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The Tame Grasses in Kansas.—When, Where and How to Sow Them, with Some Suggestions as to Their Management.

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(Concluded.)

ALFALFA, OR LUCERNE, (*Medicago sativa*), has been cultivated as a forage crop from the earliest period of history. It was well known to the ancient Romans; and, time out of mind, it has been a fodder plant with the inhabitants of central and southern Europe. The early settlers of the South American states—notably Chili—carried the seeds of this new plant to their new homes, where it has grown with success ever since. From Chili, its cultivation has rapidly extended over our western coast, from whence most of it our knowledge has been derived. The effect of the dry climates of South America and California upon the habit of the plant, has been quite remarkable. Alfalfa is more hardy, takes a more luxuriant growth, and endures drouth much better than its near relative, lucerne. For this reason, it is clearly to the interest of every grower of alfalfa to use only seed of California origin.

In regard to the value of alfalfa for Kansas, we have no hesitation in saying that, all things considered, it is our most valuable clover, especially for the western and southwestern sections of the state. Nevertheless, a large proportion of those who undertake to grow alfalfa will fail, in the first attempt. Let us emphasize two or three of the matters about which most of these failures cluster. Alfalfa must have old, rich, and well-drained land to begin with; and the freer this is from weeds, the better. Prepare the ground thoroughly, by plowing and harrowing. Sow not less than twenty pounds of seed per acre, and sow this about the middle of April: harrow in lightly, following with the roller, if possible. Do not be discouraged if the plants make a feeble growth during the first season, as they always do. Do not pasture or mow during this first and critical season. The mower should occasionally be run over the ground, high enough to miss the alfalfa and cut off the tops of the weeds. After this first season, alfalfa will take care of itself and all the weeds within its reach. Alfalfa is perennial, perhaps eternal: at all events it will outlive the "oldest inhabitant," if it gets good treatment. The dangers which threaten it most are the common mites, which frequently burrows among its roots doing great damage, and the very severe cropping of cattle and swine during the summer and late fall. This last difficulty can and should be guarded against. Alfalfa makes the most pasturage for neat stock, and the best "hog pastures." It cuts the most hay: we have cut three and even four large crops from the same ground in one season.

ORCHARD-GRASS (*Dactylis glomerata*) has proved one of the very best and safest of all the pasture grasses that we have tried. It is but an indifferent hay plant, yielding a light crop of woody, fibrous fodder. Upon very rich land, large crops of hay are claimed to have been secured; but this result we have never obtained, and the hay has proved with us scarcely equal to that cut from the prairie. But, in grazing, its valuable qualities soon become apparent to the farmer. We feel confident that it will yield fully twice the feed that can be obtained from the same area of blue-grass or timothy; and, in nutritive qualities, it is certainly 'great', superior to blue grass. Orchard grass is one of the earliest grasses to start in the spring, and the last to succumb to the frost in the fall, it will furnish good pasture far into winter. It is consumed with great relish by stock of all kinds, especially if the grass has been cropped short. It seems to do equally as well upon heavy clay and sandy soils; and any rich and well drained soil seems suited to it. It germinates about as easily as oat; and, with good seed, no difficulty is experienced in getting a "stand" that will endure moderate cropping the first fall after seeding. As might be inferred from its common name, it does best when moderately shaded, and is admirably suited to orchard culture: yet there are few that will so well endure the prolonged sunshine of our dry seasons. For these reasons, we feel safe in recommending this grass to the farmers of central Kansas, for the purposes of

the pasture. It should, however, be remembered that orchard grass will not make a sod, as blue grass does. It always grows in bunches or tussocks; and, to counteract this tendency seed should be sown with a liberal hand. Not less than 1½ bushels of seed should be sown per acre; and two bushels would perhaps be better. We have usually sown a liberal sprinkling of Kentucky blue grass seed with orchard grass; but almost invariably, it has been smothered by the orchard grass. We have found that red clover does excellently with this grass, and aids in furnishing that variety of food so agreeable to the taste of animals.

Orchard grass will endure late seeding better, perhaps, than any other sort; but this operation ought not to be delayed much beyond the middle of April.

PERENNIAL RYE-GRASS, OR ENGLISH BLUE-GRASS (*Lolium perenne*).

In the eastern and southeastern part of the state, this old English favorite has given great satisfaction; and its cultivation in these parts is rapidly extending. In some respects, this sort is superior to orchard grass, as it seems equally adapted for pasturing and mowing. Upon rich soil, it endures close cropping wonderfully: we doubt if it is surpassed in this regard by any other grass. Moreover the seed grains are; and a stand is obtained about as equally as with oats. We are inclined to the opinion that this sort is especially valuable for our rich bottom lands, over a large part of the central and eastern portions of the state. But it is worth while to remember that perennial rye-grass yields a woody and innutritious feed; and it is peculiarly liable to ergot, a fact which our graziers will appreciate. I have frequently noticed this parasite in great abundance upon the rye grass grown upon the College farm. Sow not less than two bushels per acre, upon land that has been well and thoroughly prepared.

The old fashioned Eastern favorite, and without doubt the most generally valuable of all clovers and grasses,

RED CLOVER (*Trifolium pratense*), needs no particular mention here. In 1874 and '75, two exceptionally dry seasons, it failed almost entirely here, giving neither pasture or hay. But, during the favorable seasons which have since prevailed; it has flourished abundantly; and has yielded more—both of hay and pasture—than is generally obtained in the east. We have in one season cut two excellent crops of hay and a crop of seed from the same ground. Red clover in this state has one peculiarity worth mentioning. When land is once seeded, it never "runs out," as is the case in the eastern states, but thickens and spreads continually by self seeding. Red clover is worth a trial anywhere in the state, and we are confident will ultimately take a prominent place in the agriculture of the eastern and central portions; but, in very dry seasons, it lacks the "staying" qualities so remarkable in alfalfa. However, while drouth generally reduces the yield of clover, as of all other crops, it will rarely, upon strong clay soil, permanently injure the plants.

KENTUCKY BLUE-GRASS (*Poa pratense*) can be grown almost anywhere in the now settled portions of the state. We have never failed to secure a good stand, and ultimately a good sod—even during such very dry seasons as 1875,—when good seed was sown upon well prepared land and at the proper season, which is early in the spring. However, our experience with the grass,—a very extended one by the way,—has convinced us that, for all useful purposes except lawns, in central and western Kansas, this is one of the most worthless of the tame grasses. It starts early in the season, and for a short time yields a small amount of quite inferior feed; but in May it ripens its seed the grass becomes brown, dry and fibrous, and in this dormant condition it remains until fall, and often until the following spring. We have invariably found, too, that, in a field containing other sorts, cattle will not touch blue grass until all these others are consumed, and starvation compels them to resort to the despised blue grass. Moreover, the dry weather of last season, while it nearly destroyed the blue grass of one of our fields, did no damage to orchard grass and clover growing in the same field. On the other hand, in the eastern portions of the state, particularly in the counties bordering the Missouri River, we know from personal observation that blue grass thrives abundantly, and is a very profitable grass.

We can easily see that this possesses great value for a region like Illinois and Kentucky, where winter rains abound, enabling it to make a slow and continuous growth; but the Kansas winter is generally our driest season, and for

this reason we doubt much if this old favorite sort has any place in our agriculture. To obtain a good stand quickly, blue grass seed should be sown in the early spring; and, in amount, not less than three bushels per acre of ground.

In regard to the old standard eastern sort,

TIMOTHY, we have little to say, believing that, over a large portion of the state, it will not prove generally valuable. We have grown large crops, and I have seen many fine stands west of this point; still, it suffers more from drouth than any other sort that we have tried, and it rarely survives the ravages of the grass-hopper.

MANY OTHER SORTS of grasses might appropriately be referred to in a discussion of this character, had we the space at our command. But, in actual fact, the practical farmer, generally, will not cultivate more than two or, at the outside, three species of grasses, and very often a single one will answer his purpose. For these reasons we have given our observation and experience with a few sorts having, in our judgment, the greatest promise for the newer portions of Kansas. But, even of the sorts mentioned, with the single exception of alfalfa, it must be said that, in

TIMES OF SEVERE DROUTH, they will fail to yield any crop worth the name. Most of these cannot be seriously injured by any ordinary dry season; and, on the return of rain, they will start with undiminished vigor.

It is worth remembering, too, in conclusion, that our much despised prairie grasses possess many valuable qualities, which entitle them to the grateful recognition of the husbandman. No known species of grass is better able to withstand the effects of drouth; and we suggest that any one possessing a good field of prairie grass, ought to take all pains to secure it against injury, both for its intrinsic value and as a precaution against a possibly dry season.

Farm Letters.

STAFFORD, Stafford Co., 200 miles SW from Topeka, March 24.—Spring has at last made its appearance to the great joy of every one after a long and extremely cold winter. Farmers are all busy; planting trees, plowing, and making preparations to put in a large crop this spring. Early drilled wheat is looking well and will make a good crop. That put in late and sown broadcast is winter killed to a considerable extent. As the ground is in excellent condition for early planting, there will be more spring wheat sown than usual. It has not been a successful crop in this county; will be thoroughly tested this season.

