble.

The farm tractor can hardly be said to be a perfect machine yet. But there are a number which can be relied on to do good work if they are properly handled and cared for.

A man has no more right to expect continuous good results from his tractor if he neglects to keep it properly lubricated, supplied with water, nuts tightened up, spark plugs kept cleaned, and, in fact, if he doesn't know how to keep it in good working order and do it, than he could expect good results from horses that he didn't feed and water.

This same Kansas farmer thought he had a pretty good tractor and boasted of many things he did with it. He said he plowed 160 acres of ground without even cleaning a spark plug.

A very good testimonial for the manufacturer. Evidently he doesn't believe in cleaning spark plugs until they get so foul that the engine will not run.

Some men wait until they burn out some bearings before investigating to see if all parts are getting their proper lubrication.

The tax American farmers pay for neglect to properly care for their machinery is greater than they pay in income taxes.—B. E. JAMES in American Fruit Grower.

Engineering Suggestions

There are many irrigation, drainage, or other engineering problems which confront the man on the farm. The establishment of an extension service along engineering lines by our agricultural college to furnish the necessary information is to be heartily commended. In an editorial in the Engineering News Record this feature of our agricultural college extension service is commented upon as follows:

Distribution of technical information for the instruction of the public is a useful activity of the engineering department of the Kansas Agricultural College. Technical articles are prepared on subjects of local interest, such as irrigation and drainage, in language easily comprehended, and are sent on

request to the local press and to journals.

This development of the college extension system may be classed with well known short courses in highway drainage work, in their influence on community. The press is merely a different vehicle. By its means, information may be supplied on matters of interest, such as good roads, land reclamation, street paving or the water supply and sewerage facilities of small towns. Articles of that sort do not displace the engineer. Rather they educate the public concerning the purpose and importance of the engineer's work and bearing on the welfare of the community. While many universities have publicity agencies, in most cases bulletins and news sheets inform the public about the work and activities of the institution. The Kansas idea differs in supplying the public with information about engineering matters in which is directly interested.

Threshing Schools Popular

There were 150 in attendance at one-day threshing school held in Wabasha recently, representatives from five counties being present. At Abilene 125 were in attendance and seven counties were represented. A school was held at Bend the same week. The week ending May 31 schools were held in Dodge, Mankato, Hays, and Norton.

Representatives of threshing machine companies report that 70 per cent of the threshing machines sold this year are of the smaller sizes and are operated by farmers owning tractors. Many farmers think it better to own their own machines than to wait their turn with the custom machines.

This condition has probably been brought about by the increased acreage of wheat and the desire to thresh at the most convenient time.

Last year the Food Administration included threshing machinery inspection in their food conservation program. It called the attention of many people to the great possibilities of saving wheat in connection with the process of threshing. This year at the termination of the food conservation program the work was taken over by the Office of Public Roads of the United States Department of Agriculture.

Various threshing machine companies agreed to co-operate in the scheme and have furnished their leading men to this project. Those acting in co-operation with the divisions of extension engineering of the agricultural college have planned and conducted the one-day schools which have been conducted.

At these schools discussions and demonstrations on threshing problems were given by representatives of the threshing machine companies and specialists from the agricultural college.

One of the strong arguments advanced in favor of the farm tractor is that it enables certain kinds of farm work to be done more rapidly than can be done with horses. In the wheat growing sections it has been thoroughly demonstrated that the earlier the ground is plowed after harvest, the better the yield. This means that the plowing must be done in hot weather, frequently when the ground is getting rather dry, which makes the plowing heavy. Horses must be handled carefully during this heavy plowing in hot weather, and it is not until the tractor comes in, for it is not affected by the heat and will work as long hours as men can be furnished to do it.

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WHAT IS DEMOCRACY?

his address before the graduating
of our agricultural college last
Doctor Bailey, who spoke on the
"The Aspiration of Democracy,"
d out some of the fallacies in our
regarding democracy. This ad-
appealed to thinking men and
of all classes. It was truly a
tragic address, and made a special
to those interested in agriculture,
Doctor Bailey is recognized for his
vision and sound thought on rural
and progress. The backbone of the
racy of this country and of any
ry is in its agriculture. On an-
page of this issue we quote from
Bailey's address and would urge
ful reading of these few excerpts.
true American citizen is keenly
sted in the line of thought pre-

WATERS HALL

often we wait until men are dead
one before we erect monuments in
of their achievements for the bene-
progress of the world. This rule
asionally broken, and we wish to
end the action of the Board of
istration of Kansas in officially
g the agricultural building at our
lural college Waters Hall in honor
H. J. Waters, president from 1909
18. This building, of which only
ing is now complete, will stand as
ument to the splendid work done
ector Waters in carrying forward
stitution during the period of his
ency.

or Waters had been invited to
place on the platform during the
necement exercises, but had not
old in advance what was to occur,
ceremony of naming the hall was
m a most pleasant surprise. In
ning the official act of the board,
preceded the conferring of de-
President William M. Jardine said
ector Waters:

agriculture, as in every other field
aman endeavor, there are great
ets and seers—men who interpret
truths to those of lesser vision,
who explore the future with the
of wisdom and faith. These are
men who keep the world moving
rd in its unending course toward
tion.

of the great leaders was for
years president of the Kansas Ag-
rural College, and to him the col-
education, and agriculture all owe
ing gratitude."

is certainly a well deserved
and the many friends of Doctor
rs in the state will be glad to know
he has been thus honored in the
ing of this building, which when
eted will be one of the most con-
ous on the campus.

MAY PAY FARM STORAGE

yet there have been no positive
necements relative to the matter of
ng storage on wheat held on the
The simplest possible way to
ate the flow of wheat to market
with justice to all would be to allow
ing for farm storage. There is
n to be a serious congestion on the
ads and at the elevators when the
crop begins to move. We have al-
had experience in the embargo
of handling these congestions.
results have demonstrated the un-
ess of this method of overcoming
difficulty. A plan whereby accumu-
premiums would be allowed on
held in storage on the farm would
oute the marketing and be fair to

all. According to a Washington dis-
patch, Mr. Barnes, who is at the head of
the United States Grain Corporation,
states in a letter to the House agricul-
tural committee that he has such a plan
under consideration. If such a plan is
to be put in operation, it should have
been announced long before this. The
agricultural committee recognizes the
need for some method of overcoming the
congestion which is certain to occur and
also appreciates the importance of an
early announcement. The members of
the committee have written Mr. Barnes
for details of the plan proposed and it
is to be hoped that an announcement
will be made soon so wheat growers
will know what to do. It takes time
and costs money to prepare for wheat
storage on the farms and growers natu-
rally have not been enthusiastic about
going to this expense, which could not
work otherwise than reduce the margin
between the selling price of their wheat
and the cost of producing it and placing
it on the market, unless some allowance
is made for storage.

CROPS FOR LATE PLANTING

Feterita is a surer crop to plant at
this late date than corn or kafir if grain
is desired. Feterita can be regarded
largely as a catch crop. It matures grain
three weeks earlier than most kafir vari-
eties. Freed Sorgo is another crop which
is of value for late planting to produce
grain. It produces a lighter yield than
feterita, but ripens in from seventy-five
to eighty-five days after planting. It
is suggested by the superintendent of the
Hays Experiment Station that it is
suited for planting for grain up to the
first of July.

Another late crop which has given
good results in hay at the Hays station
the past five years is Sudan grass or
Red Amber cane drilled in well worked
land up to July 1. These late planted
sorghums always make good hay and
some farmers argue that the late sown
crops make better hay than the earlier
planted because they mature about frost
time and do not dry out so much before
feeding.

RETRAINING OF SOLDIERS

Nothing has ever before been at-
tempted such as our government is suc-
cessfully carrying out in the retraining
of disabled soldiers. The greatest han-
dicap is the indifference of the men in
need of such training. It is character-
istic of the American people. One of
the reasons why the battle casualties
were so high was the supreme self-confi-
dence of the average American soldier.
He disdained to take cover and rejected
advice. He believed he could do the
job, and did do it, but probably with a
good many unnecessary losses. The
Federal Board for Vocational Education,
which has charge of the retraining work
being offered by the government to every
man disabled in any way, reports that
the same spirit is manifest in a great
many disabled men. They come out of
the hospital confident that they can
carry on, notwithstanding their handi-
caps. This spirit is a priceless asset to
our country, but a good many of these
brave men who have been disabled are
finding that the victories of peace are
more difficult than those of war.

It is the duty of every citizen and the
friends of those who may be eligible for
retraining to urge upon them the im-
portance of accepting this opportunity
offered by the government. It is not a
matter of charity, but simply a matter
of right and justice on the part of the
government for which they have sacri-

ficed. We should take every oppor-
tunity possible to convince these men
that the thing for them to do is to take
this free vocational education the gov-
ernment offers with its liberal support
for themselves and their dependents and
the certainty that it will equip them to
make an adequate livelihood in the
future.

RESPECT FOR THE FLAG

June 14 has been officially designated
as Flag day. In parades and other cele-
brations for our returning soldiers the
flag has naturally been much in evi-
dence, and a general carelessness in the
matter of showing proper respect to the
emblem representing our country has
been observed. It is by no means un-
common to see men standing with their
hats on and women heedlessly chatting
and laughing while the colors go by.
This is of course due only to thought-
lessness and not to any lack of respect
or affection for that flag which is the
"symbol of the power and the glory and
the honor of fifty millions of Ameri-
cans" and which stands for the things
for which we should be ready to sacri-
fice life itself.

There may also be some confusion as
to the proper method of showing respect
to the flag. The War Department pre-
scribes rules and regulations for observ-
ance within the army, but it is beyond
its province to prescribe any such rules
for the guidance of civilians. There is
no federal law now in force pertaining
to the manner of displaying, hanging, or
saluting the United States flag, or pre-
scribing any ceremonies that should be
observed in connection with it, though
several states have laws bearing more or
less upon the general subject and some
counties and municipalities have prob-
ably passed ordinances governing action
within their own jurisdiction. In the
absence of definite legislation it would
seem that civilians might well observe
through courtesy the customs which are
incumbent upon those who serve under
the flag.

Existing army regulations provide
that when officers and enlisted men in
civilian dress and covered, pass the na-
tional flag, not encased, they will un-
cover, holding the headdress opposite the
left shoulder with the right hand. If
uncovered, they will salute with the
right hand salute. A flag unfurled and
hung in a room will be saluted by offi-
cers and enlisted men the first time they
may have occasion to pass it, but not
thereafter. The hand salute, with which
most of us are now familiar, is as fol-
lows: Raise the right hand smartly till
the tip of the forefinger touches the
lower part of the headdress above the
right eye, thumb and fingers extended
and joined, palm to left, forearm in-
clined to about forty-five degrees, hand
and wrist straight. At the same time
look toward the person saluted. Then
drop the arm smartly to the side.

When the national air—the Star
Spangled Banner—is played at any place
where persons belonging to the military
or naval service are present, all officers
and enlisted men not in formation are
required to stand at attention facing
toward the music, excepting as the flag
is being lowered at sunset, when they
face toward the flag. If in civilian dress
and uncovered, they are required to stand
and salute at the first note of the air,
retaining the position of salute until
the last note of the air is played. If
in civilian dress and covered, they are
required to stand and uncover at the
first note of the air, holding the head-
dress opposite the left shoulder until the

last note is played, excepting in inclem-
ent weather, when the headdress may be
held slightly raised. It is becoming quite
a general custom among civilians to rise
and remain standing, the men uncovered
and the women at attention, while the
Star Spangled Banner is being played.
Should we not show the same respect
to the national flag itself as to the song
which was inspired by it?

GRAIN GRADING SCHOOLS

An opportunity to learn something
about grain grading methods will be
given to farmers in a number of Kansas
counties during the next few weeks.
Schools will be held in McPherson, Har-
vey, Barber, and Pratt counties, June
19, 20, and 21; in Washington, Morris,
Leavenworth, and Barton, June 23, 24,
and 25; and in Labette, Sumner, Ellis,
and Ford counties, June 26, 27, and 28.
The department of milling and the ex-
tension service of our agricultural col-
lege are co-operating in conducting these
schools. In each of the twelve counties
mentioned there will be three schools of
one day each. Wheat growers and grain
buyers will have placed before them de-
tailed information concerning the fac-
tors which enter into the grading of
grain as well as methods of producing
and marketing grain of standard grades.
In the morning of each day the grain
grades will be discussed and there will
be explanation of the different factors
that are considered in placing grades on
grain as it comes to market. Samples
will be shown of the different grades
and the methods of sampling and grad-
ing will be actually demonstrated. In
the afternoon those in attendance will
be given a chance to do some actual
grading of grain under the direction of
those in charge of the schools.

GUARD AGAINST FIRE

Fire is always a source of danger on
the farms. Every year after wheat har-
vest begins we read of wheat being
burned up both in the shock and in the
stack. This year as we are about to
begin the harvesting of the biggest crop
of wheat the state has ever produced,
wheat growers would do well to listen
to the warning sent out by the state
fire marshal, urging the importance of
safeguarding the crop against fire. Last
year the fire marshal issued an order
that wheat shocks be set at least 200
feet from railroad tracks and that suit-
able fire guards should be plowed be-
tween the shocks and the railroad. This
was issued as a war measure, but from
information received from various
sources it seemed certain it resulted in
saving thousands of bushels of grain.
This year circumstances do not justify
issuing positive orders, but Mr. Hussey
urges the importance of taking every
precaution possible and makes the fol-
lowing suggestions:

"Provide a good and sufficient plowed
fire guard around each and every field
of shocked grain. Three furrows are
good, but six are better.

"Protect each stack with a plowed
guard of sufficient width to prevent
flames from leaping across.

"Insist when the thresher comes that
he has his spark arrester in place and
working.

"Do not put too many stacks in the
same yard. The more stacks in a yard,
the bigger your wager that they will not
be destroyed by fire—see the point?

"Do not stack grain near buildings,
either barn or residence.

"Do everything in your power to save
this immense crop in its entirety and
you will have done a patriotic duty."

