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AGRICULTURE.

Raising all, or as near as possible, all your home supplies on the farm, is the forerunner of success.

By planting or sowing corn in drills three feet apart now you can raise a lot of good stuff for winter forage.

In planning out the home garden, the great point is to keep the crops in rotation so that something can be had for the table almost every day until the ground freezes.

Select from the earliest hatched broods the most forward and promising pullets for fall and winter layers, and send the rest to the market as soon as ever they are ready.

For the Southern farmer or planter the mule is indispensable. Unfortunately, in the past, the planter has raised too few mules, depending almost entirely upon the markets to supply him.

When the hens are slow to lay, one of the best invigorators is a mess of lean meat twice or three times a week. About an ounce for each hen is sufficient at a meal.

INCREASING HAY YIELD.

Correspondence of the Progressive Farmer.

It is an astonishing fact that the majority of Southern farmers spend at least three months out of every twelve killing their very best friend in their efforts to get rid of the natural growth of crab grass that grows so luxuriant all through the South on all well-cultivated and fertilized land.

It is trite saying that it takes brains to run a farm, and some men who are farmers are totally unskilled in their calling, and others if suited are so hedged around with old notions and prejudices that they will never leave the old ruts and system that were in vogue sixty or more years ago.

The majority of farmers work very hard and accomplish all that they think it possible to do in a certain time and during the season at their disposal, but if with this hard work they are unsystematic they are simply throwing away so much time and energy. This fact will be very forcibly impressed on any one travelling through some sections of our Southern States in the fall of the year on seeing so much valuable hay left to rot in the fields, when it might have been saved and used to advantage either for market or feeding at home.

On visiting the various country stores one is impressed with the fact that all hay for sale is baled timothy shipped in from the North or West; once in a while one comes across a bale of crab grass hay, but it is very seldom indeed. Now this crab grass hay is one of the most valuable products of the Southern farm, and being an annual the yield of it is very much increased by judicious fertilizing, it grows spontaneously and the better the previous cultivation the heavier the growth of it.

We never have it on new land, but after the second year's cultivation it is sure to come to the front; it makes far superior hay to timothy, and stock that are used to it will not eat any other kind of hay as long as they can get it, and every farmer in the South can have all of it he wants if he retains his crop in a judicious manner, and the best of it is that it will grow after another crop has been taken off. I always get a good crop of it every year after my corn crop is harvested.

This is done by leveling the land by means of a V shaped harrow at the last working of the corn and cutting the corn stalks close to the ground with a very sharp hoe. If the corn has been well fertilized, particularly with potash, the hay don't require any more fertilizing, but if not, a hundred pounds of cotton seed meal and four hundred pounds of kainit at the last working of the corn will prove a good investment, if the season is favorable. I can some times cut two crops of hay from the corn field before cold weather, thus making three crops in one year off the same land.

Oat stubble plowed under and kainit broadcast at the time of plowing has all ways given me a very satisfactory crop and often two crops. I always get a good crop of hay from my early tomato patch, some times two cuttings and often three, and after the straw berries are through bearing, we have got to let the grass grow on the bed to protect the plants from our hot summer Southern sun and it has always given me two cuttings and some times three, and I might go on indefinitely repeating the same thing, but I have always noticed that the crops that got the most potash always gave me the best crop of crab grass hay. In my orchard, I always cut two or three times the grass that grows so luxuriant and the years that the crop of fruit is light are the years that the crop of hay is best and potash gets in its best work in the orchard. The general rule with the orchard is to keep it well cultivated up to within a few weeks of the fruit ripening and at the last cultivation scatter cotton seed meal and work it in the soil for hay, but lately I have been using kainit as well, and I find a great improvement, both in quantity and quality. I use about four hundred pounds of kainit per acre as a general rule, some times more and some times less, according to previous fertilizing and general state of the soil. Now the question is often debated among my

neighbors as to the cropping of hay impoverishing the soil; the Southern farmer believes in letting it rot where it grew. I believe in cutting it, and by so doing I improve the quality of the soil; because the stubble growth it afterwards makes has fifty roots for the one it previously had, and by plowing under this stubble, roots and all in the fall of the year after all growth ceases, I improve my land a great deal more than the man who allows his hay to rot where it lies, and plows his land in the spring just in time to get his spring crop, and I have hay for my stock all the year round and they are fat and sleek, whereas his roaming the woods and in the winter are nothing but skin and bone.

I could go on for quite a while on this hay question, but enough for the present. Will come back to it again soon, as it is a very important one, and we are now at the season of the year when we ought to be preparing for it. C. K. M. QUARRIE, De Funick Springs, Fla.