There will be a large acreage of corn, rice corn, and sugar cane planted this season. As there are to be two sugar factories, one at Sterling and one at Larned, each 30 miles from this place, there will be ready sale for sorghum which will be a great advantage to the farmers as cane is a surer crop, and I think would be equally as profitable as wheat.

Considerable attention is given to stock raising. Stock of all kinds that were well sheltered are in good condition; were fed principally on corn fodder and millet, as there was but little grain raised in this county last year, owing to the drouth and web worm.

Those who left the county last fall to seek employment have returned. All are working with renewed vigor, and will, in all probability, reap a rich harvest the coming season.

MRS. C. M. JOHNSON.

CENTRALIA, Nemaha Co., 75 miles NW from Topeka; March 26.—Our stock has come through the winter in much better condition than one would naturally suppose, owing to the extremely severe weather. Hay is fed up close and double the quantity of corn generally fed. Hogs are in good thriving condition, but they have been sold off very close. Horses are in good working order and now is the time to give them the best of care, and see that collars and harness fit them as neatly and easily as a well fitting and comfortable boot does their driver.

The frost is fast going out and plowing will soon begin for corn. Many of our farmers are preparing to test the listing plan of corn growing for this season. On level or nearly level ground we think the listing plan a good one but do not think it will do on rolling or rough hilly ground, from this objection—that of washing out with our heavy rains. There is no doubt but that properly drilled corn will pro-

duce more bushels of good sound corn to the acre than that planted in the usual way.

Our people are not entirely satisfied with the action of the legislature on railroad matters. But as that is not an issue in our county last fall they have no right to grumble. X.

JAMESTOWN, Cloud Co., 125 miles NW from Topeka.—Stock of all kinds look well, considering the severe winter, but feed is beginning to grow scarce. Our crops were light last season; corn averaged 20 bushels, wheat about 8, oats about 10 and very light in weight. Potatoes a very good crop. Prospects are encouraging for a good crop the coming season.

Wheat is all right with the ground full of water at this time. Hogs have ranged from \$4.25 to \$4.30 and are about about all gone. Fat steer, \$3.50 to \$4.00 per cwt.; corn 20 cts. per bushel; wheat, 70 to 75c; oats, 20c; potatoes, 50 to 60c.

My wife sends her one crust pie recipe to Mr. Moffat: Make a crust as for any other pie, peel and core good cooking apples, cut into six or eight pieces, fill your pan, sweeten, season with nutmeg, and add half a cup of thick cream and bake in a hot oven. J. HOUGHTON.

NEOSHO FALLS, Woodson Co., 75 miles south from Topeka, March 28.—The past winter has done much to convince stock men of the necessity of shelter for their herds and flocks, also to make wells and ponds to supply water in abundance without having to drive miles to obtain it. Stock generally is in good condition with food sufficient in the country to last until grass comes, although some will have to purchase from more provident neighbors.

The wheat is looking quite well, much better than was expected, but late sown, or that sown on late plowing looks very poorly. Peach fruit buds killed, and in some places the trees are injured. Blackberry canes are winter killed.

Corn is worth 35c per bushel; wheat, 80c; oats 30c; German millet, 75c to \$1.00; potatoes, 80c to \$1.00; apples, 75c; hay, \$3.00 per ton; fat hogs, \$4.50 per cwt; good horses, \$100; cows, \$22.00 to \$27.50 per head.

Sheep men in this section are complaining that we have no dog law. It certainly is a just complaint and one that our law makers should recognize as such.

Liberty township in this county refused to vote \$20,000 in bonds to aid in the extension of the Missouri Pacific railroad from Leroy southwestward. This is as it should be. Railroads will be built anyhow if the country needs them without taxing our townships to aid them. W. W. SMITH.

LYNDON, Osage Co., 30 miles south from Topeka, March 28.—Feed is scarce; corn is worth 30 to 40c; wheat, 50 to 60c. A few farmers have already plowed some, and a good many will begin this week. Cattle are in very fair condition. The wheat seems to have stood the winter reasonably well. Millet seed is in good demand and sells readily for \$1.00 per bushel. Farmers in this locality are buying a great many new plows, corn planters, etc., this spring, and seem to be preparing to go to work with a will; they generally buy 12 to 16 inch walking plows; the Skinner, and Moline Co. plows seem to be the favorites. Bonds have been voted for building a bridge across Dragoon creek, four miles north of Lyndon; this has long been needed, and when finished, will be a great accommodation to the public. L. H. D.

INDEPENDENCE, Mont. Co., 130 miles south from Topeka, March 26.—We have just passed through an exciting campaign and election. We have long felt the need of competition in our railroads, and now have the promise of a branch of the M., K. & T. railroad from Parsons to Cherryvale and Independence through the county to Sedan, and thence west. Our county voted \$80,000 in bonds, and takes \$80,000 in stock in the road. This will complete our railroad system and open a direct communication to St. Louis.

We are waiting very patiently to start the plow, but about the time we are concluding that next week it will do, the little end of some of those snow storms they are having north forces us to change our plans.

I bought one of those Chicago screw pulverizers and it has been standing two weeks with many anxious to see it start. It is a new thing here.

In some localities feed is getting scarce. Plenty of corn on the bottoms. Hogs are going off at \$4.25 to \$4.40 per cwt.

Sheep are coming through in good condition. Those that were driven in last fall are having

lambs and have lost many. The value of feeding strong has been demonstrated more clearly this winter than I have seen in Kansas before. Mr. Orett, in Fawn Creek, feeds about two bushels of corn per day to a flock of about 150. His lambs were coming during the coldest weather and they were strong and hearty, and the mothers gave a good supply of milk from the start.

Mr. Kerr, in Rutland has about 60 sheep and has fed millet and corn, and his sheep are fat. So far he has not lost a lamb.

The question of what crops to raise that the chinch bugs will not eat, may be partially solved by saying that chinch bugs will not eat lambs and wool. I referred last summer to a method employed by my friend Orett to destroy the chinch bugs as they leave the wheat field. It can be made of very great use to us as a people if we can devise some plan by which we may co-operate in one grand effort looking toward an extermination of these pests. From my operations last year, I can give some suggestions, which, if all the farmers in the state will help in, we can do much toward ridding ourselves of these pests, if they come into our wheat fields this season. Just as soon as the reaper starts let there be three furrows, about three feet apart, plowed deep around the field. The chinch bugs will be in just the condition to do the corn the most damage, and they can all be killed in those furrows, for they will leave the field in search of corn or millet. Most of the bugs will be killed in the first two furrows, but the other two are to catch the more energetic ones that get through. Those of the readers of the FARMER who remember the article referred to last year, will recollect that Mr. Orett saved forty acres of corn in this way, but as he did not start until the bugs had been coming in two days he had to work in the edge of the corn field. He killed those that got on the first few rows by scalding them. Strange to say the hot water poured on the stalks of growing corn did not kill the corn. He only poured water as high as the bugs were at work.

I am anxious to see some united effort to destroy this worst of pests. If every one who raises small grain would take this plan he could save his corn and perhaps his neighbors'. If you can emphasize this and ask all the papers to urge it it may be of great value to us. D. W. KINGSLEY.

KING CITY, McPherson Co., 120 miles southwest from Topeka, March 23.—Spring is just opening in earnest, and the farmers generally think it is about time it did. No plowing done here as yet, and everyone anxious to commence work. Wheat is just commencing to show itself after the severe cold weather, and although some is winter-killed still there is a good prospect for a good stand of wheat. There is going to be a large acreage of corn planted this season, also a large area of prairie broken.

Corn is worth 35c per bushel; wheat, 80c; oats, 30c; hay \$5 to \$7 per ton; butter 10c; eggs, 8c; hogs, \$4.25 per hundred lbs. Stock is doing first rate considering the severe weather the last two months. Some black leg among cattle. Other stock is in good condition. Not many sheep in this county so the dog question don't amount to much to the people in general. My sheep have been troubled but little with the dog, but vigilance is all that saves the flock from destruction. I like Mr. Coburns plan for dogs, that is the surest and best way to settle the question. The doctor has not any sheep so he must have three or four pointers or setters, to hunt game to furnish his table with the wild game that abounds in his section, and I expect they help themselves to an occasional lamb of some farmer's flock. It would be too bad to make the doctor pay a little tax, he could not perhaps stand up under the burden. But the flockmaster might have a law passed so that a constable might kill all the loose dogs and tax it up to the sheep raiser, thereby drive the sheep out of the state and leave the field open for the canines. How long would the sheep interest be one of the important industries of the state? How long could a farmer with 75 or 100 sheep in a well settled township, afford to pay one dollar for every dog the constable killed? It would be an inducement for office seekers to want the position of dog killer. The best plan is for the flock master to do the business himself, and then he will have the satisfaction of least of trying to save his property from the non-taxable canines. Keep the subject up until we have some law for our protection, and not be idle in the meantime but put in all our time in decreasing the worthless curs that infest the country. GEO. OLIVANT.

The Farm and Stock.

Mr. Wadsworth on Scab in Sheep.

Every country, as far as my knowledge extends, that has engaged largely in wool growing, has had some disease among its flocks of a serious nature to contend with, and this country is no exception to the general rule. All of the states east of the Missouri river at some time have suffered large losses by the disease known as foot-rot, and many men engaged in wool growing in these states were utterly ruined, financially, by its ravages. Nearly every one was more or less affected by it, but as people became more or less familiar with its workings and found remedies for its cure it did not hurt them so much, although always dreaded by wool growers.