BANKER-FARMER CO-OPERATION

Farmer, Ranchman and Banker Dependent One Upon the Other

THE business of the farmer and the stock grower furnishes the principal assets of the country, for from the land comes practically all our wealth. He who tills the soil and converts its wealth of production into live stock has in his hand the destiny of us all. Upon the fertility of the soil and its proper cultivation depends the welfare of the whole country. Let there be failure of crops, and financial depression follows. Let the herds decrease, and the source of wealth is diminished. The thoughts expressed in these sentences furnished the theme of the address of J. C. Hopper of Hutchinson at the cattlemen's meeting in Manhattan May 13. Mr. Hopper, himself a stockman as well as a banker, sought to show the relationship and co-operation which should exist between banking and live stock production. He said in part:

"The farmer, the ranchman and the banker are so closely associated in business that they become absolutely dependent one upon the other. The wise and useful banker with a storehouse of experience gained from his many associates in the farming business is an asset of great value to every town and locality his business touches, and can and should be of valuable assistance to his farmer friend.

"There was a time when these two associated businesses were at enmity with each other and the result of such enmity brought ruin and desolation. Prosperity with her associates, happiness and contentment, were hidden at this time, but as soon as the banker and farmer began to reason together these friends of mankind began to be apparent and success crowned success with a wave of prosperity that gladdened the hearts of all. Indeed the farmers and bankers have much in common and when they pull together each holding to the principal of their profession they make a team that revives the business interest of their locality making and contributing largely to a happy and contented people.

"To crudely illustrate this point, I am reminded of an instance that happened many years ago when upon the plains of Western Kansas a young man invited his father to take a ride to view the landscape o'er. It was not an automobile or an aeroplane that furnished the conveyance, but the outfit was a pair of bronchos hitched to a light buggy, the brones being held firmly by assistants who had been called in to see the start until the father and son were safely seated in the vehicle, and when they were let go the ponies leaped with a bound, kicking and bucking, and soon both brones were on the same side of the buggy pole lunging and trying to get away. The old man remarked, 'It seems to me it would be safer and we would ride with more ease and comfort and the horses would work better if each stayed on his own side of the pole.' The young man replied, 'They will learn better after a while. Let them go,' and they did.

"It is so with the farmer and banker. They have much in common, but like the ponies, let them eye each other and each pull his share of the loan.

Co-Operation Essential

"You may talk with a farmer at his home, at the picnic, or on the street, and one thing they all agree to, that he is not receiving his due unless it is his due of hardship. They all agree on that, that he has a double portion of that, and why? Because of lack of organization. There was a time when man tried to live for himself, but that time is past history. Success now comes to co-operation and organization. The problem then confronting the farmer is not easy to solve, for farmers will not stick together. Farmer

organizations smatter with discontent and finally break to pieces. Men who till the soil and raise live stock for the consumption of humanity are too busy with their stock and herds to give organization any great thought. They are too busy and are not willing to take or give advice to any great extent.

"This might be illustrated by this splendid farmers' educational bureau which called this assemblage together. But might I not say that although the great State of Kansas is spending thousands of dollars in experimenting and propagating crops, the organization and assembling of these splendid buildings and the cost of this great model farm, the study and work of these men with their wide field of thought and action are but experimental and carried on for the sole purpose of helping and assisting the farmer in raising better crops and a better quality of live stock. yet I vow that a large percentage of the farmers are not heeding or being benefited by the experiment and the problem of awakening into action this large percentage of the farmers and ranchmen is of no small proportions.

"The man is a failure who undertakes to live in this world alone and without using the facilities which are his by a God-given right. He who uses his hands while his brain remains dormant is living a hundred years behind the procession and surely cannot succeed, or vice versa, if he uses his brains and his hands are idle success will not crown his efforts. I am reminded of what a farmer said to a young man. The young farmer asked this sage of the farm, who by the way was a successful old gentleman living 'on Easy Street' as we term it, 'What is the source of your success?' And the old man quaintly said, 'Do not try to do it all with your hands, Bill. I have made most of mine spitting in the fire.'

"Reason coupled with action is the answer. These two used together and then linked with that of his acquaintance will surely bring results and the stronger the co-operation both by numbers and thought, the better the results.

The Link That Binds

"It too often happens that the farmer and banker are closely allied to each other in every way except from advantageous advice. Farmers are not willing to give much and are willing to take less. They look upon the bank as a place to get all the money they want (without asking about the source of supply), and parley over the rate of interest. They are willing to borrow the money for the full price of their stock and farm, but are not willing for the banker to say anything or give any advice in regard to it. The farmer may have ten per cent in the feed lot and the banker ninety per cent, but Mr. Banker must not say anything about the best time to sell or even suggest a remedy in the feed lot for fear the farmer may resent it. If he succeeds, all right. If he fails, the banker is to blame, and though the bankers has a hundred customers in like business and knows who succeeds and who fails, yet 'mum' is the word.

"If you will pardon a personal illustration, your humble servant ventured out to a customer's home and suggested a few things, but was promptly told where to go. The designated place not being desired, my home was chosen instead. This farmer had forgotten that as a community banker I had a hundred customers like him, knew who was losing money and the cause, and could tell him of his leaks which he had failed to learn from his neighbor. The eyes of this farmer were finally

opened and the losing proposition turned into a profitable one.

"One of the principal problems of the farmer according to my theories is to cultivate the acquaintance of the agricultural college, profit by its experiments and learn from its successes. Then study the suggestions of his banker, investigate his theories and try out some of his ideas, watch the success of his neighbor friends, and plan to gain by observation as well as hard work.

"Farmers should talk with each other and profit by the failures and successes of their fellow men. Too often they carefully pull their cloaks about them for fear their prosperity may drop upon some neighbor and this neighbor may become a rival in business. To solve this problem farmers should cultivate acquaintance and not be afraid their friends may reap a benefit. We should know each other better and to that end co-operation is the key to success.

Better Farming; Better Stock

"Some years ago a pig was a pig; a steer a steer; a cow a cow. Seed corn was shelled from any old ear and wheat shoveled out of the bin into the drill regardless of the grain or quality. This mode of procedure will not win in the twentieth century. The wastefulness of such procedure is so flagrant that the majority of farmers are recognizing even pedigreed corn and wheat. The life germ of these kernels can be analyzed from the exterior and a great problem rests upon the farmers today in the selection of seed for their farms. The method of cultivation and the time of cultivation are all problems conducive of thought as well as action. In those good old days we read about farming was not classed as business and anyone not fit to be a merchant, a banker or a lawyer could go on a farm, but my friends, that day has passed and the reverse is now true; a man not well educated for a farm whose thinking is not strong to analyze the situation may be a banker, a merchant, but he will be a failure as a farmer. The day of raising grain and hauling it to market is fast passing away. The greatest asset of the farm is the live stock produce, and farmers of today are solving the problem of turning the long-horned cat-ham cattle into the pure-bred box-shaped broad-backed cattle that will come up and eat out of your hand instead of running like the wild deer when you enter the lot. They no longer cater to the long-nosed hog that drinks out of a jug or reaches through the cracks of a corn crib for its meals. They are fast improving their live stock in order that the table may be supplied without waste. Scrubs, as we term them, are no more used as breeding stock. I heard one farmer say only a day or so ago that he would prefer to give \$2,000 for a well-bred bull to turn into his herd than to turn the scrub in for nothing.

Bankers' Difficulties

"Bankers, too, have their difficulties to overcome and one of the great problems the bankers have to solve in their community is to rightly distribute the funds entrusted into their care back to the community from which it came so that it may be used for the upbuilding of the territory. The problem of getting the funds into his possession is not always an easy one, but the problem of distributing money when it is once in his hands is equally as hard. It is said that only one man out of ten can handle money and it is the banker's problem to find the tenth man and to also help the other nine. It is up to the banker to help the man who will help himself. All bankers, I am sorry to say, are not

this way. They think their job is to get the funds into their hands and when they get them they think they are owners of these funds and they should use them where profit is greatest, and there lies a danger sometimes hidden from view, yet when power is felt and it appears in some much damage has been done.

Justice to All Borrowers

"There is another danger, or problem if you may call it so, of a banker help being given to the few to the detriment of the many and the community suffers from this. My thought is there is a lesson to be learned from the banker who is the trustee of the community, in a degree at least, the teacher and should help the small man grow into a large man by pointing out in a diplomatic manner some of the pitfalls which he may step into with borrowed capital. My idea then is to be careful in making the loan, but when you make it, to see that it serves its purpose. So we must cater to the commercial side of life. The bankers should be partners in the building and if possible teach that principal that the bank is in a sense a partner and partnership exists if you place every man that borrows of its funds and is the storehouse, or the clearing house that causes idle funds to be useful and that the bank itself belongs more to the community than it does to the stockholders. The stockholders are only trustees. (It will take me talk for some of us to get away from the idea that the bank and its business is ours.) When a man borrows he is borrowing of the community and is responsible to the community. It is my thought that when a man understands that he is borrowing from the community he will have a greater responsibility than he will if he thinks he is borrowing of the institution and paying tribute to them. This problem is no small one and consequently many mistakes will be made, for we only have to look about us to see that some bankers will take in the money but when they go to loan it will loan it to some stock-jobbing proposition rather than to take a chance with the farmer just because he sees the farmer is a little close run. He will take a lower rate from some foreign proposition than help the fellows produce live stock.

"Bankers usually loan freely when everything is prosperous, but the problem is to solve are to help things along to bring order out of chaos, to make success out of failure. I count it good banking to help those in distress. Of course, we should find out that they are worthy. Sometimes we may make a loss, and this reminds me of a bankers' meeting I attended one time when a bright banker was speaking and told how he had run a bank for so many years and had never lost a penny and did not have any past due notes in his case. By me sat an old man with probably fifty years of experience in the banking business. The remark tempted the old man and he leaned over and whispered to me, 'either never did much business or he is a d—n liar.' This illustrates the point I want to make. When a man tells me that he never takes any risk in his banking and he never makes a loan unless it is gilt-edged, I take it that he is of very little value to the community. He may have a solid bank but not a very useful one."

The use of both brain and muscle is necessary to get the best results in farming, with the emphasis on the headwork.

Wise men make mistakes, but they don't often make the same mistake twice.

WHEN THE BEES SWARM

Control of Increase Measure of Beekeeper's Success

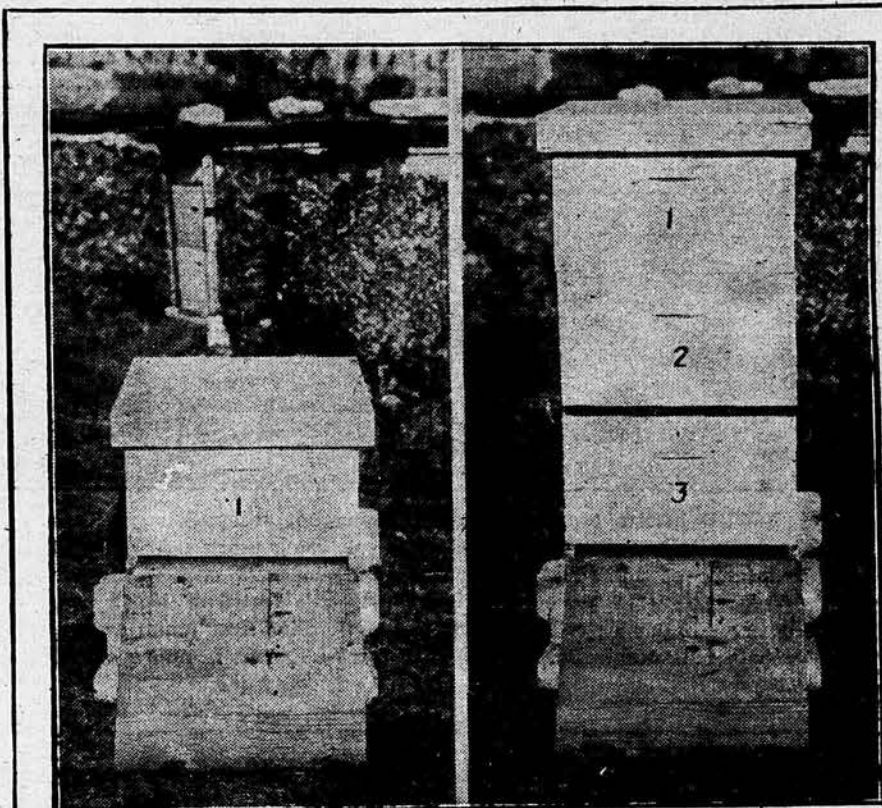
By J. H. MERRILL, State Apiarist

A MAN'S success as a beekeeper is no longer judged by the number of swarms which issue from his hives annually. It is now realized that issuing swarms cut down the honey crop, yet it is natural for bees to swarm, and unless some methods of prevention are taken they are almost certain to leave the hive as a swarm, and they do not always choose the time which would best please the beekeeper. Bees usually swarm during the honey flow, which is the very worst time, from the standpoint of the beekeeper, that they could depart. To control swarming without providing for some method of increase would be very unwise, as nearly all beekeepers desire some increase at times. In making this increase it is desired to accomplish it with the least possible interference with the storing of surplus honey. If increase is made either before the honey flow begins or when it is nearly over, both the increase and honey crop may be secured. While many methods are used, and may be used, in securing increase, only a few of those most commonly practiced will be described here. Swarming is much easier controlled in producing extracted honey than it is in producing comb honey, and the making of increase is also easier in the former case. In both comb honey and extracted honey production, the queen's wings should be clipped in the spring, so that later if a swarm issues from the hive in which the queen has been clipped, she will not be able to accompany the bees, but will flounder around on the ground in front of the hive. The bees, finding that the queen is not with them, will return to the old location. The queen should be captured and caged. The old hive should be removed from its location, and a new hive set in its place. When the bees begin to return to their old location, the queen may be released from her cage and allowed to join in at the entrance with the other bees as soon as they are going into the hive in goodly numbers. The supers should be removed from the old colony and placed on the new hive. As this colony will not only have the swarm, but also all of the bees which go to the field from the old hive and return to their old location, it will be the stronger colony and one that will store the surplus honey.