Keep the chicken coops free from lice by frequently washing them with kerosene or lime wash and put a drop of sweet oil on the heads of the little chicks once a week. A little sulphur fed in soft food once or twice a week is an excellent means of keeping down lice on hens and chickens.

THE TIME TO SOW BUCKWHEAT.

In many places buckwheat is largely grown on land that is too wet to be got into condition for other crops, because it is one that will succeed better with late seeding than will any other. The rule used to be to sow on or about the fourth of July, as this late seeding delayed blossoming and filling until cooler weather, and thus lessened the danger of the blossom blasting without filling. There is always a crop of early buckwheat from seed that was scattered in the harvest the previous year. But we never knew this early sown buckwheat to fill, except a piece that grew in an orchard where the tree shade doubtless prevented the crop blasting, as it would in July if filling then exposed to the sun. But the crop, even in the orchard, hardly paid for gathering, as the plants were checked by the draw of moisture from the ground by the trees, and were both small and thin on the surface. But though buckwheat should not be sown until about the first of July, it is best to have the ground plowed two, three or more weeks before that time, so that the seed when sown may have an even start and rapid growth. Much un-drained clay land is every year sown with buckwheat, because the ground cannot be got ready for any earlier crop.

SUPPLEMENTARY CROPS.

I have some times thought that almost every farmer succeeds well along the line of his standard crops when seasons are good or prices are right, but when the unexpected happens only the few who are always alert and wide awake are prepared for the emergency. The winter may have been a little longer than expected, grass a little late in coming so there was doubtless a shrinkage in weight of stock and possibly entire loss. This seriously affects the profits of the year's farming. But this is in the past and the thing to do now is to provide against a quite common loss that occurs in mid-summer, the "dry spell" of the year, for it is pretty sure to come.

The extreme dry weather in the interior last year will undoubtedly have its effect on meadows and pastures this year and there will be a shortage.

There are many crops that can be sown or planted that will make extra feed to cut off, to supplement the pastures for a few weeks and thus save loss. Common corn, sweet corn, millet, turnips, pumpkins, and others fill up the season, but we think nothing so good as some of the sorghums. A bushel of the common sorghum seed sown broadcast or drilled on acre of ground would be as good an investment in this way as we could suggest. The Kafir corn is splendid for this purpose, either planted with four to six times as many stalks as you would of corn, but not so many more in a hill, but have the rows closer together and the stalks closer in the row, or you can sow it broadcast one half to three-fourths of a bushel per acre. W. E. Hutchinson, of Kansas, gives my opinion exactly when he says: "Those who have tried it one year like it; those who have tried it two years praise it; and those who have tried it three to five years pity your ignorance if you have never found out about it." Five pounds will plant an acre. J. M. RICE, Winview, Okla.

WEEKLY WEATHER CROP BULLETIN.

For the Week Ending Saturday, June 6, 1896.

CENTRAL OFFICE, Raleigh, N. C. The reports of correspondents of the Weekly Crop Bulletin, issued by the North Carolina Station, for the week ending Saturday, June 6th, 1896, indicate in general fair progress in the growth of crops and in harvesting. The temperature was below the normal every day, excepting Sunday (May 31st) and Saturday (June 6th), but the deficiency was not excessive and did little damage, except to retard growth of cotton and cause a little yellowing. The rainfall was considerably above normal, and, though too much rain occurred at many places, yet the thorough breaking of the drought almost everywhere throughout the State compensates for any other disadvantages. There was less than half the normal amount of sunshine.

EASTERN DISTRICT.—The past week has been cool and cloudy, with frequent rains, setting in fair and warmer on Saturday. It is still dry over limited portions of the middle coast, but in general, emeralds have fallen over the district this week. In the north, from Halifax eastward to Chowan, and especially over Gates county, there was too much rain, causing corn to turn yellow and drowning some on lowlands, besides making crops very grassy and preventing farm work. In the south gentle rains were just suited for growth of crops, which progressed rapidly here and are clean. Corn generally is fine, much of it in silk and tassels, and being laid by. Cotton in south loks well and clean, good stand, first forms reported June 2d; in north it is not so good on account of cool weather. Lice reported on cotton in several places. Transplanting tobacco over, crop growing well, but worms have appeared in abundance. Farmers almost through setting sweet potatoes. Shipments of Irish potatoes and beans proceeding. Irish potato crop generally poor; fine tops but no tubers. Cutting wheat and planting field peas now in order. Blackberries and huckleberries now in market.