Scab is another disease and it is one that extends over a larger extent of territory than any other known to flock-masters. I believe this disease has spread all over the world and caused more trouble and loss to wool growers than any one and perhaps all other diseases that sheep are known to be afflicted with. The sheep of Australia were at one time so diseased with scab as to seriously alarm legislators as well as sheep men, and vigorous laws were passed to compel owners to take proper care of their stock, and a heavy penalty attached for failure to do so.

Kansas at the present time is as bad perhaps as any country ever was in this respect, especially the western portion of the state, and unless wool growers generally go to work and cure up their stock many will be ruined. Thousands of dollars have been lost every year I have been in the state from this cause, yet the disease is neglected. The sheep interest of this state has now become very extensive, and in a very short time I look for Kansas to be the leading state in the Union in this branch of industry. There are several reasons why we may reasonably look for such a result in the near future. Our mild and genial climate, our rich and abundant grasses and almost unlimited pasturage, our freedom from disease of any and all kinds (except scab) all combine to make this the leading state for sheep culture. If this disease were incurable people would have some excuse for its prevalence, but it is not. On the contrary it is easily cured and with concerted action on the part of those having sheep, every particle of scab can, in a very short time, be wiped out of the state, but unless there is a determination on the part of herdsmen to be rid of it, it will always be plenty, as it is very contagious, and in our open country where there are no fences sheep are liable to become so scattered that they either spread or are inoculated with the disease according to their condition. The legislature of this state ever ready to pass laws to protect its home interest passed a law to prevent any one from driving diseased sheep through the state upon the public highway, thereby preventing the driving through of thousands of scabby sheep both from east and west.

Now brother sheep men all over the state! Let us make a determined effort to cure our own sheep and with the help of our new law compel our neighbor to cure his if he is not willing to do it without. Do this and we will rid ourselves of the only real drawback to the sheep interests of the state. I think our new law provides for an inspector of sheep for each organized county, to be appointed by the Governor of the state through the recommendation of the State Wool Growers' Association. Every wool grower should join the association by sending his name with one dollar to J. B. Bartholomew, Topeka, Kas., who is secretary of the association. In this way we can get the most competent inspectors and create a general interest in all parts of the state to get rid of this dread disease. Five cents a head with the necessary labor will effect a cure. I have been in Kansas five years and have had more or less to do with scab every year. Some may ask why I do not cure my own sheep. I answer, I have repeatedly. But having dealt to some extent in sheep I have got it again. I also get more or less stray sheep in with mine and almost always they have proved to be scabby.

In this section with the business carried on as it has been since I came here we would never be entirely rid of it, for we no sooner cure it than our sheep become again inoculated. What I want is to clean it all out and keep it out. I will here give you my remedy. Fifty pounds of tobacco, two pounds of arsenic, and three pounds of sulphur for each one hundred sheep, applied as hot as possible without scalding; soaking the sheep well. Apply this twice, about two weeks between the applications. Put your sheep on a new range and in new corrals, and you may call them free of scab.

G. W. WADSWORTH.

Stalk Cutting vs. Burning.

There appeared in the FARMER about a year ago an article on the above subject, written by a correspondent from (I think) Dickinson county. I waited all the corn planting season for some more able pen to answer the theory advanced, but waited in vain.

I shall not attempt to theorize, but simply give you my ideas based on experience.

The correspondent says, as near as I can remember, "Take up all the corn stalks, weeds and trash and burn clean, thus destroying millions of weed seed and insects." No doubt we will all agree that to carry on a successful system of agriculture, bugs and weeds must be kept in subjection. But how to do this properly, and not year by year rob our land of its nat-

ural wealth of productiveness by burning off all refuse matter, is one question. The practicability of such a course is another.

My experience has taught me this: Plow under everything not wanted to feed, the deeper the better. If you run small plow, it will pay to cut your stalks with a cutter; if you run a three horse plow cutting not necessary. Do this and your land will get richer every year if you run it to nothing but corn.

I am satisfied that burning is a good thing on land not accessible to plowing. Fence corners, head lands, adjoining pastures and meadows can be burned off with great advantage to the growing crops, thus destroying numerous bugs and weed seed, also the seeds of disease and bad looks.

Don't brother farmers persist in removing everything of a manurial nature from your land and then expect to realize a heavy profit from your labors. Now to sum up.

My twenty-five years experience in corn raising in Kansas has satisfied me that the following method will prove satisfactory one year with another:

Plow your land in spring just as early as it is dry enough. Don't plow it when wet if it does make you a little late. Turn under all the stalks, weeds and trash, and the more mature the better to a good depth. Harrow thoroughly until the surface is well pulverized, this also helps to draw and hold moisture. Plant as soon after plowing as possible if the soil is warm enough to germinate the seed; commence cultivating just as soon as possible, and cultivate twice, three times—cultivate it all the time—the more the better, especially if the season is dry. Now this will meet with opposition, but it's the result of my experience all the same. Farms for rent all taken and many renters unsupplied. Wages of farm hands from \$12 to \$16 per month. Early wheat is all right; late, badly killed. That sown on summer fallow looks much the best. Stock in good condition and feed plenty. Hay worth from \$2.00 to \$3.00 in stack; corn, 25c.

D. D. SPICER.

Geneva, Allen Co., Kas.

Good Cows or Poor.

In the Country Gentleman this good advice is given:

It is surprising when we look around the country to see the large number of poor cows that are kept for years and by men from whom better things should be expected. It costs as much, if not more, to keep a poor cow than a good one. In no other branch of farm labor is it so essential to have good material to work with as in the dairy. A little study of the characteristics of a good cow will generally enable a person to tell a good cow when he sees her. I have heard men say that they breed cows to get the smallest eaters. But this is a fallacy, as no man can expect to get something for nothing. The cow (all other essentials being right) that will assimilate the greatest amount of food will usually prove to be the best cow to keep. In the feeding of cows there is a great difference. A healthy cow will consume many times her weight in food every year, but how to find the one that will do so with the least weight will repay careful attention of those who keep cows. If this point is not strictly attended to it will make a wide difference in the margin of profits.

And in illustration of this assertion we clip the following note of an actual experiment.

A young farmer bought a dairy farm stocked with sixty cows. During two years he has sold, exchanged, and reduced the number of his dairy cows, so that last year he had but thirty-five. He reports having made as much butter from the thirty-five selected cows as was formerly made from the original sixty. It is easy to see that in reduced attendance and diminished cost of feeding, with equal products, his profits must be largely increased.

Trees For Kansas.

In planting for shelter, where immediate results are of prime importance, we will continue to plant the cottonwood, boxelder, soft maple, and willow. While planting these less valuable kinds for shelter, some better kind ought to be planted for timber, and fuel. For this purpose, the walnut, honey locust, osage, red elm, white elm, hackberry, black locust and green ash, are more or less valuable, and are mostly of moderately quick growth. The hardy catalpa is giving promise of great usefulness here, and will probably prove worthy of extended planting. On higher grounds, the alanthus is worth more than ordinarily supposed.

The cottonwood and willows are easily grown from cuttings, which should be gathered and planted deeply, as soon as the spring is fully opened.

The catalpa, alanthus, and ash seed will grow if kept dry until planting time. The seed of the honey locust and coffee bean require soaking in hot water to ensure their germination, as the very thick seed-coats may not otherwise soften the same season they are planted. The nuts, and the seed of most trees in fact, germinate more surely and regularly if kept in moist, cool earth or sand during the winter. This end is best attained by bedding them out in a well-drained spot, and covering them with a few inches of mellow soil or other mulch. They are to be taken from this bed in the spring, and planted where they are to grow. Some seeds of this class are said to start fairly well, even if they have been kept dry through winter, if they are treated to prolonged soaking in cold water previous to planting. This is suggested only as a resort in case seed properly treated cannot be obtained. Such seeds however, can be purchased now of responsible dealers, with

certainty of their being in good germinating condition.

Practically, it pays to give the ground set apart for tree-planting thorough preparation. One or two years of cultivation is the least that will accomplish this. In planting, a more erect and vigorous growth is assured by planting close. The trees, for the first few years, require the mutual protection afforded by close planting; and cultivation may soon be dispensed with. While it is advised to plant close, it by no means follows that the trees are allowed to remain as close as planted. By close planting is here meant, in rows three or four feet apart, the trees standing one to two feet in the rows. While a great advantage to the young trees, such planting calls for attention to the thinning out of the plantation as fast as required by the growth of the trees. Let the young trees have thorough and clean cultivation until they begin to shade the ground, so that weeds will not grow to their injury. Aside from necessary thinning, they will need little attention to pruning, as the close growth will soon shade out the lower branches and encourage the upward growth of the leading shoots.—Prof. E. A. Popenoe, in *Industrialist*.

Willow Cuttings for Homesteaders.

Some of the western homesteaders came back to Leavenworth to winter, and knowing the value of the gray willow to the treeless plains of western Kansas for hedge and for wood, I am sending a great many willow cuttings back by them to be planted in the west, and I would gladly send a large bundle of cuttings to any of the readers of the KANSAS FARMER for the actual cost of cutting and shipping. I don't know which is the cheapest—mail or express. I believe postage on cuttings is 16 cents per pound and I think a pound will make about 200 cuttings, so for seven green stamps I will cut, pack and mail a pound package of the cuttings to any of the readers of the FARMER, at the proper season.