Doctor Miller's method of manipulating colonies for comb honey production is probably the safest and most satisfactory method that can be used. Briefly it is this: Early in the spring he places an extra hive body with drawn comb on each one of his colonies so as to give the queen ample room for brood rearing. He examines these colonies and cuts out queen cells, and whenever the queen is not producing brood up to standard he replaces her. By good management during the spring he does away with the swarming to a large extent, as the queens have plenty of room, so that when the honey flow comes on his colonies are vigorous and ready for storing a bumper crop. He then goes through his colonies, removes the upper hive body, and fills the lower hive body with all of frames of brood. He does this with all of his colonies, and with whatever frames of brood he has left he starts new colonies and gives each a ripe queen cell of a laying queen. For comb honey production probably no better method than this can be followed. It is a simple matter to make increase when producing extracted honey. One of the most satisfactory methods is known as the Alexander method of making increase. This method should be used to make increase when the colony of bees is strong and vigorous. Remove the old hive from its location and put a new hive body in its place, filled with either drawn comb or frames of full

foundation. Remove the middle frame from this colony and put in its place a frame of brood from the old hive. If the queen can be found on such a frame, use that frame for making the exchange. If she is not there, then she should be caught and placed in the new hive body on the old location. The queen excluder should be placed on top of this hive, and the old hive body placed on the queen excluder. At the end of five days the upper hive body should be examined, and if any queen cells are present they should be cut out. At the end of ten days all of the brood in the upper hive body will have been sealed over and this hive body may then be taken away to a new location, and a ripe queen cell or laying queen introduced. The laying queen is preferable because she will begin work earlier, and there is no danger of her being lost on her wedding flight. This method tends largely to discourage swarming, and will

young queen will emerge from her cell and pass out through this hole on her wedding flight, after which she will return to this hive body, and there will be a queen raising brood in hive body No. 1 and another in No. 3, while all of the bees will store surplus honey in hive body No. 2. After the bees from the old queen have all emerged in hive body No. 1, and the new queen has seven frames filled with brood, hive body No. 1 may be removed to a new location, and the increase will be accomplished without having decreased the amount of honey stored nor in any way decreasing the strength of the parent colony. If for any reason, such as an unfavorable season or a dearth of honey flow, this method is not a success, then one of the queens may be destroyed, or the queen excluder may be removed and the two queens allowed to battle it out until one is killed. This method of making increase has many advantages



ILLUSTRATING ONE METHOD OF CONTROLLING INCREASE DESCRIBED IN THIS ARTICLE

result in a safe, moderate amount of increase.

Another method which has even some advantages over the ones already described is the method described by Frank C. Pellett, in the American Bee Journal. His procedure is somewhat like that of the Alexander method in that a new hive body is set in place of the old one, or, as shown in the accompanying illustration, where the hive marked No. 1 is the one to be divided. This hive is removed and placed to one side, and hive marked No. 3 is then set in its place. Hive No. 3 should contain drawn comb, or frames of full foundation, and the frame of brood and the queen from hive No. 1 should be placed in hive No. 3. On hive No. 3 a queen excluder should be placed which is indicated in the photograph by the broad black stripe between hives 3 and 2. On this queen excluder, hive body No. 2 should be placed, which is a hive body containing frames of drawn comb or full foundation, and on hive body No. 2 should be placed hive body No. 1, which is the original colony minus one frame of brood which was placed in hive body No. 3. On the following day a ripe queen cell should be given the bees in Colony No. 1, and a one-inch hole bored in the back of this hive body. The

over a great many others. As above mentioned, it does not detract from the strength of the parent colony, does not interfere with the storing of honey, prevents swarming, and is not a difficult method to put into practice.

There are other methods of making increase, such as purchasing combless packages of bees from the South, storing nuclei, etc., but the above methods have been given because of their simplicity and because of the ease of their manipulation.

Soldiers to Home Institutions

Training disabled soldiers in home state colleges or industrial shops when practicable is the best way of fitting them to take care of themselves, says the Federal Board for Vocational Education. Men are being trained in four lines of work, generally speaking, namely: agriculture, industry, commerce, and the professions. The belief of the board, which it endeavors to live up to, is that disabled men should go back to their own states for training, if possible. The board is using private commercial colleges for the commercial education of disabled men, because they are accustomed to dealing with individual students, with different degrees of edu-

cation, who enter the course at irregular intervals. Land Grant colleges are being used for agricultural training, and whenever practical for engineering courses as well. Industrial trade schools and shops and plants of all kinds in many places are being used for the industrial work. The idea of the board is to keep the men contented during their period of training, and, as a rule, this is best accomplished by placing the men near their own people, and among familiar surroundings.

College Graduates as Farmers

Each year is adding to our list of college trained farmers. While it may have been true in times past that college trained men left the farm, the Kansas Agricultural College is sending back to the farms a goodly number of its graduates and students.

The farm management department of the college in connection with its studies of farm management problems over the state has been trying to locate graduates and former students who are actively engaged in farming work, and it is gratifying to learn that they find so many who are making good as top-notch farmers. W. E. Grimes gives the following list of men he has met on recent farm management trips.

At Herington, both A. W. Gehrke and George Gehrke are helping their father on one of the most profitable farms of that section. They finished the farmer's short course, but expect to take more work whenever an opportunity is offered.

S. B. Shields, '18, is also on his father's farm near Herington, but expects to start farming for himself soon.

Fred Carp, '18, has started a hog farm near Wichita, and great things are expected of him.

L. S. Edwards, '03, is manager of the Deming Ranch near Wamego. On the same ranch, Kelchner, a former student, is engineer. He has charge of the irrigation by tile of 1,400 acres, in addition to an eleven-mile levee, and all of the machinery. Perkins, also a former student, has a farm near Oswego.

N. E. Dale, '18, is a fertilizer salesman for Swift & Company.

F. H. Dillenback, '16, is the new county agent of Doniphan County and is a live wire.

H. E. Tagge, '14, and his wife, formerly Miss Elsie Adams, '13, have started a pure-bred Duroc Jersey hog farm in Doniphan County, and are making things hum.

H. W. Avery, '91, of Wakefield, former member of the legislature and prominent in alumni affairs, is now a successful farmer.

George Blythe, '12, of White City, is operator of a prosperous farm.

B. Needham, of Lane, has a substantial farm with modern improvements and is a leader in community life. He is state grange master.

J. W. Linn, '15, of Manhattan, entered partnership with his father in the pure-bred Ayrshire business, and has made an enviable record. He is secretary-treasurer of the Kansas Ayrshire Breeders' Association.

George Gibbons, '18, is assistant superintendent of Hays Experiment Station, and is "making good" on the big station farm.

The ram should be kept separate from the flock in summer and should be well fed, but not kept too fat. The period of gestation for the ewe is five months. If breeding starts the fifteenth of November and runs through December, this will bring the lambs in April and May.

Few people realize the value of birds in keeping garden insects under control. Even the despised English sparrow sometimes makes a mistake and eats a worm.

GENERAL FARM AND STOCK ITEMS

Something of Interest for All—Overflow from Other Departments

ONE of our readers asks if young calves can be tested for tuberculosis the same as mature cattle. Calves can become infected with this disease at a very early age. Of course it is important that its presence be determined as quickly as possible, for affected animals can transmit the ailment to the other animals running with them in the same stable or feed lot. Sometimes sufficient contact can be established through a fence to transmit the disease from older animals to calves. The youngest age at which the veterinarians of the Bureau of Animal Industry recommend testing calves for tuberculosis is six months. In special instances, however, calves younger than this have been satisfactorily tested with tuberculin. The present regulations of the bureau prescribe a dose of two cubic centimeters of tuberculin for calves ranging from six months to one year in age.

Type in Breeding

The importance of type in breeding pure-bred live stock was strongly emphasized by President D. D. Aitken of the Holstein Association of America in his address at the annual meeting of this association just held in Philadelphia. There is a lesson to every breeder of pure-bred stock in Mr. Aitken's remarks, whatever his breed. He said:

"No breeder of live stock fully succeeds who has not in his mind a clearly defined type toward which he is endeavoring to progress in his breeding operations. In other words, the breeder must at all times keep in mind the ideal form or type of his particular breed.

"The 'Scale of Points' is the expression of the true type in words and figures. All breeders should be familiar with it and breed to it. True type means success. The 'Scale of Points' describes the Holstein which has made the breed famous all over the world. It is not fancy—it is fact. If you breed without regard to it you will diminish the production and vigor of your herd. Don't think you can improve in a few years the fixed type and characteristics of two thousand years. Stick to true type and rely more upon liberal and proper feed to improve the financial results. Grow your animals well from birth to maturity and never let them depreciate for the lack of food for maintenance of their bodies; for milk cows feed according to a well determined formula to bring out the best yield.

"With regard to color, true type is important not only as a source of beauty but distinguishes many grades from pure-breds and discourages substitution."

Time to Cut Alfalfa

B. R. T., Clay County, asks what effect the stage of cutting has on the permanency of a stand of alfalfa. This was a point concerning which there was very little accurate information until the Kansas Experiment Station undertook to solve the problem. The old rule was to cut alfalfa when it was approximately one-tenth in bloom. In the test being conducted by the experiment station on the agronomy farm, which began the spring of 1914, different plots of alfalfa are cut continuously throughout the season at four different stages of growth, these being as follows: When the flower buds are formed, when the plants are one-tenth in bloom, when the seed pods are well developed. These have been commonly referred to as the bud stage, the tenth-bloom stage, full-bloom stage, and seed stage.

The effect upon the stand is perhaps the most noticeable feature of the test. The plots cut in the bud stage each year since the test started have failed badly in the matter of stand. The last time we saw these plots it was apparent that

many of the original plants had died and those remaining appeared weak. Crab grass, fox tail, and blue grass had been crowding in and seemed to be rapidly taking the plots which had been cut at this stage. Of course these grasses show up more noticeably in the later cuttings, since the alfalfa starts so much earlier that it is ahead of them at the first cutting. In the later cuttings Prof. S. C. Salmon states that the hay from these plots has sometimes been as high as 85 per cent grass and 15 per cent or less alfalfa. It is evident from this that it is possible to seriously injure a stand of alfalfa by cutting it too early. Frequently when there are large areas to be cut over it seems almost necessary to start early in order to get through before the crop is too far advanced, and the practice is without doubt a factor in injuring stands.

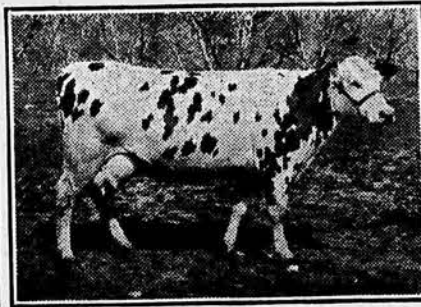
The effect of this early cutting on the yield of hay is also of considerable interest. Mr. Salmon reports that as an average of five years the bud stage plots have yielded at the rate of three and a half tons to the acre, the tenth-bloom plots four and one-tenth tons, the full-bloom plots four and three-tenths tons, and the seed-stage plots three and four-tenths tons to the acre. The yield is greater from the plots cut at the full-

the new shoots, which sometimes happens when the alfalfa is cut late, injures the stand. The results of this experiment show the fallacy of this theory. Cutting off the new shoots may reduce the yield if the crop is not cut until after the full-bloom stage, but it apparently does not in any way injure the stand.

Pasturing Work Horses

W. L. M., Woodson County, asks if it is a good plan to turn work horses on pasture at night. There is a difference of opinion among horsemen and farmers on this point. Horses at hard work cannot get enough nutrient material from grass or other green forage to keep them up in good working condition. Idle horses will keep in good flesh on pasture, but a work horse must have more concentrated feed in order to get enough nutrient material to supply the energy expended in work. Pasture may serve as a tonic and appetizer to the work horse, but should not be depended on to supply any considerable amount of the nutrient materials needed to keep the horse up in good condition.

Some horsemen maintain that work horses fed a full allowance of grain and then turned out on pasture for their roughage will not keep in good condition



RECORD heifers owned by George Young, of Riley County, Kansas. Lady Volga Colanthus 2d, on left in cut, has a year's record of 21,396 pounds of milk, making her the champion milk cow of the state. Lady Volga Colanthus 3d, on the right, has year's record of 18,573 pounds of milk and 548 pounds of butter fat, making her the first junior two-year-old for both milk and butter fat and fifth cow in Kansas in milk production for one year.

bloom stage, and it is also harvested at less cost. Professor Salmon explains this as being due to the fact that the bud-stage plots are cut five or six times during the season, the tenth-bloom plots four or five times, the full-bloom plots four times, and the seed-stage plots three times. This means that more hay is harvested from the four cuttings at full-bloom stage with the saving of labor brought about by the fewer cuttings than from the bud and tenth-bloom stages where it is necessary to harvest the crop five or six times.

Of course the quality of the hay must be given consideration. The percentage of protein gradually decreases as the alfalfa matures, but the difference is not enough to offset the greater yield from the full-bloom stage. Cut at this stage the total yield of protein to the acre is slightly larger than the total yield of protein in any of the other plots. After the full-bloom stage there is of course a large loss of leaves, and this brings about a material decrease in the protein content of the hay.

The conclusion to be drawn from these tests, both from the standpoint of maintaining the stand and the quantity of hay, is that alfalfa should be harvested at very near the full-bloom stage, and the effect upon the stand from cutting it in the bud-stage is such that this early cutting should most assuredly not be followed as a regular farm practice. There used to be the theory among alfalfa growers that clipping the tops off

for work. This difficulty probably will be overcome, however, if the horses are given some dry roughage before being turned out. It is most assuredly more comfortable for the horses out in the pasture at night than in a hot and ill ventilated stable. During the summer season the work horses will keep in much better condition if they can be turned out at night in a good clean yard, even though it has no grass.

Kill Weeds, Save Moisture

Moisture conservation is the keynote to successful crop production in Western Kansas. It is through the rank growth of weeds that one of the greatest losses of moisture takes place.

"Owing to the wet spring which may prevent farmers from getting all of their ground in row crops, many fields will be idle during the summer and will probably be put into wheat this fall," says A. L. Hallstead, of the Fort Hays Experiment Station, in charge of tillage and rotative experimental work.