CENTRAL DISTRICT.—Cool and cloudy weather prevailed, with plenty of rain and deficiency of sunshine until Saturday. Over most of the district the rain fall was gentle and beneficial, but heavy rains washed lands in a few counties (chiefly Guilford and Randolph). Grass is increasing among crops and farmers are getting behind with their work, but a week of fair weather will remedy this state of affairs. Corn is extra promising, and is being laid by slowly. Harvesting wheat is in full blast, with crop short but heads well filled; some fields were tangled by rain and wind, and some damage by chinch bugs still reported. Oats apparently not so bad as expected, and spring oats improved during past two weeks. The greater part of the cotton crop continues in good condition, almost all chopped, and forming cog in south; on light, thin lands cog nights caused a little yellowing. Lice reported at many places. Tobacco nearly all transplanted, except where drought prevented (Forsyth county), where setting is progressing, crop growing well. Irish potatoes poor. Sowing peas on stubble land.

WESTERN DISTRICT.—Fine rains occurred on the 3d and 4th, breaking the drought almost everywhere, and greatly benefiting all crops. Oats were improved by the showers though much of the crop has been injured beyond recovery by the drought. Corn and cotton are doing finely since the rains. It was a fine season on tobacco plants recently set out, and also on potato slips. Rain assisted greatly in bringing up late planted cotton. Peas are being planted in fields now. Grapes are generally reported as doing nicely. Harvesting of wheat was the chief work of the week; crop short, but grain good. Rain stopped work, but crops not suffering for want of cultivation.

HOW TO MEASURE LAND.

Make a light and straight pole six feet and a half feet in length, and mark feet and a half feet on one side, and on the opposite side divide the sixteen and a half feet into spaces representing the length of links in the chain of a surveyor, says a good authority. A surveyor's chain is sixty six feet in length, containing 100 links. Hence, a pole sixteen and a half feet long would be equal to twenty five links. A link is 7.92 inches in length. With dividers one can indicate twenty five equal spaces or links on one side of the pole

in a few minutes. Let the pole be oiled or painted, and be kept under shelter where it will not spring by being exposed to alternate rain and sunshine.

Now, in order to measure an acre of land, multiply the number of rods (or the lengths of the pole) on one side of the plot by the number of rods on the end of the plot, and divide the product by 160, the number of square rods in one acre. For example: A plot eighty rods long and two rods wide will make one acre. A plot forty rods long and four rods wide is equal to an acre. A plot twenty rods long by eight rods wide will embrace 160 square rods, equal to one acre. A plot twelve and a half rods on each side, if the lines run at right angles, will embrace (approximately) a square, or 156 square rods.

When a plot is not lined out at right angles, if (the square plot) will not embrace as much ground, although the length and width are the same as there is in the square plot. A fourth of an acre, or even a tenth part of an acre may be lined out with the angles so acute as to measure as many lineal feet as the length and side of a square acre. One can make a rude square of two pieces of lath that will enable him to line out land at a right angle, unless it is important to proceed with the accuracy of a surveyor, indicated by his compass.—Massachusetts Ploughman.

CHEAT.

We hear much complaint of cheat in winter oats. This is always the case when the crop is killed out by the winter frosts. Do not blame the seed oats. Neither oats nor wheat ever turn to cheat or ches. The cheat seed was in the land or has been sown there with some crop at some time and only wanted a favorable opportunity to germinate and grow. This is afforded it by the killing out of the oats and wheat, and it now asserts itself. It is as distinct botanically from oats and wheat as are the other grasses from the same grain. Cut the crop down whenever it appears before it seeds, or it will at some future time again assert its right to grow and plague you.—Southern Planter.

GRASS FOR PIGS.

Exercise, good air, and sunshine play a much greater part in pig raising than most people commonly suppose. It is for this reason that the western practice of relying quite largely on grazing for the nourishment of swine is so successful, says Farm News. This has never been so clearly demonstrated as by a series of pig feeding tests extending over four years, made by Mr. A. A. Mills, of Utah. We give the results below:

1. Pigs allowed to run at large over eighteen acres of good pasture and fed a full ration of grain made the most rapid growth and required the least grain for one pound of gain.

2. Pigs confined in movable pens in the pasture grew more slowly than those running loose, and required an increase of twenty per cent of grain to make one pound of growth.

3. Pigs at pasture, fed under three different conditions, gained 92.5 per cent more and ate but two per cent more than the pigs getting grass and otherwise similarly fed, but confined in pens. The grain required to produce one pound of gain was increased forty per cent, with those in pens over those in pasture.