Four years ago I put in a row of gray willow cuttings about ten inches apart, the row about ten rods long. A year ago the hedge would turn stock. It is now from twenty to eighty feet high and will make considerable wood.

If the ground is very dry where the trees are wanted to grow the best plan is to stick them into a piece of ground that is damp or will keep moist, and nearly every cutting will grow and root, and the next spring they may be planted where needed; though if the ground is well prepared the cuttings may be put right in the hedge row and well packed, leaving about an inch above the surface, and if the season is favorable they will give satisfaction. They should be well mulched. They make an excellent hedge and can be cut four or five feet above the ground for wood every third year.

A. G. CHANDLER.

Leavenworth, Kansas.

Professor Beal, of the Michigan Agricultural College, makes the alarming statement that there are in Europe "mills which make a regular business of grinding quartz rocks; this is sifted to the proper size, dyed yellow, and sold to mix with clover seeds which are sold by weight." This points the moral of what is said in another place about the difficulty of obtaining good grass seeds.

Poultry.

The Fowl for the Farmer.

Situated as we the people of Kansas, are with Colorado, the banner mining state, with New Mexico, Arizona and Utah, we have a market for our poultry, eggs, fruits, etc., etc., which can never fail or be supplied and which will be our best markets in future years. By what method can the farmers of Kansas increase the industry of poultry raising? How can we make this a profitable source of revenue? I will answer: Find the fowl best suited or adapted to the farm and market. Give poultry the same attention that we do the horse, cow and pig, read the poultry journals and the KANSAS FARMER. I find through a large correspondence that there is a decided interest manifested in improving the business by getting thorough bred fowls, and introducing the improved breeds among our thrifty farmers. A move in the right direction: the first and most important move is to find the breed best suited and adapted for the farm. There has been quite a controversy through the columns of the FARMER regarding the best fowl for farm and market, and among the breed mentioned are Lt. Brahmas, P. Rocks, B. Spanish and "Dung Hill." Mr. Marsh has presented the merits of the Lt. Brahmas to the readers of the FARMER in a very forcible manner. Mr. Chase defends the "Dung Hill." Mr. Waltaire thinks the Lt. Brahma and B. Spanish are the most profitable.

There can be no question but that each breed has its peculiar merits. After trying a great many standard breeds I have settled on the Lt. Brahmas and P. Rocks as being the best breeds for general use. Mr. Marsh has written such exhaustive and lengthy descriptions of the Lt. Brahma, that it is almost useless for me to add anything new. But, as to their laying, Mr. Chase complains of their rarely laying even six eggs before they want to sit. My experience is decidedly contrary. My Lt. Brahmas rarely want to sit before laying 20 and as high as 35 eggs. They are as easily "broken up" as any I have tried. I have tried Brown Leghorns for 5 years, and by the record kept, the Lights have laid as many dollars worth of eggs, per head, as the Browns. The Brown Leghorn is probably the best layer of

any. But lay most of their eggs in the spring and summer, while the Lt. Brahma lay many eggs in the winter when the product brings the highest prices. There is a vast difference in the different strains of Lt. Brahmas; being an old breed they like the Wilson Albany strawberry are badly mixed. Many persons are sadly disappointed in buying Lt. Brahmas in not getting the pure bred birds; and here let me say, always order from a reliable breeder and one who keeps his stock up to the standard of excellence. The pure bred birds are invariably the best layers and with me rarely want to sit until laying from 20 to 35 eggs. The hens are the best of mothers; their chicks are splendid for late market.

Now, as to the weight of these fowls Mr. Chase speaks of weighing three Buff Cochins, and gives the weight as 31½ lbs. I have just received from Philander Williams, Taunton, Mass., four Lt. Brahma chicks, one Cockerel and three pullets, the combined weight is 43½ pounds. The weight of four of my Duke of York Brahmas is 42½ pounds (chicks). Why are not such fowls more valuable for the farmer than the "Dung Hill" that will not weigh four pounds? I say decidedly so. If you want a superior fowl, and one that will give you profit and pleasure, try the Lt. Brahma or P. Rock, and my word for it, they will give you perfect satisfaction. SANFORD L. IVES.

Mound City, Kas.

Apiary.

"Come; Let us Reason Together."

A despondent bee-keeper writes: "I am about ready to abandon the pursuit of bee culture for something that will pay better."

But what is there that is always prosperous, independent of times and seasons? Fruit fails once in a while,—does the fruit culturist cut down his trees and burn them, and then search for something that pays better than raising peaches, apples or plums? Crops of grain often fail in large districts, as the result of atmospheric influence, insect depredation or unpropitious weather. Will farmers then cease to plow and sow, and go in search of something that will pay better?

The present severe winter has been very destructive on all kinds of live stock. Thousands of cattle have already died on the prairies and western lands,—will the breeder give up, and seek some other business that will not be so destructive and that will pay better?

Storms on lake and ocean cause the waters to yaw and swallow many a valuable vessel and cargo,—does the mariner become disgusted and look for some business that has no drawbacks? The manufacturer, the banker and the merchant often have to grapple with financial distress and commercial panics,—do they forsake the counter, desk and factory, and look for some business that is without loss and trouble?

Prof. Riley predicts another visitation of the 13 and 17 year locusts, both broods coming together this year, which in their destructive career will eat up vegetables, and leave the earth bare in many and vast districts,—will the agriculturists, therefore, leave the fruitful fields of America and go to the barren hills of Italy, or the burning sands of Arabia?

No, indeed! such reverses but stimulate progressive men to further diligence and more dauntless courage. When the farmers, herdsmen, fruit growers, merchants and bankers set the example, it will be time enough for the bee-keepers to become discouraged. Until then, hold on perseveringly; for the average years will make as good a showing for bees and honey as any other business.—*American Bee Journal*.

Spring Management of Bees.

Bees have died largely everywhere during the past severe winter, and many who have lost heavily will no doubt have their losses much increased before the coming of fruit bloom. Unless the weather should be unusually favorable, spring dwindling will finish many colonies already badly depleted. We should be very careful to do everything possible for the welfare of those we have left. Now that they have had a good cleansing flight, every hive should be examined to learn their condition; see that they have sufficient stores and where there is any lack they should be fed. They should be placed on only so many combs as they can well cover. Right here we wish to add, that no hive is complete without a division board. The brood chamber must be constructed for judicious management. Especially so, when colonies are weak. It can be done by allowing the cloth over the frames to hang down over the side of the frames. Later in the season this will not work so well as the division board. Should any colonies prove queenless, unite them with other colonies. Avoid all upward ventilation, keep on all cushions or blankets, that the brood nest may be kept as warm as possible, and close up all entrances so that only one or two bees can pass at a time. In reducing the number of frames, leave those containing the most honey, unless a sufficient number already contain broods. The honey in the frames removed should be fed back to them as they need it. To do this, pick those containing the most honey, first, break the capping and hang in the hive, outside the division board, and they will soon carry it around to the brood nest. They will breed very slow at first, but should be examined every week or ten days when the weather will permit, to see what they are doing. The comb should be given back to them as they grow stronger, but only one at a time as they may need it, in the center of the brood nest.

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Subscribers should very carefully notice the label stamped upon the margin of their papers. All those marked "14" expire with the next issue. The paper is sent free of charge to the expiration of the time paid for, and to avoid missing a number renewals should be made at once.

Post Office Addresses.

When parties write to the FARMER on any subject whatever, they should give the county and post office both. Some of the new post offices are not put down in the post office directory, and when the county is not mentioned, the post office clerks do not know where to send papers or letters.

KEEP THEM OUT!

As our readers know, thousands of animals, more especially calves, have been shipped west during the last six months and some of them unquestionably from eastern states where the fatal lung plague is known to exist. We do not think any have yet come into this state and if our people do themselves justice none will come. The stock interests that constitute nearly one-fourth of our taxable property must not be jeopardized by any attempt to make a few paltry dollars out of animals the most insignificant of which may bring into our midst the seeds of disease that millions would not eradicate.

The people of this state have their fortunes at stake in this matter and can afford to make no misstep. Cattle from states east of the Mississippi Valley are excellent property to let severely alone. Cattle raisers of Kansas, your legislature has refused you protection; see to it now that you protect yourselves! See to it that none of those eastern cattle come within our borders!!

The Kansas Farmer Company.

In due time an announcement of the members of this company will be made. The readers of the FARMER may rely, however, on the present management of the paper being fully able to make for the producers of Kansas, a paper in full accord with their interests and as strong and valuable as at any time in its previous history. The FARMER has always maintained a high place among the agricultural papers of the country, and now in its nineteenth year of publication it has before it the prospect of a long and useful life. It has always been true to the interests of agriculture, discussing fearlessly such questions of legislation and public policy as specially relates to the farmers and their business. It is the intention of the present company having control of the FARMER to place as nearly as possible the paper in the hands of every reading farmer in the state. The importance of building up a strong agricultural paper meeting the confidence of all its readers is fully appreciated and we wish to say in this connection that we shall count upon the continued generous support heretofore given the paper by the farmers of the state.