"Volunteer grains and weeds are coming up and using the abundance of moisture now in the ground which should be conserved for a following crop. It is important that this waste in soil moisture should be stopped by killing the weeds.

"Nearly every farmer will be busy caring for his row crops during the time it may be necessary to kill this crop of weeds. On the idle ground, then, the most economical method must be found

to kill these weeds and conserve moisture.

"One of the most effective and economical methods of killing these weeds is by listing the ground. This should be done before the weed growth is high to cover. When the weeds begin to show again on the listed ground, a lister cultivator or weeder may be used to destroy a second crop of weeds. When it becomes necessary to kill another crop of weeds the lister may be used to split the ridges first thrown. Unless the weed growth gets too high a shovel cultivator may be used with more economy than with a lister. In case a cultivator is used it may be better to plow this ground before seeding. However, if plowed, it should be done immediately after harvest."

Weaning Pigs

Hogmen have different ideas as to the exact time for weaning their pigs. We believe the most successful hogmen, however, recognize that it is not a good practice to wean pigs too young. Some hogmen take pigs away from their sows when they are only six or seven weeks old. A good brood sow properly fed has a good flow of milk when the pigs are of this age. There is no better feed for growing pigs than their mother's milk, consequently it should be used to the greatest extent possible. When the pigs are of suckling age the sow should be on full feed. Unless there is some extraordinary reason for earlier weaning the pigs should not be weaned under the age of ten weeks, and it is better to let them nurse until they are twelve or fourteen weeks old.

Often serious results follow weaning at too early an age. An entire change of feed following weaning may create serious trouble. If, however, pigs have access to corn, shorts, middlings or tankage, in a self feeder placed in the open where they can eat at pleasure without being disturbed by other hogs, they can be weaned at the age of twelve or fourteen weeks, with very little change in their feed, by allowing them to continue on the self feeder.

Wheat Storage on Farms

If every wheat grower markets his grain as it is threshed, all elevators will soon be full, and threshers must stop until some can be shipped. In a short time terminal elevators will be full, and every car which will hold wheat will be full and many will be blocking the terminals. Under present demurrage rules the use of cars for storage is too expensive for dealers. If this were true, all grain cars in the country would soon be full and standing on the siding.

When the price of wheat was first an allowance for farm storage should have been arranged, but it was not. Still, rather than stop all the threshing machines and cause immense loss to both wheat growers and laborers, farmers who either have storage or can arrange storage at home should use it to full capacity. Then, when such another crisis comes, the wheat grower should get the same pay for storing grain that the elevators do.—J. B. PAYNE, Parsons.

Shade for Pigs

This is the season of the year in which the pigs are running on pasture. The matter of shade should never be overlooked. If there is no good natural shade in the pasture, temporary shade should be provided. This can be very easily done by setting some posts and nailing boards on them three and a half or four feet above the ground, covering the whole with straw or hay. It is also very important that hogs running in pasture have access to plenty of good pure water.

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Farming Must Be Safeguarded

THAT democracy is a state of society expressing itself in personal welfare and in the public good was the conclusion set forth by Dr. L. H. Bailey, world renowned agricultural leader, and writer and scholar, of Ithaca, New York, in the Commencement day address at the Kansas Agricultural College last week. It is his belief that in the future wars can be prevented by farmers. He cannot conceive of great armed outbreaks occurring in a world in which the people of the farms thoroughly understand each other and have large international plans of cooperative effort.

Agriculture must be safeguarded, he pointed out, though this is not apparent in the covenants from the peace conference so far as they have been reported. He commended the League of Nations as the best aid in sight, but warned against regarding it as absolute perfection.

Democracy is absolutely inevitable, Doctor Bailey stated. It is the expression of evolution and inevitably leads the race of men.

Democracy in Allegory

"From the airplane of my fancy," said the speaker, "I saw a man walking up hill. He was a burthened man borne down with the weight of many tiresome loads. He seemed not to know his way and yet his course was up and onward."

Doctor Bailey traced the progress of this man as he went back and forth, zigzag, and sometimes backward, but always resumed his course up the hill, and at every turn dropped burdens. The burdens that he dropped were "the evil eye," gluttony, drunkenness, beastliness, idolatry, sorcery, and fatalism. At last he became a man, stood erect and looked about him. He became conscious of himself and a smile was on his face.

"This allegory," commented Doctor Bailey, "represents the progress of democracy. It is slow and devious. Sometimes there is retrogression. Put always the tendency is upward and onward, inevitably leading the race."

Democracy a State of Society

"We are likely to think that democracy is not inevitable, but in that case we confuse democracy with government. Democracy is not a form of government any more than religion is a form of worship. It is not the absence of kings, not anti-monarchy, not 'the rule by the people,' not popular suffrage, not independence, not even freedom. Democracy is a state of society, expressing itself in personal welfare and in the public good. Government is only one of its forms of action, and in some respects its less important form. Democracy is the expression of evolution, if the evolution is progressive rather than retrogressive. From this point of view, democracy is inevitable if evolution is inevitable."

Forces Are Internal

"The contemporaneous teachings of evolution emphasize the internality of its forces. It is not even unscientific to speak of a perfecting principle that lies within the forms of life. The effort to find the motive and the force of evolution in externality has failed. The former conception of the struggle for existence, and natural selection as the cause of variation and the course of

progress does not stand the test of current investigations. The whole effort of present biological evolutionary inquiry is to determine the marks and the process of the perfecting principle. The old discussion of 'acquired characters' was a contribution to it. So also are the newer discussions in the great field of heredity."

"What may be the nature of the physiological or other forces that were implanted in the living structure in the beginning or have been picked up by it in the long processes of time, we are not yet able to clarify. For the time being we must be content to know its results. We are convinced of the progressive evolution of the kingdoms of life. This naturally leads toward democracy, inasmuch as it must lead towards the welfare of the individual and also of the association; that is, toward the welfare of the Demos."

"The man going up hill is always in difficulties. He has hard places to pass. He may think himself much burdened, as in fact he is. His case may look to him to be hopeless, yet from time to time he looks back over the landscape and notes that he is higher than when last he stopped. The progress of the race is halting and it may be zigzag and it is always to be won with effort; but we are witnesses of the progress nevertheless."

Democracy Is Relative

"So, therefore, should the difficulties not become discouragements. We are to meet them, and the more acute our rationalizing processes, the more easily and rapidly should we resolve our troubles. The only reason for a democratic form of government is that it is a means of education. Never does any man see the top of his mountain. Democracy is relative, as evolution is relative."

The speaker mentioned some present problems. He expressed himself in favor of the League of Nations as the best aid in sight, of legislation for the betterment of the laboring man, of the public school system as it is but with the hope that it may be better, of legislation for the safeguarding of children, and all the rest. "We must not expect, however, that any of these movements are yet perfected, or that we have passed the danger in them," he said.

Opposes Government Ownership

"We must outgrow the dogma of government ownership," continued Doctor Bailey. "There seems to be a widespread feeling that there is a sort of occult infallibility in 'the state.' A building is no stronger than the materials that compose it, and so is a state no stronger or better than its people. The contemporaneous experience with government ownership has brought the whole subject before us in a new guise. It shows that we have not yet learned the way, and that government does not have more wisdom than does the general indefinite organization known as 'business.' We have not yet had sufficient training to make government ownership the most desirable."

"Yet aside from this, government ownership of public utilities rests on a fundamental fallacy. As government is su-

(Continued on Page Thirteen)



See That He Comes Right

When the thresherman brings his outfit to your farm, don't let him bring an old worn out steam engine. Nor, do you want him to bring a little light gas tractor that lacks power and is constantly breaking down. Insist upon his coming with the old reliable

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WE ARE likely to think that democracy is not inevitable, but in that case we confuse democracy with government. Democracy is not a form of government any more than religion is a form of worship. It is not the absence of kings, not anti-monarchy, not "the rule by the people," not popular suffrage, not independence, not even freedom. Democracy is a state of society, expressing itself in personal welfare and in the public good. Government is only one of its forms of action, and in some respects its less important form. Democracy is the expression of evolution, if the evolution is progressive rather than retrogressive. From this point of view, democracy is inevitable if evolution is inevitable.—LIBERTY HYDE BAILEY.

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PURIFYING CISTERN WATER

A WELL-CONSTRUCTED and properly-designed filter is a very desirable feature of a cistern. It is even possible to use cistern water for drinking and other household purposes if it has been properly filtered and purified. In Farmers' Bulletin 941, "Water Systems for Farm Homes," recently published by the United States Department of Agriculture, the vital features of a good, safe cistern are enumerated as follows:

Absolute water-tightness, top, sides, and bottom, and close screening of inlet and waste pipes; provision for excluding from the cistern the first portion of each rainfall until the roof or other collecting area has become rinsed thoroughly; a first class filter of clean, well-selected sand and thoroughly burned charcoal. The flow in the filter should be downward, and the top area of the filter bed and the rate of flow to the bed must be so harmonized and regulated that slow, effective filtration (not rapid straining) is secured. A waste pipe should be provided which removes surplus inflow from the bottom of the cistern where impurities tend naturally to settle. Periodic and thorough cleansing of the cistern and filter is necessary. From time to time the clogged sand should be raked or removed from the filter and the dirty charcoal replaced.

The practice of throwing charcoal into cisterns to absorb the odors of decaying organic matter is of little advantage, says the bulletin. Boiling cistern water, or "dosing" it with chemicals to sterilize it, although safe precautions, injure the wholesomeness of the water and should be regarded as emergency measures—never as suitable substitutes for the best possible construction and operation.

If rain water is filtered effectively, the keeping qualities will be improved and large-sized cisterns may be used. That method of filtration which resembles most nearly the slow percolation of rainfall into the ground will give the greatest degree of purification. Such a filter can be constructed with a barrel or large galvanized iron tank, placed above the ground so it can be easily cared for, and filled with some suitable filtering material. The water as it drains from the roof should pass through this material before it enters the cistern, the rate being kept down to one pint in four minutes (45 gallons in 24 hours) for each square foot of area in the filter bed.

Sand is one of the best and most available filtering materials, and well-burned charcoal is most useful in removing color, taste, and odor. Fine sand removes minute particles to a greater extent than does coarse sand, but on the other hand it clogs more quickly. Crushed quartz and thoroughly clean pit or beach sand, such as is used in mixing mortar, are employed extensively. The size of the grains should be quite uniform and should be such that all could be sifted through holes made in a sheet of paper by a medium-sized awl or knitting needle. A depth of two feet of carefully selected sand free from clay, loam, and vegetable matter, is preferable to a greater depth of sand of indifferent quality. As the thin surface layer becomes clogged with continued use, it may be scratched or furrowed, or a half inch or so may be scraped off with a trowel, until eventually the bed is reduced to 12 or 15 inches in thickness. The sand removed either should be washed and returned, or be replaced with new sand. It is advantageous to place about six inches of well-burned charcoal under the two-foot bed of sand. Triple-burned, triple-ground wood charcoal, the pieces averaging the size of wheat grains, has given excellent results and costs normally about 60 cents a bushel, in sacks, at kilns in eastern states.

Control of insects and diseases affecting garden crops has been made so simple that it is little trouble nowadays to apply the remedies. It is not necessary

to have a lot of expensive apparatus. A cheap hand sprayer or a sprinkling can may be used to apply all of the remedies that are used in liquid form. Poisons, in the dry or powdered form can be applied by dusting them upon the plants by means of a cheesecloth or gunny sack. The entire cost for equipment with which to fight the common garden insects and diseases need not be more than a dollar.

TEST LAMBS RETURN PROFIT

(Continued from Page One)

gain of 15.40 pounds, or an average daily gain of .31 pound per lamb.

The feed required to make 100 pounds gain was 362.73 pounds of linseed oil meal, 369.09 pounds of alfalfa hay, 566.36 pounds of corn silage, at a cost of \$19.61 per hundred pounds gain.

The lambs cost an average of \$10.67 in the feed lot. The cost of the feed consumed per lamb was \$3.02, labor cost 28 cents, interest on investment 11 cents, interest on equipment 12 cents, shipping and market expense 43 cents, or a total cost of \$14.63 per lamb.

The selling price was \$17.75 a hundred, or \$14.31 per lamb. There was a net loss of 32 cents per lamb in this lot.

RESULTS IN LOT SEVEN

The lambs in Lot 7 weighed an average of 65.23 pounds at the beginning of the test. They consumed an average daily ration of 1.24 pounds shelled corn and 2.14 pounds alfalfa hay. At the end of the feeding period they weighed an average of 84.11 pounds at the Kansas City market. They made an average total gain of 18.88 pounds, or an average daily gain of .38 pounds per lamb.

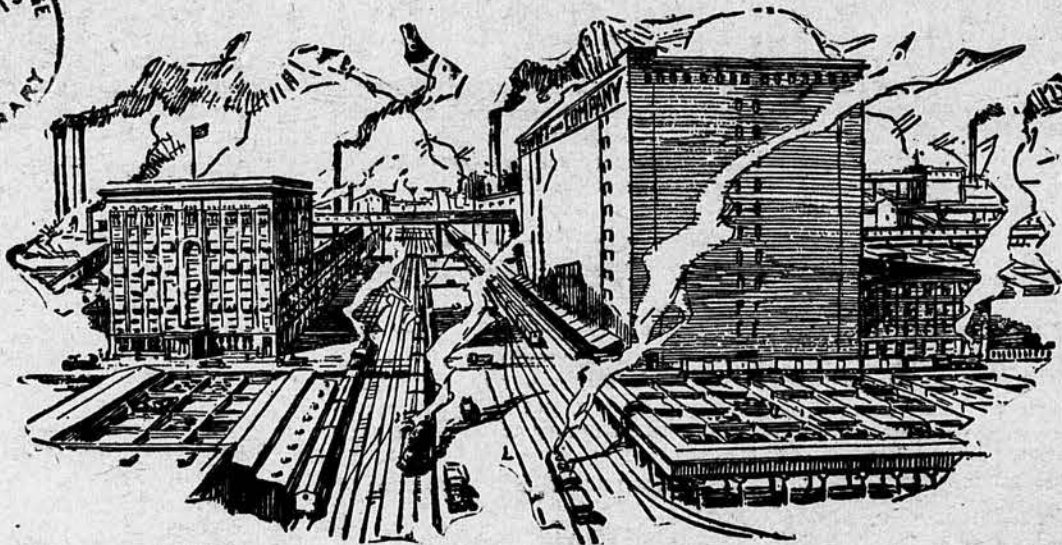
The feed required to make 100 pounds gain was 321.82 pounds of shelled corn,

and 555.40 pounds of alfalfa hay, at a cost of \$17 to the hundred pounds of gain.