4. Pigs fed but part rations of grain at pasture made satisfactory gains. Those at pasture getting the three-fourths grain ration gained more than those fed a full grain ration and grass, either in the yards or in the pens.

5. Pigs pastured without grain made about the same growth for three seasons in succession, this averaging .36 of a pound per day.

6. As nearly as can be judged, exercise alone increased the gain 22 per cent, and the amount eaten but 1.5 per cent, but decreased the amount required for one pound gain 22 per cent.

7. Grass when cut and fed green to pigs, whether fed in pens or yards, or with full or part grain ration, or without grain, proved to be of very little value.

8. Pigs confined in pens and fed on grass alone, mostly lucerne, for 31 days, lost over a quarter of a pound per day.

9. The average of the pigs fed on grass gained a little more than those without the grass, but not enough to pay for the extra feed in the grass.

10. With the pigs confined in the hog-house pens, the grass proved beneficial, while with those in the yard it proved detrimental, the latter requiring more grain to make a pound of pork with the grass than without it.

THE DAIRY. BUTTER PRODUCTION.

Correspondence of The Progressive Farmer.

For a good many years there has been a tendency towards the factory or creamery system of butter making that the belief has become quite common that more butter was being produced in this country that way than on farms. But the following from "Statistics of the Dairy" by Henry E. Alvord, Chief of the Dairy Division, gives information on the subject that will surprise many. It is as follows:

"The most noteworthy fact in connection with the production of butter on farms is that, notwithstanding the great extension of the creamery system and the decline in the amount of butter annually exported, such production has increased even more rapidly than population. To go back to the census of 1850, it is found that the total production of butter on farms in 1849 was 313,345,396 pounds, or 13.51 pounds per capita of population. In 1860 the amount reported was 459,681,572 pounds or 14.92 pounds per capita. In 1870 the amount reported was 514,092,683 pounds, which gave an average of only 13.33 pounds for each inhabitant. Up to this time there had been no creamery butter reported, but in 1880 the production of farm butter averaged 15.50 pounds for each inhabitant, and that of creamery butter 0.58 pounds for each inhabitant, the total average being thus 16.08 pounds. At the eleventh census, however, the production of butter farms on alone averaged 16.38 pounds per capita of the population, and such had been the increase in the production of butter in creameries that the total production of butter averaged no less than 19.25 pounds per unit of the population."

A further reading of Maj. Alvord's report shows that in 39 States and Territories, considering the two Dakotas as one State for the convenience of comparison with the statistics of 1879, there has been an increase in the production of farm dairy butter. As a rule the increase has been greatest in the States where the greatest extension of the creamery system has taken place, including such States as Wisconsin, Minnesota, Iowa and Nebraska.

With the above facts before us it will not do to ignore the farm dairy butter interest. It will be seen that the eleventh census shows that more than five and one-half times more butter is made in farm dairies in this country than in factories or public creameries. Is not the farm dairy interest worth looking after, and will it not pay to do all that can be done to improve the quality of farm dairy butter produced? The writer's answer is, yes. He believes that will be the answer of many. Again is it not high time that dairy farmers should organize? F. W. MCKELEY, Clinton, Iowa.

IMPURITIES IN MILK.

The processes of manufacturing butter from milk have passed through a wonderful development in recent years. There is no doubt that the separator removes some impurities from cream that other processes of skimming milk would not. The cream from the separator is consequently that much cleaner and nearer free from dirt, which may be the origin of fermentations that will develop a bad quality in butter. This quality of the separator is no excuse for carelessness in handling the milk which is to be skimmed by it. Dirt does not belong in milk, says a writer, and though the separator may be able to remove a part, it cannot be depended on by the milk producer to annihilate all the defects with which milk may be inoculated by impurities.

THINGS TO THINK ABOUT.

One of my mistakes in dairying is that I have been keeping some poor cows. I have been figuring on the difference in profit between a good cow and a poor one, and I find that a good one is cheaper at \$100 than a poor one as a gift, provided I must keep each for four years. This is the way I figure it: The good one will make 300 pounds of butter in a year, which, at 25 cents, would amount to \$75. During this time she will consume about \$40 worth of feed, leaving a profit of \$135, or \$140 in four years. On the other hand, the poor cow will make 160 pounds of butter, which, at the same price, would amount to \$40. She will consume, say, \$35 worth of feed, leaving a profit of \$15, or \$20 in four years. The difference between \$20 and \$140 is \$120, in favor of the good cow. I will certainly have to give the P. F. credit for making me think of this, and hereafter when I get a poor cow I shall sell her for as much as I can get, but sell her I will, and quickly, too.—George H. Brown, in Practical Farmer.