A striking feature of the FARMER which has always elicited favorable comment by our eastern readers and cotemporary agricultural press, is the large amount of excellent original matter furnished by the contributors covering in their discussions the entire range of topics pertinent to such a paper as the FARMER. This is as it should be. The farmers paper should give in a systematic and well classified shape the practical experience of breeders, farmers and horticulturists.

Better Cultivation of Brains Needed.

Washington is reputed to have said that agriculture was the most healthful, most useful and noblest employment of man, and for nearly a century the statement has been quoted by politicians and tricksters to tickle the vanity and secure the support of men engaged in agriculture, and who they did not hesitate to designate in private as mudsills and clod-hoppers. We do not endorse the idea that there is any nobility in agricultural pursuits or any other, unless those engaged therein lend them dignity and nobility by the intelligence with which their operations are directed. Unless guided by cultivated brains, there is no more nobility in the work on a farm than in digging coal or driving a will cart. A large per cent. of our farmers we blush to say are dragging along in the same old rut their grandfathers moved in, planting and gathering crops, building fences, weaning, castrating and breeding their stock according to "signs in the moon," arguing that wheat turns to chess; doctoring cattle for hollow

horn, and wolf-in-the-tail and maintaining other ridiculous practices characteristic of the dark ages. In the same spirit great numbers make little or no attempt to cultivate their minds or to co-operate for mutual benefit as do men in all other avocations, but remain in a large degree isolated hewers of wood and drawers of water, the prey of astute politicians, unscrupulous lawyers, soulless corporations and conscienceless money lenders. The only earthly way to remedy this state of affairs is for farmers to cultivate their brains more—to educate themselves.

When we speak of education, we do not necessarily mean that obtained at academies and colleges, but that practical kind, within the reach of all who will read, observe, and think. The literature of our day pertaining to the calling of farmers is so abundant, and so cheap that only those who prefer to need be groping and blundering in ignorance. All branches of rural industry including stock raising, grain raising, and fruit raising in their various divisions are treated in text books by standard authors, and each week the agricultural press sends its hundreds of thousands of sheets filled with the latest and best for the enlightenment, encouragement and advancement of those who wish it. Farmers, you are in the majority and have the requisite power in your hands to elevate yourselves to be the peers of any. The levers to do this with are better cultivated brains; your farms need to be managed with them, and your stock to be fed with them; you do not need quite so much bodily but a great deal more mental labor, more thought, more discipline of the mind, more time spent in reading and investigation of the subjects and sciences pertaining to your calling, and more concert of action, more co-operation in your various enterprises. As helps toward the accomplishment of these you have the press, the Grange, the Alliance and other kindred organizations, but they can avail little unless given a more cordial, earnest support than you have yet accorded them. No niggardly, 5 cent, milk-and-water support will build up your press or your organizations. If you would be the peers of your fellows, you must give the efforts in that direction time, thought, work and money. This is plain talk but true, which we think our readers will accept if in the right spirit, and we wish to assure them that in the future as in the past their old friend the KANSAS FARMER will be in the fore-front with its best energies to clear and shed light on the way that leads forward and upward.

Prohibition and the Lord's Supper.

Since the enactment of the law for strictly enforcing the prohibition amendment, there has been much discussion as to the constructions that would be placed on it by churches and pastors in communion services, and many eminently pious people have been much perplexed as to how their religious belief could be reconciled with the new law in its bearing on the use of wine in churches. Some of our highly esteemed correspondents have written to the FARMER for advice as to what they as officers of churches should do, and their communications have evinced a conscientious desire to do their duty as they might understand it, from the best light obtainable. To such we desire to commend a portion of a recent letter by Rev. J. E. Gilbert, of Milwaukee, Wis., to the Capital.

Mr. Gilbert is well known in Kansas, having been for a number of years pastor of the Quincy street M. E. church in Topeka, and recognized as one of the brightest men in the west. It seems to us that Mr. Gilbert in his letter but expressed the sentiments of those who at heart really and sincerely desire to do away with the use in any form of that wine which is a mocker.

In his letter he says: "The assumption that fermented wine is necessary to the sacrament must be regarded with surprise. If that kind of wine must be used at the Lord's table, who shall forbid it at any other table? Then must we not immediately change front on the temperance question, and admit that such wines may be used moderately, even with the example and command of Jesus? Having reached that conclusion who shall pause this side that awful precipice over which multitudes plunge into drunkards' graves? The only safety lies in a denial of the dangerous assumption. Alcoholic wine used in commemorating the death of Christ! The most violent of all poisons, the great disturber of domestic and public peace, an emblem of the blood shed for the remission of sin! Preposterous and blasphemous! Who can show that the wine used by Jesus was fermented? Who can show that we have now any such wine as was then employed? But, if both these can be proved, who will affirm that we are obligated to use the same now, even with the ravages of strong drink on every side? In the city of Cincinnati some years ago the wife of a prominent citizen was addicted to the use of ardent spirits. She sold furniture, clothing and food for liquor. She was at last converted, reformed and added to the church. She continued steadfast until, on communion day, she was given fermented wine and then went down to her old mode of life. Who will justify the act of that minister? Is Christ to be an agent for sin? Is his memorial service to be a temptation? Martyrdom, forsooth! Let the minister of Jesus beware how he puts the bottle to his neighbor's lip, even under the name and sanction of a church sacrament. No, no, fermented wine is not necessary. At the recent session of the South Kansas conference of the Methodist church, a resolution was adopted pledging the ministers to the exclusive use of the pure juice of the grape on sacramental occasions. That action was in harmony with a resolution adopt-

ed at the general conference in 1872, and reaffirmed in 1876 and in 1880. Let other denominations take a similar position. Let not the church fall below the sentiment of the masses of the people. We are just beginning a struggle for the complete overthrow of the liquor traffic. To the church belongs the leadership. Let her utterances be bold and emphatic. Old king alcohol must die!"

Pasture for Hogs.

The majority of farmers do not seem to understand, or at least to take advantage of the fact, that the hog is a grass-eating animal, and will on good pasture thrive and grow for several months in the year without any grain. Red clover seems best adapted to their wants, and will furnish the largest quantity of food to the acre, but white clover answers quite as well, and orchard grass, being tender, sweet and nutritious when young, is excellent; it will stand frequent croppings without injury. A ten acre field of good tame sod will afford fair pasturage for forty to fifty hogs. The tame grasses are the best, but any farmer who has none and can fence in a piece of good prairie sod for hog pasture, should not fail to do so, as he can in no other way make more economical provision for what should be among the most profitable stock of the farm. A hog pasture should contain some shade, natural or artificial, to protect from the sun. If none better is accessible, some posts, poles and coarse hay or straw will make a shed answering every purpose. Together with the shade, a spring or plenty of good water of easy access is invaluable; if so arranged that the hogs can have reasonably clean water to wade or lie in, and yet be kept out of too much mud, it assists to clean their skins and keep them in better health.

We are aware that a great number who read this, while raising some hogs, have no facilities for pasturing them; to these we would say, by judicious management they can keep their hogs in small pens, if necessary, and yet provide them with a quantity of green, healthful food at small expense. Our favorite plan has been to plant early an abundance of some such large, early sweet corn as the Early Minnesota, also Stowell's Evergreen, give it good cultivation and as soon as in roasting ear cut up and feed morning and evening all the hogs would eat. There is economy in fattening as much as possible while the weather is warm and pleasant. In the early part of the season the hogs will eat the stalks and blades as well as the corn, and no food so surely returns a good profit on its cost as the grass and green corn converted into pork. With grass in summer, some green rye and plenty of artichokes in fall and spring, supplemented by a comparatively small quantity of corn, pork making can be made a paying business, at a price over \$2.25 per cwt. gross.

Sorghum.

We have before us a copy of the new, revised and enlarged edition of "Sugar Cane, their Products, Culture and Manufacture," by Isaac A. Hedges, president of the Mississippi Valley Cane Growers Association. The raising of sorghum is a rapidly growing interest in Kansas, and all who are informed concerning its introduction, know that Isaac A. Hedges, of St. Louis, Missouri, is in fact, the father of this particular industry, and has devoted to it more earnest thought, study and experiment than any other man living, hence his utterances are entitled to the great weight always accorded them. In his little book of 190 pages he has condensed the latest and best yet known about manipulating sorghum and its products and every man who raises or manufactures it should study this volume. Of it the author in his preface says:

"It has been my one single purpose to write a plain, practical treatise upon the subject to which it relates; to produce a book adapted to the wants of persons engaged in cultivating and working the Northern Cane. I am, neither by inclination nor education, a book maker. All the qualifications I possess in that line, and all that I have employed in preparing this little volume, are such as have been forced upon me, by a long and rugged intimacy with the business of which it treats. If I have not furnished a scholarly production, it is, perhaps, because my degrees were taken in the furrow, the mechanic shop, and sugar-house, and not in the university."

It can be obtained of Mr. Hedges, St. Louis, and we think the price is one dollar.

A Point for Sheep Raisers.