The lambs cost an average of \$10.68 in the feed lot, the average cost of feed being \$3.21, labor 28 cents, interest on investment 11 cents, interest on equipment 12 cents, shipping and market expenses 32 cents, or a total cost of \$14.83 per lamb.

The selling price was \$18.85 a hundred, or \$15.85 per lamb. The lambs in this lot returned an average net profit of \$1.02 a head.

In this test feeds were priced as follows: Shelled corn, \$1.50 a bushel; linseed oil meal, \$65 a ton; cottonseed meal, \$65 a ton; corn gluten feed, \$60 a ton; hominy feed, \$60 a ton; alfalfa hay, \$30 a ton; and corn silage, \$8 a ton. The corn silage used was made in August after the corn had been badly injured by dry weather and hot winds.



Suppose you were managing Swift & Company

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Suppose you are the manager. You know that more meat is eaten in cold weather. A cold snap begins suddenly, butcher shops enjoy a thriving trade and call for meat. The rush of orders uses up your stocks. Competition among buyers sends the price up.

The next winter, when you are expecting the usual good demand along comes the influenza epidemic and people stop eating meat, leaving a big lot of perishable food on hand!

What would you have done then, if you had been managing Swift & Company? Of course you would have had to reduce prices to get rid of the meat—and taken a loss.

Demand is the queerest thing in the world.

No one ever has put his finger on it. Weather, fashion, business, all control men's appetites, and they buy what they want to eat.

These touches and flurries in different parts of the country cause the price to bob up and down like a cork and bait pulled by an excited fish.

After operating Swift & Company you would see how the public appetite for meat controls the price of live and dressed beef. You would find that the packer doesn't like these fluctuations any better than you do, and that he is powerless to stop them.

You would also find that he has to use the keenest judgment and the best of management to get his profit of a fraction of a cent per pound.

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THE HOME-MAKER'S FORUM

ETHEL WHIPPLE, Editor

Letters from readers are always welcome. You are urged to send in helpful suggestions, to give your experiences, or to ask questions. Address the Editor of this Department.

Renovating the Summer Hat

THE housewife often places the summer hat away in the fall with good intentions of wearing it again next spring, but she is likely to feel disappointed when she takes it from its winter hiding place. The brilliant coloring of the outdoors in spring makes the feathers, flowers or ribbons look faded and worn by contrast. It is not until the flowers or feathers are retinted and the velvet ribbons steamed that an old hat will look new.

Soiled ostrich feathers, aigrettes and paradise plumes can be cleaned best in a gasoline and flour mixture.

Cleaning Ostrich Feathers.—Take a deep bowl large enough to work the feather easily and use the proportion of one pint of gasoline to two tablespoons of flour. Mix thoroughly and immerse the feather, rubbing it carefully toward the tip in working. Squeeze out the excess gasoline when the feather is clean and shake it in the air until dry. If the feather is very soiled, it is advisable to put it through a plain gasoline bath first, to remove some of the dirt, before putting it into the flour and gasoline mixture. If the gasoline is allowed to settle the top may be poured off and used again.

To renew or change the color of os-

One way to restore the color of velvet and to clean it is to brush it lightly on the right side with a sponge dipped in chloroform. This must be done in front of a window and away from fire, as the fumes of chloroform are likely to produce drowsiness and headache.

Steaming Velvet.—To steam velvet, hold it over the spout of a boiling tea kettle and when dry brush it carefully to raise the nap. Another way to steam velvet is to place a hot iron between two bricks with the flat side of the iron up. Cover the hot surface with a damp cloth and then draw the velvet over it, right side up. The steam rising through the velvet will remove the creases and raise the nap. When the velvet is dry, brush the nap with a fine soft brush. If stiffening is desired, sponge the wrong side with a little weak ammonia water to which gum arabic has been added.—Circular, Wisconsin College of Agriculture.

To Can Fricaseed Chicken

Clean the chicken in the usual manner and cut it in pieces. Place in a kettle with enough water to cover. Tie in a bunch, for each two and a half pounds of chicken, two branches or parsley, one small branch of celery, a sprig

2881 combine to make a smart design. Foulard, which is always pretty, is suitable for any season of the year, and wears well, would combine well with satin, georgette, or organdie, in this costume. Blue tricotine combined with white linen would be very effective. Crepe, georgette, gingham, or voile would also make up nicely. Waist 2890 and Skirt 2444 make another summer frock for which plain and figured voile, georgette and foulard, or organdie and linen, may be combined.

White linen was used for 2866 with stitching for a finish. Cotton gabardine, pique, voile, corduroy, gingham, chambray, percale, or seersucker are all nice for this style, while the other little girls' dresses shown would be pretty in soft voile, batiste, lawn, dotted Swiss, organdie, dimity, silk, or challie. Gingham, chambray, or percale could also be used. The guimpes for 2426 and 2882 might be of lawn, batiste, or dimity. Either narrow lace or embroidery is a pretty finish for 2882.

The bolero and sash make 2488 a very graceful style for a slender, youthful figure. It would be very attractive in organdie, batiste, dotted Swiss, foulard, or linen, with a bolero of contrasting material, of embroidery, or of the same material as the dress. Crepe, gabardine, serge, and other wool fabrics could also be used.

In ordering patterns, address, Fashion Department, KANSAS FARMER, Topeka, Kansas.

Cherry Preserves

3 pounds cherries
3 pounds sugar
1 cup cherry juice

Make a syrup of the sugar and fruit juice, cool, add seeded cherries, and cook rapidly until fruit is clear and syrup is of the proper consistency. If a thermometer is used, finish cherry preserves at 106 to 108 degrees Centigrade or 223 to 226 degrees Fahrenheit. Cool, pack into jars, and process pint jars for one-half hour at simmering—87 degrees Centigrade or 188 degrees Fahrenheit.

The Flag

Here comes the flag—
Hail it!
Who dares to drag
Or trail it?
Give it hurrahs—
Three for the stars,
Three for the bars.
Uncover your head to it!
The soldiers who tread to it
Shout at the sight of it.
The justice and right of it,
The unsullied white of it,
The blue and the red of it,
And tyranny's dread of it!
Here comes The Flag!
Cheer it!
Valley and crag
Shall hear it.
Fathers will bless it,
Children cherish it,
All shall maintain it,
No one shall stain it.
Cheers for the sailors that fought on the
wave for it,
Cheers for the soldiers that always were
brave for it,
Tears for the men that went down to the
grave for it.
Here comes The Flag!
—Arthur Macy, in Youth's Companion.

A True Bird Story

The young bird has to learn how to do things just as small boys and girls do, although not exactly the same way.

One of the first lessons he learns is how to fly. He really knows how to do this, but needs practice until his wings grow strong enough to carry him through the air. Many young birds begin this practice before they leave the nest. I have often seen a nestling beating and beating his wings without stirring an inch from his tiny home.

You have heard perhaps that the father and mother birds push their babies out of the nest. Do not believe any such thing because it is not true. I have seen many young birds leave the nest of their own accord, but never one pushed out. Sometimes the mother may coax her children, but often they fly out while the parents are away finding food.

After the young bird leaves the nest his father and mother follow and feed him, for he does not yet know how to feed himself. This is the next lesson he has to learn. He must also know where to sleep, and how to protect himself from all the other creatures that want to catch him and eat him. Then he must be able to sing, and no doubt there are

THE FLAG SPEAKS

"I am what you make me, nothing more.

"But always I am all that you hope to be, and have the courage to try for.

"I swing before your eyes, a bright gleam of color, a symbol of yourself, the pictured suggestion of that big thing which makes this nation. My stars and stripes are your dream and your labors. They are bright with cheer, brilliant with courage, firm with faith, because you have made them so out of your hearts. For you are the makers of the flag, and it is well that you glory in the making."—FRANKLIN K. LANE, Secretary of the Interior.

trich feathers, flowers and such materials as velvets, crepes, nettings and light-weight silk, tubes of oil paint may be used.

Tinting Feathers.—Mix the paint in a bowl with gasoline. Be careful to dissolve the paint in a small amount of gasoline first and to add enough gasoline to dilute the mixture to the color desired. After the feathers have been dipped into the tinting solution until colored, remove them quickly and shake in the air until dry. As the gasoline evaporates rapidly, it will not remove the curl. If a darker tint is desired at the tip end of the feather, repeat the process with the tip end until it is sufficiently colored. Do all this out of doors, away from any fire. The color of velvets after tinting is better if they are dried by dripping and fanning in the air without squeezing.

Beaver hats, heavy laces and felt hats are best tinted by using dry powder paints in any desired color, such as blue, brown, and tan.

Tinting Beaver.—Mix the paint with cornstarch or talcum powder and rub upon the hat. Let stand a few days. Brush before wearing.

Cleaning Beaver.—In cleaning white beaver hats and white furs, use two tablespoonfuls of wheat flour to every pint of gasoline, as in cleaning feathers. Rub the mixture into the hat or fur and shake it out when dry.

of thyme, one bay leaf, and a small piece of leek. Add one teaspoon salt and one-half teaspoon pepper. Let boil for fifteen minutes. Add twelve small peeled white onions and one good-sized potato, pared and cut into little cubes. If desired, two or three ounces of sliced and diced pork may be added. Cook for one-half hour. Remove chicken and herbs, cut meat from the bones and return it to the kettle. Let it come to a boil, pack into the cans to within one-half inch from the top, distributing meat and soup evenly between the cans. Add a little finely chopped parsley to each can. Put lids on lightly and sterilize for ninety minutes in hot water bath, forty minutes under five to ten pounds steam pressure, or thirty minutes under ten to fifteen pounds pressure. Remove jars and tighten lids.

The Problem of Clothes

This is a season of capes, and they are indeed comfortable and serviceable. The model shown is suitable for ordinary wear in serge, velour, cravenette, cheviot, double-faced suiting, and broadcloth. For evening wear or for a light summer wrap it might be made of satin, silk, crepe de chine, moire, or velvet. It may either be buttoned closely around the throat or the collar may lie open as shown.

Waist Pattern 2879 and Skirt Pattern

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many other lessons for him to learn that we do not know about.

Once I had a good chance to watch two young bluejays learn to get their own living. After they left the nest they lived in a little grove, where I could easily find them when I went to watch. They seemed to be always hungry, and every few minutes one of the parents would hurry up with a grasshopper or some other insect to stuff into the wide-open mouths. They were fed choke-

cherries too. These little wild cherries grew on a big tree in the grove.

One day after giving the twins chokecherries, the parents slipped quietly out of sight, and stayed away a long time. I could see them perching near, but the young birds could not. The father and mother were not hunting food as usual, but seemed to be taking a rest. I wondered at this, for I had never seen them resting since the little ones were hatched.

The twins, who were quite as large as their parents now, did not try to pull any of the fruit from the trees, although it grew all about, and they had often seen it done. They sat idly picking at their toes, stretching their beautiful wings, or hopping from branch to branch.

Soon it was evident that they were hungry, for they began to call. Nothing happened. They called again. Still no food. This must have been a great surprise, for usually their cries brought a parent with food at once. Hungrier and hungrier they grew, and louder and louder they called, but still no parents.

All this time I could see the mother and father birds sitting near, and I also began to wonder why they did not bring something.

At last the mother bird flew to the children, but with nothing in her beak. Squawking madly the two hungry youngsters flung themselves upon her. They almost knocked her off the perch. She just hopped out of the way and did not seem to care that they were hungry. Again the twins flew at her, begging for food, and again she calmly hopped out of the way. Then she hopped up to a bunch of cherries and pulled one. The children crowded close, and what do you think that bird did? She deliberately swallowed that cherry herself!

The twins seemed dumbfounded. For a minute they did not make a sound nor move a muscle. Then screaming louder than ever they began jerking at the chokecherries for themselves. At first they were so clumsy they dropped every one, but soon they managed to swallow a few.

Those two young bluejays had learned the great lesson of their lives.—OLIVER THORNE MILLER, author of "The Children's Book of Birds," and M. M. M., for U. S. Bureau of Education.

Shoe Trees Prevent Wrinkles

The increasing cost of shoes has brought home to all of us the necessity of making them last as long as possible. One of the best ways to keep shoes in shape and prevent wrinkles is to use the stretcher or shoe tree when the shoes are not on the feet. The ordinary, inexpensive stretcher with wooden toe and heel pieces connected by a pliable steel strip is satisfactory. It is particularly effective if placed in the shoe as soon as it is taken from the foot, before the dampness has evaporated and the wrinkles are set.

Frequent brushing will also help keep shoes in good condition. A lamb's wool brush, a dark oiled cloth, or even an old stocking sprinkled with any oil and then rolled to allow the oil to penetrate, makes an excellent shoe cloth which not only cleans and polishes but preserves the leather.

Needed repairs should not be neglected. The wearing of shoes after the heel is run over ruins the shape of the entire shoe so that no amount of repairing will ever restore it.

Renovating the Refrigerator

A good many people who thoroughly believe in the sanitary qualities of paint never think of giving the interior of their refrigerators a coat, notwithstanding paint dealers sell an enamel especially intended for refrigerators. One of the features of this special enamel is that it will not contaminate the food. This is by no means true of all enamels. It is difficult to think of anything which it is more important to keep thoroughly clean and sanitary than a refrigerator. Ptomaine poisoning and other serious diseases may result from neglect to do this.

Of course, the advice to paint applies

particularly to refrigerators having galvanized iron linings; those having porcelain or enameled linings require only frequent washing with soap and water to keep them clean and sanitary.

Kansas Fairs in 1919

The following is a list of the fairs to be held in Kansas in 1919, their dates (where such have been decided on), locations and secretaries, as reported to the State Board of Agriculture and compiled by Secretary J. C. Mohler:

Kansas State Fair—A. L. Sponsler, secretary, Hutchinson; September 13-20.
Kansas Free Fair Association—Phil Eastman, secretary, Topeka; September 2-5.
International Wheat Show—E. F. McIntyre, general manager, Wichita; September 29-October 11.
Allen County Agricultural Society—Dr. F. S. Beattie, secretary, Iola; September 2-5.
Allen County-Moran Agricultural Fair Association—E. N. McCormack, secretary, Moran; September 3-5.
Barton County Fair Association—Porter Young, secretary, Great Bend; September 30-October 3.
Bourbon County Fair Association—W. A. Stroud, secretary, Uniontown; September 9-12.
Brown County-Hiawatha Fair Association—J. D. Weltmer, secretary, Hiawatha; August 26-29.
Clay County Fair Association—O. B. Burris, secretary, Clay Center; September 1-5.
Cloud County Fair Association—W. H. Danenbarger, secretary, Concordia; August 26-29.
Coffey County Agricultural Fair Association—C. T. Sherwood, secretary, Burlington; October 5-10.
Comanche County Agricultural Fair Association—A. L. Beeley, secretary, Coldwater; September 10-13.
Cowley County-Eastern Cowley County Fair Association—W. A. Bowden, secretary, Burden; September 3-5.
Dickinson County Fair Association—T. R. Conklin, president, Abilene; September 16-19.
Douglas County Fair and Agricultural Society—W. E. Spaulding, secretary, Lawrence.
Ellsworth County Agricultural and Fair Association—W. Clyde Wolfe, secretary, Ellsworth; September 2-5.
Ellsworth County—Wilson Co-operative Fair Association—C. A. Kyner, secretary, Wilson; September 23-26.
Franklin County Agricultural Society—L. C. Jones, secretary, Ottawa; September 23-26.
Franklin County—Lane Agricultural Fair Association—Floyd B. Martin, secretary, Lane; September 5-6.
Gray County Fair Association—C. C. Isely,

secretary, Cimarron; September 30-October 3.
Greenwood County Fair Association—William Bays, secretary, Eureka; August 26-29.
Harper County—The Anthony Fair Association—L. G. Jennings, secretary, Anthony; August 12-15.
Haskell County Fair Association—Frank McCoy, secretary, Sublette; about September 15.
Jefferson County—Valley Falls Fair and Stock Show—V. P. Murray, secretary, Valley Falls; September 2-5.
Labette County Fair Association—Clarence Montgomery, secretary, Oswego; September 24-27.
Lincoln County—Sylvan Grove Fair and Agricultural Association—Glenn C. Calene, secretary, Sylvan Grove; September 2-5.
Lincoln County Agricultural and Fair Association—Ed M. Pepper, secretary, Lincoln; September 9-12.
Linn County Fair Association—C. A. McMullen, secretary, Mound City.
Marshall County Stock Show and Fair Association—J. N. Wanamaker, secretary, Blue Rapids; October 7-10.
Meade County Fair Association—Frank Fuhr, secretary, Meade; September 2-5.
Mitchell County Fair Association—W. S. Gabel, secretary, Beloit; September 30-October 4.
Montgomery County Fair Association—Elliott Irvin, president, Coffeyville; September 16-20.
Morris County Fair Association—H. A. Clyborne, secretary, Council Grove; October 7-10.
Nemaha Fair Association—J. P. Kieizer, secretary, Seneca; September 2-5.
Neosho County Agricultural Society—Geo. K. Bideau, secretary, Chanute; September 29-October 4.
Norton County Agricultural Association—A. J. Johnson, secretary, Norton; August 26-29.
Pawnee County Agricultural Association—H. M. Lawton, secretary, Larned; September 24-26.
Phillips County—Four-County Fair Association—Abram Troup, secretary, Logan; September 9-12.
Pottawatomie County—Onaga Stock Show and Carnival—C. Haughwout, secretary, Onaga; September 24-26.
Pratt County Fair Association—W. O. Humphrey, secretary, Pratt.
Republic County Agricultural Association—Dr. W. R. Barnard, secretary, Belleville; August 19-22.
Rooks County Fair Association—F. M. Smith, secretary, Stockton; September 2-5.
Russell County Fair Association—H. A. Dawson, secretary, Russell; September 30-October 3.
Smith County Fair Association—J. M. Davis, secretary, Smith Center; September 2-5.
Trego County Fair Association—S. J. Straw, secretary, Wakeeney; September 9-12.
Wilson County Fair Association—Ed Chapman, secretary, Fredonia; August 18-23.

Many a big head is full of emptiness.

FASHION DEPARTMENT

All patterns, 10 cents.



No. 2420—Girls' Dress: Cut in four sizes, 6, 8, 10 and 12 years. Size 8 requires two yards of 44-inch material for the dress, and 1½ yard for the gump. No. 2882—Girls' Dress: Cut in five sizes, 4, 6, 8, 10 and 12 years. Size 8 requires 1½ yards of 27-inch material for the gump, and 2½ yards for the dress. No. 2879—Ladies' Costume: Waist 2879 cut in seven sizes—34, 36, 38, 40, 42, 44 and 46 inches. Skirt 2881 cut in seven sizes—22, 24, 26, 28, 30, 32 and 34 inches waist measure. A medium size will require five yards of 44-inch material. Width of skirt at lower edge is about 1½ yards. Two separate patterns, 10 cents for each pattern. No. 2902—Ladies' Cape: Cut in four sizes—small, 32-34; medium, 36-38; large, 40-42; and extra large, 44-46 inches bust measure. Medium size will require 3½ yards of 54-inch material, without nap.



No. 2488—Dress for Misses and Small Women: Cut in three sizes—16, 18 and 20 years. Size 18 requires five yards of 36-inch material. The skirt measures about 1½ yards at the foot. No. 2890—Ladies' Costume: Waist 2890 cut in seven sizes—34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 2444 cut in seven sizes—22, 24, 26, 28, 30, 32 and 34 inches waist measure. For a medium size this dress will require eight yards of double width material. Two separate patterns, 10 cents for each. No. 2875—Girls' Dress: Cut in four sizes—2, 4, 6 and 8 years. Size 6 requires 2½ yards of 36-inch material. No. 2860—Girls' Dress: Cut in four sizes—6, 8, 10 and 12 years. Size 10 requires 3½ yards of 36-inch material.

Classified Advertising

Advertising "bargain counter." Thousands of people have surplus items of stock for sale—limited in amount or numbers hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These intending buyers read the classified "ads"—looking for bargains. Your advertisement here reaches over 60,000 farmers for 5 cents a word per week. No "ad" taken for less than 60 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms, always cash with order.

SITUATIONS WANTED ads, up to 25 words, including address, will be inserted free of charge for two weeks, for bona fide seekers of employment on farms.

AGENTS WANTED

AGENTS—MAKE A DOLLAR AN HOUR. Sell Mandets, a patent patch for instantly mending leaks in all utensils. Sample package free. Collette Manufacturing Co., Dept. 102, Amsterdam, N. Y.

MISCELLANEOUS.

RICHMOND AND MONTMERCY cherries, \$2 24-quart crate. Address Vanstrom & Son, Edgar Greenhouse, Edgar, Neb.

ONE MAN CHANGES HEAVIEST HAY racks, header boxes, etc., from ground to wagon and off with my sling. Price, \$9. Satisfaction or money returned. F. Lovering, Fremont, Nebraska.

THRASHING OUTFIT FOR SALE cheap. Case 50-horse engine, 30-inch Buffalo-Pitts separator, tank, etc.; six-bottom plow; all first class condition. Write or come and see. Prices right. Carl Miller, Bellevue, Kansas.

CORN HARVESTER—ONE-MAN, ONE- horse, one-row, self-gathering. Equal to a corn binder. Sold to farmers for twenty-three years. Only \$25, with fodder binder. Free catalog showing pictures of harvester. Process Corn Harvester Co., Salina, Kan.

FOR SALE—FIFTY PER CENT OF stock in a money making pasteurizing plant, located in the most progressive city of 20,000 in Kansas. Only one plant. Purchaser of stock will have a working interest as retail delivery in city and can pay for stock on monthly basis. Write or come soon, for same will be sold. Address "S," care Kansas Farmer.

ENGINES.

FOR SALE—25-HORSE RUSSELL EN- gine, 32-54 Avery thresher rig, Genesee, Kan. No trade. Tom Householder, Clay Center, Kan.

CATTLE.

HIGHLY BRED HOLSTEIN CALVES, either sex, 15-18th pure, from heavy milkers, five to seven weeks old, beautifully marked. \$25, crated and delivered to any station, express charges paid here. Send orders or write. Lake View Holstein Place, Whitewater, Wisconsin.

REAL ESTATE.

FOR SALE—IMPROVED EIGHTY ACRES of land near Purcell, Doniphan County, Kansas. Address F. L. Schneider, Box 464, Albuquerque, New Mexico.

FARMS WANTED.

WANTED—TO HEAR FROM OWNER of good farm for sale. State cash price, full particulars. D. F. Bush, Minneapolis, Minn.

THE STRAY LIST.

TAKEN UP ON THE 21ST DAY OF MAY, 1919, by B. E. Swarts of White Church, Wyandotte County, Kansas, one bay mare, 16 hands high, no marks or brands. William Beggs, County Clerk, Wyandotte County.

TAKEN UP—BY J. A. ROBERTSON, OF Rago, Kingman County, Kansas, on the 24th day of April, 1919, one heifer, color red, weight 700 lbs., letter "V" on right hip, both ears nipped. Appraised at \$55. Geo. Howe, County Clerk.

TAKEN UP ON THE 14TH DAY OF MAY, 1919, by Ray Robertson of Route 1, Crestline, Shawnee Township, Cherokee County, Kansas, one red sorrel mare 16 hands high, weight 1,200 pounds, small curb inside left front ankle. Appraised at \$135. Anna Masterson, County Clerk.

TAKEN UP—BY WM. LUCAS OF HOL- comb, Finney County, Kansas, on the first day of May, 1918, one gray horse, weight 1,000 pounds; also one gray mare, weight 1,000 pounds. Each appraised at \$75. F. H. Lavertaux, County Clerk.

DOGS.

SHEPHERD PUPPIES (FEMALES), \$5.00 each. From natural heelers. H. W. Chestnut, Kincaid, Kansas.

COLLIE PUPS FOR SALE, TWO MONTHS old, parents good stock dogs. Prices: Male, \$10; female, \$5. Earl Phillips, Route 9, Emporia, Lyon County, Kansas.

AIREDALES, COLLIES, AND OLD ENG- lish Shepherd dogs. Trained male dogs, brood matrons, pups all ages. Flemish Giant, New Zealand, and Rufus Red Belgian rabbits. Send 6c for large instructive list of what you want. W. R. Watson, Box 128, Oakland, Iowa.

HONEY.

REGARDING THE LAST WORD IN FINE honey, write to Drexel, the Bee Man, Crawford, Colorado.

HONEY—CHOICE ALFALFA, 60 LBS., \$12.50; 120 lbs., \$24. Amber Dark Honey, 60 lbs., \$11; 120 lbs., \$20. Bert W. Hopper, Rocky Ford, Colo.

SEEDS AND PLANTS.

TWO MILLION CABBAGE PLANTS, Surehead, Ballhead, Flat Dutch, Copenhagen. \$2.50 thousand, 35c hundred. Address Vanstrom & Son, Edgar Greenhouse, Edgar, Nebraska.

Real Estate For Sale

HOME FARM, 320 ACRES

Out 6 1/2 miles. Good buildings. Fine water, 160 wheat, half with sale; some alfalfa. Only 08,500, with \$2,500 cash, balance long time. One good 160, out 9 miles, small house, 100 smooth, 60 wheat, 40 spring crops, one-fourth with sale; shallow to water; only \$2,500, with \$500 cash, balance terms. Have other farms and ranches on small payments now, another payment after harvest.

E. C. BUXTON, Ulica, Ness County, Kansas

SOUTHEASTERN KANSAS—Farms, all sizes; lowest prices. Terms, \$1,000 and up. Send for booklet. **THE ALLEN COUNTY INVESTMENT CO., Iola, Kansas.**

FOR SALE

Improved 40-Acre Farm in Osage Co., Kan. Good three-room house, plenty of good water, small orchard, outbuildings. Price, \$3,000. Write **ARTHUR W. BOYER, 3401** High Street, Little Rock, Arkansas.

FARM FOR RENT

Half section wheat land 2 miles east of Preston, Pratt County, Kansas. Seven room house, big barn, good water, wind mill, cribs, granaries, etc. Fenced and cross-fenced. **W. H. Maxwell, 420 Jackson St., Topeka, Kas.**

— OTTAWA —
Business College
OTTAWA, KANS. CATALOG FREE

PURE BRED POULTRY

LANGSHANS.

SCORED BIG BLACK LANGSHANS, laying strain, guaranteed. Cockerels, pullets, eggs. **H. Osterfoss, Hedrick, Iowa.**

RHODE ISLAND REDS.

SCORED DARK RED ROSE COMB cockerels, \$5 and \$10 each. Eggs, \$5 for fifteen; \$15 for fifty. Highland Farm, Hedrick, Iowa.

LEGHORNS.

S. C. BROWN LEGHORNS, BRED 23 years; 232 to 266 egg lines. Eggs, fifteen, \$2; thirty, \$3; fifty, \$4; hundred, \$7. Gorsuch, Stilwell, Kansas.

TURKEYS.

NARRAGANSETT TURKEYS, STOCK and eggs for sale. Mrs. John Mitchell, La-fountain, Kansas.

BABY CHICKS.

BABY CHICKS—GUARANTEED BEST grade. White Leghorns, Brown Leghorns, \$18 per hundred; Barred Rocks, Buff Orpingtons, \$17; Reds, \$18, postpaid, live arrival guaranteed. Same rate on twenty-five or fifty. Booth Hatchery, Clinton, Missouri.