The Kansas City Price Current thus comments on what is of no small value to the sheep raisers of Kansas:

"Of all the railroad legislation that has been attempted at Jefferson City this winter the most important by far was the passage last week of a bill requiring railroads to furnish double-deck cars for the shipment of sheep. It was not only a measure demanded by a large and growing interest in this section, but can work no hurt to the railroads, even when double-decked cars are hard to overload with this class of stock. The forced practice heretofore existing in requiring shippers to use single deck cars has been very detrimental to the sheep trade of this section, and unjust upon shippers. It forced upon this class of stock two freights, which upon the lower grades amounted to a prohibition tariff, and greatly restricted the demand for them. Double-decking has been in practice on all the roads east of the Mississippi river for years. It is only a just and equitable treatment of shippers of sheep, and they should have been accorded such justice in this section by the railroads voluntarily, and not waited until com-

pelled to do so by law. The enforcement of this law must awaken new life in the sheep trade, and when it is generally known that double-deck cars can always be had from here, Kansas City will at once attract the attention of eastern sheep buyers, and encourage the shipment of many sheep from the west to our market that have heretofore been held solely for their wool."

Marketing Thin Cattle.

The Drovers Journal, of Chicago, last Thursday offers some suggestions on this subject that if heeded may prove exceedingly valuable to a great many of our readers who are stall-feeding. It said:

It seems almost sinful and is certainly a great waste to send to market thin, ill conditioned cattle, such as are coming to this market in great numbers now, evidently hurried from the feed lots by the high and tempting prices which have been current for some time past. If it was mid-winter there would be some excuse for such work, but it is positively wasteful for feeders (?) to turn off cattle that are just beginning to take on fat, when corn is as plentiful as it is in the west, and after the stock has been dragging along through the severe winter, consuming food and requiring attention yet hardly holding weight.

True the prices that have been current for some time, are very high, but that is no justification for sending unripe cattle to market, just when they are in good fattening shape, and more particularly is it wrong when the very time is at hand when feed can be converted into beef with very little waste of material, stock not requiring so much food to keep up the animal heat, as in cold weather. Large numbers of these immature cattle have been attracted to the Chicago market by high prices paid, in a time of scarcity, for a few, and as an illustration of what we mean by claiming it is folly to send anything to market before it is ready, we have but to cite the wild market of last week, when at Chicago a few cattle, under the influence of a sharp demand and a merely nominal supply, sold at exorbitant figures. The reports reaching the country, "a thousand and one" shortsighted men rushed to market with every steer they could get hold of, and the old, old story was again told, the market going off about 50 cents per hundred, and where the half dozen men got high prices during the cattle famine caused by the snow blockade, hundreds sacrificed their cattle, and went home poorer if not wiser men. Their is no use trying, it don't pay to market stock, or do anything else until it is ready, and while a few will occasionally get very high prices for very poor stock, the hundreds will find it a losing game. Be sure you are ready, then come ahead.

Water Transportation for Western Products.

The movement of grain by barges down the Mississippi had a very humble beginning a few years ago. Now it has grown to such proportions that not only the inland cities, but also the seaboard cities are alarmed at the immense quantities of grain going to Europe by the great river route. Six barge lines are now engaged in this great traffic from this city, and the Gould line, about which so much has been said, is not carrying the most grain either. Similar companies have been organized at Kansas City, and other cities are also looking to the Mississippi river as the grain route of the future to foreign markets. Not only is this highway to foreign ports the cheapest, but it is also the quickest route. The old way of shipping by rail to New York required two weeks. To New Orleans by river seven days is now the average. The seven days in favor of the river route is only partly consumed in the race for European markets between the vessels from both points. The drifting of so much business, from the railroads and eastern houses, is naturally a subject for discussion in commercial circles. Chicago declares something must be done to check this business. She calls for lower railroad rates to the east as one means of affording relief. The war for cheap transportation will in the meantime benefit the producers of the Mississippi Valley.—St. Louis paper.

The only club offer that can be made for the paper is 10 copies for \$10, with a free copy to the club agent. The names must all be sent at one time. Single subscription to the FARMER is \$1.50 for one year, \$1.00 for six months. No premiums are offered. The price of the paper is as low as it can be made for, and every farmer should stand by his own paper and give it his cordial support.

Capt. McTaggart informs us that his first shipment of cotton, two bales, amounted to \$125.95; freight, \$4; commission, etc., \$4; baling, \$4; ginning, \$12; total cost, \$24. Net returns, \$96.95, to which he added \$33, the value of the seed. Total, \$129.95, as the return from four acres. The Captain is very enthusiastic over cotton-raising, and reports that there will not be enough seed to supply the demand. He will show his faith by planting about one hundred acres in cotton this spring.—Independence Tribune.

A Useful Novelty.

In our advertising columns F. M. Van Bitten offers a very useful and ornamental article for the ladies. Mr. Van Bitten has been in business in this city for a number of years and stands well as a reliable and honorable business man. Fair dealing is thus assured.—Star Covenant.

The KANSAS FARMER, Weekly Capital, and American Young Folks, sent one year for \$2.50.

Kansas Stock Topics.

Olando Bonner this week shipped sheep to Kansas City that brought \$5.15 per hundred. Stock-yard men say they were the finest sheep ever handled at the Kansas City stock yards.—Abilene Chronicle.

T. W. Walker, one of the most extensive stock dealers in southern Kansas, shipped five car loads of hogs from Howard on Thursday and Friday of last week. There were about three hundred and seventy-five in the lot.

A sale of 100 cattle, averaging 1,443 lbs was made at the yards Saturday, to Hathaway & Jackson, for \$5.02. They were raised and fed by H. Short, near St. Marys, Kansas, and Shipped by P. O. Connors.—Am. Stockman, Chicago.

In a recent number of the Chicago Drovers Journal in the report of cattle sales is a statement "that one lot of good export steers sold to go to London at \$5.75 per hundred." These were Douglas county cattle, as we learn from the following item in the same paper.

Dr. Young imported four horses from Canada the other day, and arrived with them at this place on Friday. The horses are thorough breds and are kept at Cooper & Slough's livery stable. They are magnificent animals, and well worth seeing.—Abilene Democrat.

Lee Bros., near Brown's Grove, in this county, have about 120 head of fine cattle, about 40 of which are thoroughbreds, and the remainder high grades. They have gone through the winter in fine condition, without the loss of a single animal.—Larned Chronicle.

George T. Peacock, of Wakefield, had a yearling heifer snowed under in a drift this winter, where it remained nineteen days without food or water, and when found was still alive. It came out rather weak, but is now in a sound, healthy condition, and will make good beef yet.

The \$5.75 cattle sold to-day to Schraal were fed and raised in Lawrence, Kansas, by A. P. Clark, who is a prominent shipper and feeder. Mr. Clark was present at the yards and seemed very well pleased. In the bunch there were forty-eight head that averaged 1468 pounds.—Lawrence Journal.

Last week N. A. McKittrick bought of E. R. Powell, hogs and cattle to the value of over \$2,000, making more than six thousand dollars worth of stock purchased by the former gentleman of the latter in the last few weeks. Stock raising is the monied part of farming.—Augusta Republican.

Mr. Geo. E. Hubbard, took 1,298 Colorado wethers to winter. Two were killed by accident, one died from some unknown cause and he has 1,295 in condition for market now, many of which will weigh 150 pounds gross. "Pawnee beats the world for fat sheep."—Larned Chronicle.

Messrs. Lord & Nelson, of Burlingame, shipped from Fairfield, Monday morning, five car loads of fat steers and one of hogs. They had them wintered by Mr. O'Brien, of Kaw township. These gentlemen represent one of the largest and most substantial stock farms in the state.—Alma Herald.

Mr. C. McLain, who has a farm adjoining Wellsville, Franklin county, recently sold to Mr. Carman four car loads of cattle, averaging 1,607 pounds each, at five cents per pound at home. He has 105 head left which he is now feeding. Over \$80 per head for cattle at your own door, is not a bad price. We would not mind having a few such to sell, ourself.

L. W. Hostetter, of Franklin township, sold 121 head of cattle fed on his own farm to S. H. Carman, of Lawrence, to be delivered in May at five dollars per hundred, they will weigh over 1,600 pounds each and are as fine a lot of cattle for the number as ever went out of this part of the country.—Ottawa Republican.

We notice that there is a great deal of butcher stock going to Colorado. It looks strange that Kansas has to furnish beef for Colorado, when they claim to be the great cattle state of the west. This proves that Kansas is ahead in grain, stock or anything you might name in the farming line, and can raise enough to feed Colorado, New Mexico and part of the east. Kansas is always ahead.—Newton Golden Gate.

Stock of all kinds have wintered well in this part of the country. We know of several large flocks of sheep in which hardly a death has occurred. Cattle also look well for this time of the year. There is no better country in the world to raise stock than Southern Kansas, and a great many people are beginning to find it out. We think Elk county is a little better than any part of the state for this business.—Elk Co. Times.

Hearing of the great loss of cattle on the west end of the road, that had perished by starvation and the severe weather, the editor of this paper took a trip over the entire line last week, and can say from personal observation the accounts have not been exaggerated. The cattle have perished by thousands, most of them having drifted with the storms from the upper country along the Smoky and Republican rivers, and from letters we have received from parties in those sections, we hear the loss has been equally as great there.—Spearville Echo.

If our readers can send us, when writing for the FARMER, a list of farmers receiving mail at their post-office and not now taking the FARMER, we shall take pleasure in sending them a sample copy of the paper.