POULTRY WANTED.

FOR BETTER PRICES, EXPRESS YOUR poultry and eggs to "The Copes," Topeka, Kansas. Established 1883.

Sheep Growers Organize

There seems to be an increasing interest among sheep growers in the matter of co-operating in order to get better results in handling their flocks, and particularly the wool. A good many counties are now organizing local associations. We notice in a recent news letter from the county agent of Sumner County that an expert sheep shearers was employed to shear the sheep for the members of the association in that county, and a definite routing was made out for him to follow. In small flocks of less than fifty the sheep were sheared for 20 cents apiece and in the larger flocks for 15 cents apiece. Members of this association also ordered wool sacks and twine through the secretary of their organization. The men are finding so many things of interest that they have been holding regular monthly meetings, the May meeting being for the special purpose of considering the matter of marketing their wool. The plan which has worked well in many counties is to have the wool all assembled at a central point and after being graded have buyers come and make bids on it according to grade.

HELPFUL POULTRY HINTS

Practical Ideas on How to Fill the Egg Basket and Increase Profits

Farm Flock Pays \$3.88 Per Hen

A FARM woman in Indiana, Mrs. Amos Sanders, has kept records on her poultry work which show that she received \$721.63 for 394 hours devoted to her 186 pure-bred Rhode Island Reds last year. This is an average of \$1.83 an hour, or \$3.88 a bird. The flock laid 23,950 eggs for the year, or an average of 129 eggs to the hen, a much higher record than the state average of 85 eggs to the hen.

Mrs. Sanders is co-operating with the county agent, and the poultry division of Purdue University, in a farm poultry demonstration. The figures given here are the results of her first year's work.

The price received per dozen eggs averaged about 42 cents for the year. A small premium was obtained for some eggs sold for hatching. Mrs. Sanders has built up her flock by careful collection and this with her financial success has attracted many near-by farmers as customers for hatching eggs.

The labor income of \$3.88 per hen is the highest yet made by any of the demonstration farms in Indiana. This means that after charging all feed used from the farm, feed purchased, 6 per cent interest on investment, 10 per cent depreciation on all equipment, and other miscellaneous expenses, there is a balance of \$3.88 left for the time devoted to each hen.

Heavy egg production has been the main reason for this success. This production is not the result of any one "secret," but of the combination of good stock, early hatching, proper feeding, and good housing conditions. Self feeding devices, dropping boards, and other equipment, contributed a large part toward reducing the time required to look after the flock.

What Mrs. Sanders has done with her farm poultry flock simply illustrates the possibilities which are within the reach of most farms. It is simply a matter of applying good methods in a common sense way.

Raising Guineas

Guinea fowls are fine substitutes for the game birds now so scarce. The raising of guineas may become a profitable feature of poultry production as a means of meeting the demand for game birds.

The present generation knows nothing of the good tasting game birds of the preceding generation. Prairie chicken has almost disappeared, partridge rarely comes on the table, quail is following the fate of the other birds. Are we as a nation willing to give up the good tasting viands?

The guinea fowl offers everybody a delicious game bird for the table; meat as tender, delicious and good tasting as any partridge that ever came on the table.

The production of this table bird offers poultry fanciers a chance to make money.

Pliny, of natural history fame, slurs the meat of the guinea. Maybe he tried an old bird! The old specimens of the game birds are invariably poor eating. The Romans and Greeks of epicurean taste used the bird and considered it a great delicacy.

The flesh of the young bird weighing two to three pounds per pair is delicious. The meat is dark colored and possesses a gamy flavor. The great materialist, Pallas, said the guinea as a table delicacy equaled the pheasant or peacock.

When two and a half months old the guinea weighs one to one and one-half pounds, and the birds reach the late August market at this weight. The fully matured birds (cock and hen) weigh three to four pounds.

Birds are marketed with the feathers on.

The guineas go to market late in the summer and throughout the fall. The New York market in 1916 gave the following quotations:

September 1, spring birds, two pounds per pair, \$1; spring birds 2 1/2 to 3 pounds per pair, \$1.25 to \$1.37. October 1, spring birds, 2 pounds per pair, \$1; 2 1/2 to 4 pounds per pair, \$1.25 to \$1.50. November 1, spring birds, 2 pounds per pair, 75 cents to \$1; 3 to 4 pounds per pair, \$1.50 to \$1.75.

As a substitute for the good tasting partridge, quail, grouse, the guinea fowl has a well established place in the cuisine.

Foot and Head Disease

A disease known as the foot and head disease of chickens is described by L. R. Newson of the Colorado Agricultural College. This seems to be peculiar to the dry lands of Eastern Colorado. We have not heard of the trouble in Kansas, but Western Kansas conditions are so similar to those of the plains of Eastern Colorado that it perhaps is to be found in our state as well as in Colorado.

It is a disease largely of little chickens which manifests itself by the formation of blisters between the toes, around the bill and on the eyelids. This is later followed by a scabby condition. The eyelids are glued shut, toes turn up and in many instances the chickens die largely from inability to find food.

The disease appears to be associated in some way with sod, since it has not yet been found on an irrigated farm. However, it is known to exist on dry knolls in irrigated districts. Just what this association is between sod and the disease is still open to question.

In the older chickens that are fairly strong, the application of carbollized vaseline to the scabby toes and heads will be found reasonably effective in softening these parts and in preventing serious distortions. In the younger chickens there appears to be no treatment that is really valuable.

Now is the time to begin culling flocks. Send the roosters to the chopping block or the market. Eliminate all weaklings and deformed chicks. Get rid of the chick that stands along the side of the coop with its wings down, its feathers ruffled, eye shut, and head down. Do not keep a single chick that you are not sure it will pay to raise.

Shade, clean fresh water, clean coops, and colony houses, and good ventilation and plenty of room during the night are of the greatest importance in growing healthy, strong, vigorous birds, whether they are for meat, eggs, or breeding.

Growing chicks should have plenty of good nourishing food. Bone meal should be fed liberally to those intended for layers or breeders.

Do not forget to continue the fight on mites and lice. They must be fought all the time in all sections and in all seasons.

Poultry raising is what one makes it. Lots of people make it drudgery by the attitude of mind rather than the amount of work they do.

It costs but the merest trifle more to feed a hen that lays 150 eggs a year than one that lays sixty.

A hen is not lazy by nature, and will surprise you in what she can do if given the right chance.

Farming Must Be Safeguarded

(Continued from Page Eight)

preme, so is there no effective way of correcting and controlling it. If the public becomes the prosecutor in any case, then the government is defendant, jury, and judge. All dissatisfaction is voiced against the government and there is no adequate means of protection. The ownership of the public utilities would violate the underlying function of government which is not only that it shall protect them. By directing all the complaints at government, the public ownership of such utilities tends to set the people against their government.

Politics May Spoil Best Plans

"Checks may be devised as against the autocracy of commissions and boards with large legislative powers; but they are only checks nevertheless and they are not remedies. An oligarchy of such commissions or boards may be the worst form of autocracy. These agencies are not reached directly by vote of the people. In fact, the vote of the people is for political ends and not for the management of the people's business. Management cannot lie in the public vote. Governments should exercise the large function of oversight and of protection of the people's interests independently of political votes.

"The ownership of the utilities by government does not remove such utilities from politics. Experience has amply illustrated this. The best and most perfect schemes fall before politics.

"It is an underlying principle in democracy that self help lies before state help. The appeal to the state is rather for permissive legislation, allowing things to be properly undertaken and to provide ways of correcting abuses and of giving every man a chance. The operation of these forces is usually better left with those who are concerned in them and who have the quick and personal touch. On its face, the state help theory appears to be dynamic, but in the end it is more likely to be disruptive."

Farming Must Be Safeguarded

"The influence of organization," said the speaker, "is well seen in the covenants resulting from the Paris confer-

ences. The interests of labor and trade seem to be well safeguarded, but so far as these covenants are yet reported to us, agriculture is not in them, and yet the production of supplies from the earth and the maintenance of the fertility of the planet are the fundamental problems before mankind. 'The farmer must be safeguarded in his living wage'; the surface of the earth must be protected; the vast rural peoples must partake and share in the democratic movements of the world; we can conceive of no great armed outbreak if the farming people of the world understood each other and had large international plans of co-operation. We need instrumentalities for these great ends as much as for labor and trade. The betterment of one should be consciously the betterment of the others.

"Every shortening of the hours of labor draws the labor away from the farm and adds to the difficulties of our fundamental occupation. We are vastly in need of a co-ordinated system of social and economic development."

Doctor Bailey expressed objection to socialism as commonly preached on the ground that a promise of laziness seems to run through it. "Its idyllic theories, its hazy phraseology, and its incohesive irresponsible fabric seem to offer only intangible results," he said. "Political socialism is largely yet a vocabulary."

Do Earthworms Injure Lawns?

The small boy who is preparing to go fishing has a friendly feeling for earthworms—known to juvenile anglers as "fishin' worms"—but his father, with a particular pride in a well kept lawn, may regard them as enemies. The father's feeling toward the lowly worm may or may not be well founded. The common impression is that earthworms are injurious to lawns, but the United States Department of Agriculture, through its Bureau of Entomology, says that the damage is probably very slight. In fact, it is believed that instead of being injurious these worms are really beneficial in increasing the fertility of the soil by bringing to the surface soil from a lower depth, and in this way keeping up a very slight but continual top dressing.

Rainfall of May, 1919, in Kansas

Reports Furnished by S. D. Flora, Meteorologist, Weather Bureau, Topeka

1.43	0.72	1.74	3.74	3.33	3.80	3.90	2.11	2.67	3.86	2.93	3.60	4.61
1.47	2.00											
N. report	2.05	4.06	1.65	3.01	3.63	2.98	3.68	2.66	2.88	3.57	5.89	2.61
0.39	N. report	1.47	2.65	6.85	2.92	3.47	2.20	2.46	3.46	2.60	2.68	2.29
1.69	1.35	0.52	2.90	3.04	2.63	3.44	3.38	4.90	2.61	3.09	3.15	4.03
1.31	1.64	0.98	1.34	0.97		2.40	2.84	3.89	3.68	4.04	5.69	9.26
2.76	1.16			2.85	2.40	3.08	5.14	4.48	4.82	4.15	4.98	
1.60	1.8	1.32	2.04	1.56	2.71	1.93	4.72	4.86	4.69	5.58	4.29	
1.68	N. report	1.57	1.82	2.35	2.71	3.04	3.47	3.65	4.64	3.74	4.62	3.84
1.34	N. report	1.63	5.60	2.38	2.83	3.04	3.47	3.65	4.64	3.74	4.62	3.84

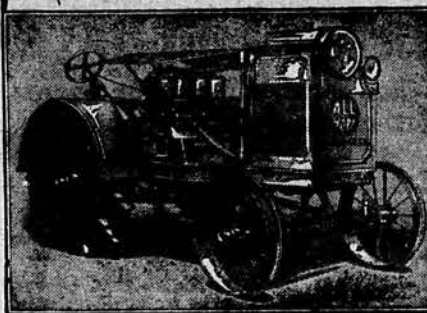
THERE was an unusual amount of cool, partly cloudy, rainy weather over Kansas during May this year, but, contrary to the impression of most persons, the actual amount of rainfall was distinctly less than normal. It fell frequently during the month and was well distributed over the state and, as the ground was soaked when the month began, it continued too wet for cultivation or seeding most of the time.

The greatest monthly totals reported—9.20 inches at Pleasanton and 6.85 inches at Hays—were due to heavy local downpours on single days. There was no snow and no frosts occurred, except a few light ones that did no damage whatever.

The fore part of the month was fine for wheat, which made a great growth, but the prolonged rains the latter part occasioned a great deal of concern on account of the possibility of damage by rust, which was beginning to be general in many places, and the danger of the wheat going down, as it was very rank. By the close of the month the crop had headed generally over the eastern two-thirds of the state, with harvest only two weeks away in the southeast quarter, and was beginning to head freely in the western third.

Barley and oats were looking fine and the latter beginning to head in the southeast. Most of the first crop of alfalfa was cut, but heavy rains ruined a great deal of it. Corn was backward all month. It came up to fairly good stands, but considerable replanting was necessary on account of cut worms and drowning out, and there was insufficient opportunity for cultivation. Potatoes made a fine growth and were being dug for immediate use.

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We can furnish these aprons in either light blue checked or pink checked. In ordering, state color wanted.

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Kansas Farmer

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One carload fresh Holstein Cows—One carload heavy Springers
These cattle are extra good. A few choice registered bulls.

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SAND SPRINGS FARM HOLSTEINS

On yearly test fourteen cows in our barn average 13,329.6 pounds milk, 522.6 pounds butter, in 348 days. Average age 4 years, 10 months, 23 days. Possibly we could interest you in a young bull. Have one whose dam made nearly 20,000 pounds in a year.

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Registered Jacks and Jennets. Good individuals, good colors. Have some choice young jacks that are priced to sell quick.

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F. S. JACKSON, Topeka, Kan.
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Mahlon Greenmiller, Pomona, Kansas.
Horn Dorset Sheep
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CLAIM SALE DATES.

Hereford Cattle.
July 28 and 29—J. O. Southard, Comiskey, Kansas.

Jersey Cattle.
June 24—Dr. J. H. Lomax, Leona, Kan.
June 23—Mrs. William Knabb, Leavenworth, Kan.

Spotted Poland Chinas.
Oct. 11—R. W. Sonnenmoser, Weston, Mo.
Feb. 14—R. W. Sonnenmoser, Weston, Mo.

Poland Chinas.
Aug. 6—A. J. Erhart & Son, Ness City, Kan.

(Sale at Hutchinson.)

Aug. 21—Earl Bower, McLouth, Kan.

Oct. 3—Ezra T. Warren, Clearwater, Kan.

Oct. 4—Geo. Morton, Oxford, Kan.

Oct. 7—Jones Bros., Hiawatha, Kan.

Oct. 8—Dr. J. H. Lomax, Leona, Kan.

Oct. 9—Hergan Gronniger & Son, Bendena, Kan.

Oct. 10—Plus Haug, Seneca, Kan.

Oct. 11—Ketter Bros., Seneca, Kan.

Oct. 13—H. L. Glover, Grandview, Mo.

Oct. 14—H. E. Myers, Gardner, Kan.

Oct. 15—H. B. Walter & Son, Effingham, Kan.

Oct. 16—A. J. Erhart & Son, Ness City, Kan.

Oct. 17—Adams & Mason, Gypsum, Kan.

Oct. 20—P. M. Anderson, Holt, Mo.

Oct. 22—Fred G. Laptad, Lawrence, Kan.

Oct. 23—McClelland & Sons, Blair, Kan.

Oct. 24—Dubauch Bros., Wathena, Kan.

Durocs.

Aug. 13—F. J. Moser, Sabetha, Kan.

Aug. 20—W. T. McBride, Parker, Kan.

Oct. 22—Fred G. Laptad, Lawrence, Kan.

Mrs. Idell Knabb, owner of the Knabb Jersey herd at Leavenworth, Kansas, has announced June 23 for her first biennial reduction sale. Fifty head of Jersey cows and heifers will be offered. All the cattle are registered and are a useful lot of working dairy cows. They are from the best strains of profitable Jersey families. They are not fat and have not been fitted for a sale, but their condition shows they are producers. There will be included in the offering one herd bull and twenty-five of his heifers ranging in age from six months to long yearlings, and they show exceptionally good quality. The sale will be held on the farm three miles south of Leavenworth

HEREFORD CATTLE.

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PUBLIC SALE JULY 28 AND 29, 1919
200 Head—The breed's best cows and heifers. Send for my fourteen reasons why MONARCH HEREFORDS are best. My catalog free for asking.

J. O. SOUTHARD
Box K Comiskey, Kan.

on the new Lawrence road, and three miles west of Lansing. Most of the offering is of St. Lambert and Golden Fern Lad breeding.

W. T. McBride, the well known breeder of Duroc Jersey hogs and Red Polled cattle at Parker, Kansas, has announced August 20 for the annual summer sale of Duroc bred gilts—thirty fall yearling gilts by a son of Pathfinder and five sired by a son of King the Col. and fifteen spring boars sired by Echo Sensation, he by Great Sensation. Mr. Parker owns one of the well bred herds in Kansas and takes care of his hogs in a way that insures their usefulness when they go into other herds. He never makes record sales as regards sensational prices, yet the averages are such that he realizes a fair profit as producer.

E. S. Engle & Son, of Abilene, Kansas, owners of the famous Sand Spring Farm herd of Holsteins, report their herd making a fine record. This herd is noted for heavy production and many good producing heifers have been started with foundation stock from Sand Springs Farm herd. Among recent sales of breeding stock they report the sale of Sand Spring Sylvia, Prince Johann, a very fine young bull calf, to the St. Joseph Orphanage, Abilene, Kansas. The dam of this youngster at 2 years and 21 days of age completed a yearly test with a record of 11,037.3 pounds milk, 461 pounds butter, average test for 365 days 3.34 per cent fat. This bull will head the fine high grade herd at the orphanage. Engle & Son will place every cow in their herd on yearly test this fall.

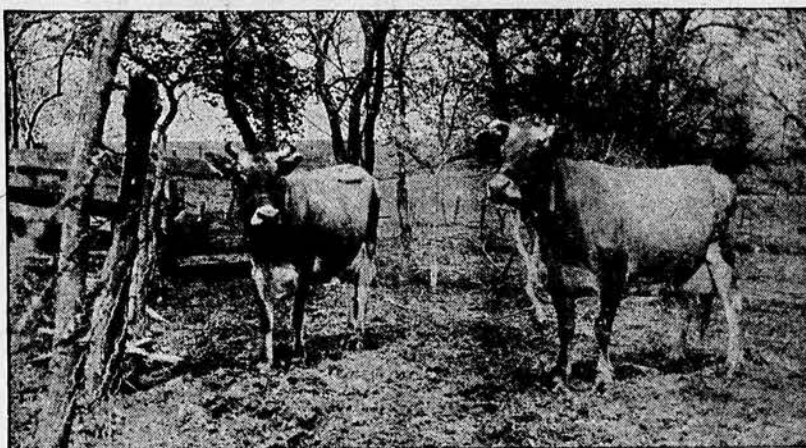
T. T. Langford & Sons, of Jamesport, Mo., owners of one of Missouri's good herds of Spotted Polands, report their herd doing well. This year they saved a fine Colosseum spring pigs by such boars as Spotted Up to sus, Woodrow Wilson, and Spotted Up to Date. The spring pigs are growing out fine and there is a number of outstanding herd boar prospects among the lot.

Ray Felton, of Dwight, Kansas, owner of Ripple Brook Stock Farm, reports his herd of pure-bred Ayrshire cattle doing fine. Mr. Felton is building up one of the good herds of Ayrshires in Kansas, and a feature of the herd at this time is the fine lot of young stock. He reports that the Morris County Cow Testing Association will be going soon and the future for the dairy interests in that county is promising.

SHE'S THE
MONEY COW**BUY JERSEYS**SHE'S THE
MONEY COW**FIFTY HEAD -- PURE BRED JERSEYS -- FIFTY HEAD**

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Tuesday, June 24

At the farm, on Grand Island
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seph, Mo., seven miles from Den-
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J. H. LOMAX, Leona, Kansas

FIRST BIENNIAL JERSEY SALE AT THE KNABB FARM

Leavenworth, Kansas, June 23

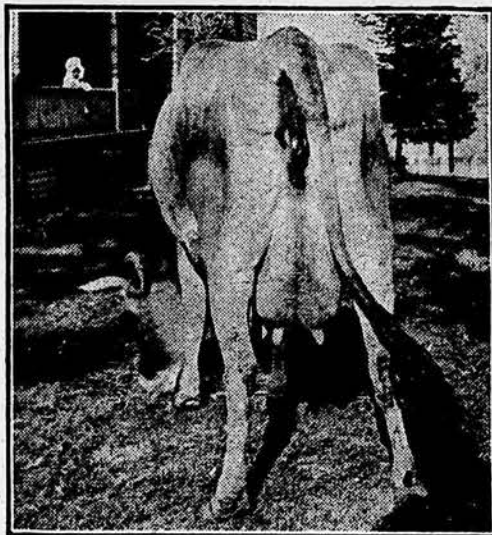
**Buy Jerseys---She
is the Money Cow**

FIFTY HEAD OF JERSEY CATTLE

Twenty cows in milk, 25 heifers six months
old to long yearlings, four young males,
one herd bull three years old.

Stockwell's Orderly Lad 2d and the sire of
several good calves in the sale. Popular
sires and blood lines.

I have faith in the Jersey cow. They have
made me money. I have more than I can
care for and am making my first biennial
sale. These cattle are not fat, but have good
breeding and will pay at the pail. If you
want a real profitable cow, come to my sale
and buy a bargain. The young heifers are
extra good.



Silverine's Sylvia 194587, Six Years Old.—One of the
Foundation Cows of the Herd

**Buy Jerseys---She
is the Money Cow**

Farm located on new Lawrence road,
three miles south of Leavenworth, three
miles west of Lansing.

Parties from a distance will come to the
National Hotel at Leavenworth and find
free conveyance to farm morning of sale.

For catalog write

B. C. SETTLES, Sale Mgr., Palmyra, Mo.

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Strouse.

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The World's Greatest Pork Hog

Now booking orders for spring pigs. Shipment when weaned.
Pairs or trios, no kin.

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**CLINTON HERD
BIG TYPE POLAND CHINAS**

Is ready to ship you a spring boar that will
make you a real herd boar, sired by Giant
Buster's Equal. Will sell a few trios not
related. We have satisfied customers in 25
different states and can satisfy you. Every-
thing immune and we record them.

P. M. Anderson, Holt, Missouri

ERHART'S POLAND CHINAS

Have a few bred sows and bred gilts priced
reasonable. All immune. Several fall boars
ready for service. Write your wants.

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**CHOICE LOT OF POLAND CHINA BRED
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A Few Fall Pigs.
CHAS. E. GREENE
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LANGFORD'S SPOTTED POLANDS
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Choice fall boars. Registered ram lambs
by Broughton 2434 and Senator Elby VI.
R. W. SONNENMOSER, WESTON, MO.

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Big-Type Poland Weanling Boar Pigs
Bargain prices. Satisfaction guaranteed.
Isaacs Stock Farm, Peabody, Kansas.

MYERS' POLAND CHINAS

Large spring pigs in pairs or trios, priced
to sell. Write your wants. Annual fall
sale October 14.

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SPOTTED POLAND CHINAS.

Herd Boar Prospects by Spotted Colossus.
Spotted to Date, and Woodrow Wilson; \$50
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Gilts, bred or open. Choice spring boars. Dou-
ble treated. **Geo. W. Ela, Valley Falls, Kansas**

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Dr. J. H. Lomax, the well known breeder
of high class Jersey cattle at Leona, Kansas,
has catalogued fifty head of high class cows
with well developed udders and Register of
Merit records. The cows are a well bred
lot and have been well taken care of in a
way that will insure their future usefulness
if given proper care. The offering will be
bred to an imported bull and this lot prom-
ises to be the best lot of registered Jersey
cows that will be sold in any sale this
spring. The sale will be held on the Dr.
Lomax farm two miles from Leona, Kansas,
on the Grand Island railway, and seven
miles from Denton, on the Rock Island.

The sale of Shorthorn cattle held at
Ottawa, Kansas, Friday, June 6, by Kelley
Bros. of Gardner, Kansas, resulted in the
disposal of forty-three head of females at
an average of \$299 per head, and ten young
bulls at an average of \$191 per head. The
sale was a great success. While no sensa-
tional prices were recorded, the averages
were very fair, and the total returns for
the entire offering were very satisfactory to
Kelley Bros.

Mora E. Gideon, of Pleasant Vity Stock
Farm, Emmett, Kansas, and owner of
choice herds of Percheron horses, Hereford
cattle and Duroc hogs, reports his stock
doing well. Mr. Gideon also reports a good
demand for high class breeding stock and
his sales from his herds have been very
satisfactory. Among recent sales was a
choice three-year-old Percheron stallion to
the Bell Ranch, in New Mexico.

S. M. Knox, of Knox Knoll Stock Farm,
Humboldt, Kansas, owner of one of the
best herds of pure-bred Mulefoot hogs in
the West, reports his herd doing fine and
young stock growing out well. A feature
of his herd at this time is the fine lot of
early spring pigs and fall gilts.

Judge from South America

The Angus cattle in the breeding
classes at the International Live Stock
Exposition this year will be judged by
a South American breeder. A cable to

Charles Gray, secretary of the American
Aberdeen-Angus Association, inform-
ing him that William J. Grant of Argentina
has been chosen by the Rural Society
of Argentina to come to Chicago as the
Angus judge. Mr. Grant comes from the
Scotch Grants and has done much to
boost the Angus cattle in Argentina.

The Rural Society of Argentina will
offer an immense cup to be awarded to
the best animal of the Angus breed at
the coming International, a similar cup
being offered at the Palermo Show at
Buenos Ayres, held in August.

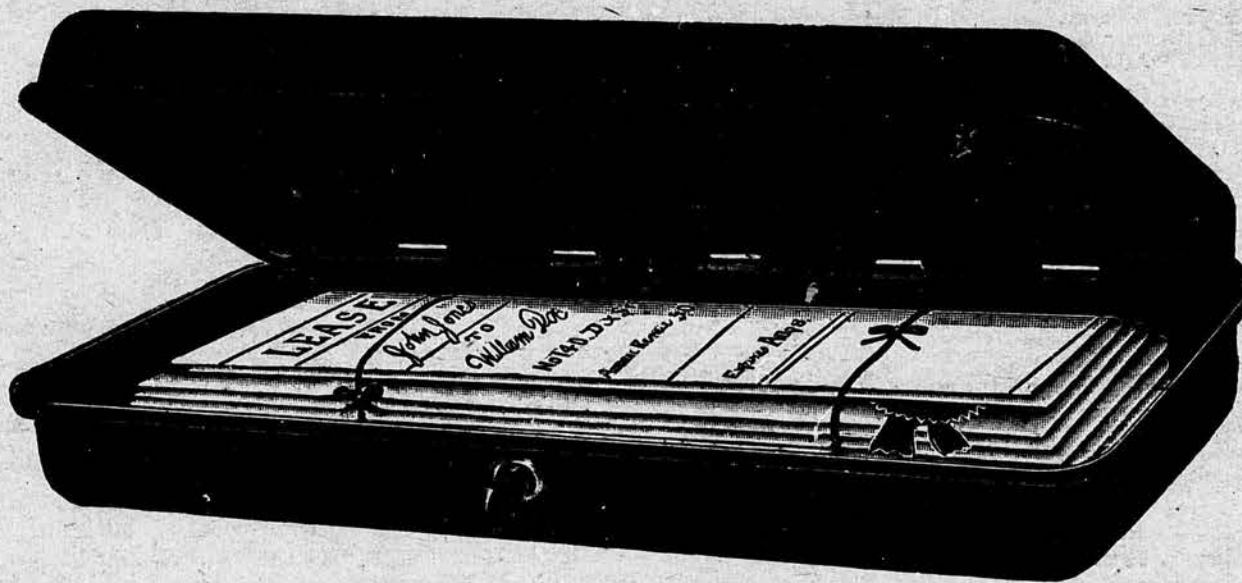
This is the second foreign judge the
Angus Association has brought to Chi-
cago for the International. So success-
ful has been the plan that other bee-
breeds are falling in line, as it seems to
be a way out of the maze of politics
and prejudices so apt to be involved in
awarding the prizes at this great live
stock show.

There will be a show of grains and
hay at the next International Live Stock
Exposition. The Chicago Board of Trade
has offered \$10,000 to be used in pre-
miums to those who exhibit these prod-
ucts. This show has long been known
as one of the great live stock shows of
the country, and the management now
promises to stage a show of grains and
forage which will be on a par with the
live stock features of the exposition.

The silo is the most economic equip-
ment for storing forage. When space is
considered, eight times as much feed can
be stored in a silo as in a haymow.

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