FOREST EVERGREENS.

J. W. MULVEY,
Kidder, Mo.

Literary and Domestic

Be Content.

It may not be our lot to wield
The sickle in the ripened field;
Nor ours to hear, on Summer eves,
The reaper's song among the sheaves.

Yet where our duty's task is wrought
In unison with God's great thought,
The near and future blend in one,
And what's to be is willed is done.

And ours the grateful service whence
Comes, day by day, the recompense;
The hope, the trust, the purpose shaded,
The fountain, and the noonday shade.

And were this life the utmost span,
The only end and aim of man,
Better the toll of fields like these
Than waking dreams and slothful ease.

But life, though falling like our grain,
Like that, revives and springs again;
And early called, how blest are they
Who wait in heaven their harvest day!

—Whittier.

Col. Bob Jarvis.

We were sojourning at Anaheim and the sea. There was a sunshiny dullness about the place, like the smiles of a vapid woman. The bit of vineyard surrounding our whitewashed cabin was an emerald set in the dull golden-brown plain. Before the door an artesian well glittered in the sun like an inverted crystal bowl. Esculapius called the spot Fezzan and gradually I came to think the well a fountain, and the sunburnt waste a stretch of yellow sand.

When I had walked to the field of whispering corn behind the house, and through the straggling vines to the vineyard in front, I came back to where my invalid sat beneath the feathery acacias, dreaming in happy loneliness.

"Did you ever see such placid, bright, ethereal stillness?" I asked.

Esculapius took his cigar from his lips, and looked at me pensively.

"It may be my misfortune, I hope it is not my fault, but I do not remember to have seen stillness of any sort."

Esculapius has but one shortcoming. He is not a poet. I never wound him by appearing to notice this defect; so I sat down on the dry burr-clover, and made no reply.

"You think it still?" he went on in a manish, instructive way, "but, in fact, there are a thousand sounds. At night, when it is really quiet you will hear the roar of the ocean for ten miles away. Hark?"

Our host was singing far down in the corn. He was a preacher, a deep-toned Methodist, brimming over with vocal piety.

"Nearer the great white throne,
Nearer the Jasper sea."

came to us in slow, rich cadences.

The fern-like branches above us stirred softly against the blue. Little aromatic whiffs came from the pale eucalyptus trees near the house. Esculapius diluted the intoxicating air with tobacco smoke and remained sane, but as for me the sunshine went to my head, and whirled and eddied there like some eastern drug.

"My love," I said, wildly, "If we stay here very long and nothing happens, I shall do something rash."

The next morning a huge derrick frowned in the door way, and a picturesque group of workmen lounged under the acacias. The well had ceased to flow.

Esculapius called me to a corner of the piazza, and spoke in low, hurried tones:

"Something has happened," he said; "the well has stopped. I thought it my relieve your feelings to get off that quotation about the golden bowl."

I looked at him with profound compassion. "I have forgotten the quotation," he said, "but I think it begins: 'The grinders shall cease because they are few'—perhaps you had better take care of your shot gun and don't forget your light overcoat. Good bye."

Then I took a pitcher, and went down the walk to the disgraced well. The musical dip on the pebbles was hushed; the charm of our oasis had departed. In its place stood a length of rusty pipe full of standing water. Some bits of maiden's hair I had placed in reach of the cool spray yesterday were already withered in the sun. I sadly took the gourd from its notch in the willow, some one had been before me and carved "Ichabod" on its handle. I filled my pitcher and turned to go. A tall form separated itself from the group of workmen and came gallantly forward.

"Madame," said a rich, hearty voice, "if you'll just allow me, I'll tackle that pitcher, and tote it in to you. Jarvis is my name. Col. Bob Jarvis, well borer. We struck a 10-inch flow down at Scranton's last week, and rather knocked the bottom out of things around here."

"But the pitcher isn't at all heavy, Col. Jarvis."

"Oh never mind that; anything's too heavy for a lady; that's my sentiments. You see, I'm a ladies' man—born and brought up to it. Nursed my mother and two aunts and a grandmother through consumption, and never let one of 'em lift a finger. 'Robert,' my mother used to say, 'Robert, be true to God and the women; and, by Godfrey, I mean to be!'"

I relinquished the pitcher instantly. Esculapius was right; something had happened. The well was gone, but in its place I had found something one thousand times more refreshing. When my husband returned he found me sitting breathless and absorbed under the acacias.

"Hush!" I said, with upraised finger; listen!"

Our host and the Colonel were talking as they worked at the well.

"We've had glorious meetings," he went on, over at Gospel Swamp, Jarvis," the minister was saying, "I look for you every night. If you could just come over and hear the singing, and have some of the good brothers and sisters pray with you, don't you think—"

"Why, God bless your soul, man," interrupted the Colonel, "don't you know that I'm religious? I'm with you right along, as to the first principles, that is, but you see, I can't quite go to the Methodist doctrine. I was raised a Presbyterian, you know—regular black and blue Calvinist—and what a fellow takes in with his mother's milk sticks to him. I'm attached to the old idea—infant damnation and total depravity, and infernal punishment, and the interference of the saints. You fellows over at the swamp are loose! Why, by the way, my mother used to say to me, in her delicate, squeaky voice: 'Robert, beware of Methodists; they're loose, my son, loose as a bee, of bones! No, indeed, I wouldn't want you to think me indifferent to religion; religion's my forte. Why, by and by, I mean to start a Presbyterian Church right here.'"

"I'm glad to hear you say that," said the good minister, warmly; "but you have no idea how glad I am, Jarvis."

"Why, man alive, that church is in my mind day and night. I want to get about forty good pious Presbyterian families to settle around here, and I'll bore wells for 'em, and talk up church matters between times. You saw me carrying the lady's pitcher for her this morning, didn't you? Well, by the way, that was a religious motive entirely. I took her man for a Presbyterian preacher the minute I struck the ranch; may be its poor health gives him that cadaverous look, but you can't most always tell. More likely its religion. At any rate—"

Esculapius retreated in wild disorder, and did not appear again until supper time. When the meal was finished, Col. Jarvis followed me as I walked to the piazza.

"If it ain't presuming, madame," he said confidentially, "I'd like to ask your advice. I take it you're from the city, now?"

"Yes," I answered with preternatural gravity; "what makes you think so?"

"Well, I knew by your gait, mostly. A woman that's raised in the city walks as if she was used to it; city women are generally good steppers. But that ain't the point. I'm engaged to be married."

My composure under this announcement was a good deal heightened by the fact that Esculapius, who had sauntered out after us, humming an air from Pinafore, became suddenly quiet and tumultuously.

"Engaged to be married?" I said. "Let me congratulate you, Colonel. May I hope to see the fortunate young lady?"

"That depends. You see, I'm in a row—the biggest kind of a row; by a good deal; and I thought you might give me a lift. She's a 'Frisco lady, you know; one of your regular high-flyers; black eyes; hangs with no end o' spirits. You see she was visiting over at Nibel's, and we made it up, and when she went back to 'Frisco I thought I'd send her a ring; so I bought this," fumbling in his pocket and producing the most astounding combination of red glaring pinkback; "and by Godfrey she sent it back to me! Now, I don't see anything wrong about that ring; do you?"

"It is certainly a little—well, peculiar, at least, for an engagement ring; perhaps she would like something a trifle less showy. Ladies have a great many whims about jewelry, you know."

"Exactly. That is just what I reflected. So I went and bought this," (triumphantly displaying a narrow gold band); "now that's what I call genteel; don't you? Well, if you'll believe it, she sent that back, too, by return mail. I wish I'd fetched you the letter she wrote; if it wasn't the spiciest piece of literature ever read by anybody. 'She'd have me to understand she wasn't a barmaid nor a Quaker; and if I didn't know what was due to a lady in her position I'd better learn before I aspired to her hand,' etc. Oh! I tell you she's grit; no end o' mettle there, you see; I've struck a boulder, and it suits me bad because I want to see the parson through with his well here, and then go to 'Frisco and get married. Now, if you'll help me through and set me into sand and gravel again, and your man decides to settle in these parts, I'll guarantee you a No. 1 well, good, even two-inch flow, and all expense but pipe and boardin' hands. I'll do it by—some means."

"Oh, no, Colonel," I said, struggling with a laugh. "I couldn't allow that. It gives me great pleasure to advise you, only it is a very delicate matter, you know—and really—I was casting about wildly for an inspiration—wouldn't it be better to go on to the city, as you intended, and ask the lady to go with you and use her own taste in choosing a ring?"

My companion took a step backward, folded his arms and looked at me admiringly.

"Well, if it don't beat all how a woman looks through a millstone! Now, that's what I call neat. Why, God bless you, madam, I've been born at that thing for a week steady, night and day, by—myself, and making no headway. It makes me think of my mother. 'Robert,' she used to say (and she had a very small, tremulous voice), 'Robert, a woman's little finger weighs more than a man's whole carcass; and she was right. I'll be destroyed if she wasn't right!'"

Esculapius laughed rather unnecessarily when I repeated this conversation to him.

"I am willing to allow that it is funny,"

said; "but after all, there is a rude pathos in the man, an entreated chivalry. Nearly every man loves and reverences woman. It is old-fashioned, I know, but it has a breezy sweetness of its own, like the lavender and rosemary of our grandmothers; don't you think so?"

There was no reply. I imagine that Esculapius is insensible at times of his want of idealism, and feels a delicacy in conversing with me. So he went on musingly:

"With such natures love is an instinct; and it is to instinct after all, that we must look for everything that is fresh and poetic in humanity. We have all made this sacrifice to culture—a sacrifice of force to expression. Isn't it so, my love?"

Still no reply.

"I like to picture to myself the affection of which such a man is capable—for no doubt he loves the girl of whom he speaks; not, of course, as you—as you ought to love me, but with a rude, wild sincerity, a sort of rugged grandeur. Imagining him being betrayed by her. A man of the world might grow white about the lips and sick at heart, but he would find relief in cynicism and bitter words. This man would act some wild, strange act of vengeance. The cultured nature is a honeycomb, his is a solid mass, and masses give us our most picturesque effects. Don't you think so, my dear?"

And still no reply.

"Esculapius!"

"Well, my dear."

"Isn't it barbarous of you not to answer when I speak to you?"

"Possibly; at least it has that appearance, but there are mitigating circumstances, my dear. I was asleep. * * *

Two weeks later the Colonel brought his wife to call upon me. She was a showy, loud-voiced blonde, resplendently over-dressed. At the first opportunity her husband motioned me aside.

"Isn't she about the gayest piece of calico you ever saw?" he asked with proud confidence. "Doesn't she lay over anything around here by a large majority?"

"She is certainly a very striking woman," I said gravely, "and one who does you great credit. But I am a little surprised, Colonel. No doubt it was a mistake, but I got the impression in some way that the lady was a brunette."

"The Colonel's countenance fell. 'Now look here,' he said, after a little reflection, 'I don't mind telling you, because your up to city ways, and you'll understand. The fact is, this isn't the one. You see, I went on to 'Frisco, as you advised, and planked down a check for \$500 the minute I got there. 'Now,' said I 'Bob Jarvis don't do things by halves; just you take that money, my girl, and get yourself a ring that is equal to the occasion. I don't care if it's a cluster of solitary diamonds as big as a section of a well-pipe!' Now, I call that square, don't you? Well, God bless your soul, madam, if she didn't take the money and slip out with another fellow! Some white-livered city sneak—beggin' your husband's pardon—wouldn't been hangin' around for a year or more. Of course I was struck when I heard of it. It was this one told me. She's her sister, I could see that she felt bad about it. 'It was a nasty, dirty trick,' she said; and I'll be—demoralized if I don't think so myself, and said so at the time. But, after all, it turned out a lucky thing for me. Now, look at that, will you?"

I followed his gaze of admiring fondness to where Mrs. Jarvis was bridling and simpering under Esculapius' compliments.

"Isn't she a nosegay? But don't you be jealous, madam; she's just wrapped up in me; and constant," he added, shaking his head reflectively—"why, bless your soul she's as constant as sin."

When I told Esculapius of this he sighed deeply. "What is the matter?" I asked, with anxiety. He threw back his head and sent a little dreamy cloud of smoke up through the acacias.

"I was thinking," he said pensively, "what a wild, strange act of vengeance it was!"

I looked him sternly in the eye. "My dear," I said, "don't think you ought to distress yourself about that. I never should have reminded you of it. You were dreaming, you know, and you are not responsible for what you dream. Besides, dreams are like human nature, they always go by contraries."—Argonaut.

The Cause of Beauty in Women.

The *Cornhill Magazine* discussing the reason why physical beauty is prevalent in the aristocratic ranks of Great Britain, argues that it is due to the "constant selections of the most beautiful women of all classes, peeresses, actresses, or wealthy bourgeois, through an immense number of generations," and deduces from this fact that "average personal beauty everywhere corresponds to the average general love for beauty in the abstract." This is undoubtedly true, with the addition that aesthetic taste is the result chiefly of education. Hence it is that the prevailing beauty of American women is remarked by every traveler who comes from beyond the Atlantic. Hereditary forms and features certainly, in the main, are transmitted from generation to generation, but they must be refined by social and mental education, or else the coarse and the sensual will be the rule, even among the titled classes of England. In that kingdom beauty is the exception, not the rule, as the repulsive ugliness of the lower human strata proves, and this is the fact because those strata remain in dense ignorance.

The common school system is the bottom of American beauty. An American girl has the

advantages of a good school education and of average musical training, and although less robust than her British sister, is more spirituelle and refined in skin, color and carriage. There can be no doubt that the love of the beautiful, a resultant of education, beams through the face and adds grace to the person, for it is the province of love to do this in women just as the love of wisdom in men makes them rugged. The late Adelaide Neilson was unquestionably kept beautiful by playing the loveliest of all the characters of Shakespeare. The simulation of similarity. On the other hand, the face of Thomas Carlyle, just deceased, was rugged and severe. In Neilson's case, beauty streamed from her face because her thoughts, derived from and in sympathy with the Shakespearean model, flowed from within to without. In Carlyle's case his face was rugged because his thoughts flowed from without to within. It is utterly impossible for a very great thinker to be facially handsome, and if Sir Robert Peel is cited as an example to the contrary, the answer is that he was a rare exception. Our Webster, Clay and Calhoun were not Apollos; although striking in features and forms. Women cultivate the affections and hence their loveliness, provided they are educated in a taste for beauty; men cultivate the mind, and however great their acquirements the inward flow of thought will sooner or later overwhelm every particle of facial beauty which they might have inherited from a lovely mother. The truth is, and few people ever think of it, there is a certain tendency in men to leave the likeness of their mothers and gravitate toward the likeness of their fathers, and is the surest proof of legitimacy.

To sum up, physical beauty, while a hereditary of inter-marriage, as the *Cornhill* argues, is refined, heightened and every way enhanced by a cultivation of the finest affections and intellectual graces, such as the female heart and mind can bear. Such a woman will be attractive when her looks are silvered, for an inward artist molds her features and makes them a glass through which the emotions are as visible as brilliant colors through a transparent vase.—N. O. Picayune.

Women Who Can Cook.

An English contemporary avers that all Austrian ladies are accomplished cooks. This probably explains why complaints of dyspepsia and stories of immortality so seldom come from Austrian sources. Food properly prepared never disarranges the human digestion or inflames the blood, but such food cannot be had with certainty if the table depend entirely upon the skill and temper of a hired cook. Ladies who manage their own kitchens, or are competent to do so, may be sure that their families will have food that is properly cooked and appropriate to the season. There is something inexplicable about American ignorance of the art of cooking. In Europe even gentlemen take pride in being able to prepare certain dishes, and ladies are glad to be known as practical managers of their respective households. Here, however, strong adults and feeble infants are alike dependent upon the ignorance of the kitchen. Were some of the industry displayed by American ladies in copying foreign customs devoted to kitchen management, on the Austrian plan, we would be a happier and better nation.—N. Y. Herald.

How to Boil and Stew.

To do either properly, the food must be immersed at the beginning in actually boiling water, and the water must be allowed to reach the boiling point again immediately, and to boil for about five minutes. The action of the boiling water upon the surface of either meat or vegetables is to harden it slightly, but enough to prevent the escape either of juices or mineral salts.

After the water covering the food has begun to boil the second time, the pot should be removed to the side of the fire, and the water allowed to simmer until the food is done. This simmering, or stewing, extracts all the nutritious qualities of either meat or vegetables; the pot should be kept closely covered unless for a moment when it is necessary to raise the cover in order to remove the scum. The steam will condense upon the inside of the cover, and fall back into the pot in drops of moisture, if the boiling is slow. Do not think that rapid boiling cooks faster than the gentle process which I recommend.

After the water once boils, you can not make it cook any faster if you have fire enough under it to run a steam engine. So save your fuel and add it to a fire little by little, to keep the water boiling. Remember if you boil meat fast and hard it will be tough and tasteless, and most of its goodness will go up the chimney or out of the window with the steam.

Angel Cake.

Take the whites of eleven eggs, one and one-half cupful of granulated sugar, one cupful of pastry flour (measure the flour after it has been sifted four times), one small teaspoonful of vanilla, one teaspoonful of cream of tartar and six again. Beat the eggs to a stiff froth. Beat the sugar to the eggs and then add the seasoning; add the flour, stirring it in quickly and lightly. Beat until you are ready to put it into the oven; put it into a new pan or a pan that has been put for nothing else, and keep in a moderate oven for forty minutes. Do not grease the pan.

No wise woman who has flowers in her house or garden will throw away her soapuds. They

are a most valuable fertilizer for flowers, and especially for the verbenas. If this floral favorite is plentifully watered with soapuds and its seed vessel picked off, it will flower profusely. Soapuds are good for vines, currant bushes and fruit trees. Indeed, they are food for plants; corresponding to milk for animals, and it is very wasteful to throw them away if there are plants anywhere within reach that may be benefited by them.—Canada Farmer.

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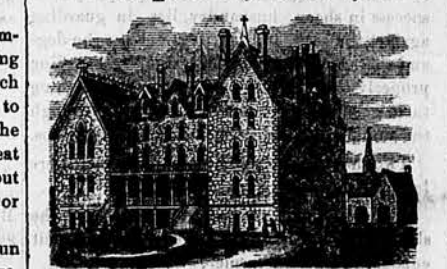
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