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Agriculture.

THE OAT CROP AS A FORAGE.

Corresponding Editor Irby Discusses the Subject.

Editorial Cor. of The Progressive Farmer.

Many farmers refrain from sowing oats because they cannot make a good grain crop; but that fact need not cause them to lose the use of this valuable crop for feed. In the spring, or early summer, there is always a scarcity of forage, and especially something fresh and appetizing to the cattle and horses. The oat crop of North Carolina generally is rather poor in grain compared with other sections; but the rest of the plant is good. It is not uncommon to see an oat crop four feet high and sown rather thickly. This, as can readily be seen, will furnish a large amount of forage.

For the benefit of those who are not already growing this valuable crop, and who would like to do so, I will give my methods of growing. In the first place, I try to have a clover sod, or a pea or stubble on which to sow it, as the oat crop calls for a large amount of nitrogen to make its best growth. This element is furnished abundantly by either the clover, or the pea crop. Many pounds of available nitrogen will be left on each acre by these two legumes. Strange to say, the oat crop takes out less nitrogen from the soil, but requires more in the soil for its growth than does either of the aforementioned crops.

The piece of land having been selected, we will now consider the rest of the work. If a stiff soil of any kind, turn under with a two-horse plow or with a disc-plow. This puts the stubble in deep and thereby lightens up the soil, rendering it porous and sponge-like. This enables it to hold an abundance of water, with which to tide over droughts, and it also allows the air to penetrate deep into the soil. The air, of course, is the great disintegrator, acting chemically on the soils, rendering soluble the plant food locked up in varied combinations.

On light soils this loosening up process is unnecessary, and a light plowing is all that is necessary. The work of a good cutaway harrow will be quite sufficient. Certainly that of a single horse plow will answer.

After the breaking the grain should be sowed. If best results are sought for, then the land should be treated with commercial fertilizer, to give the crop a good start and enable it to get deep rooted before cold weather sets in. If the whole crop of peas, or of clover was turned under, then the application of nitrogen in the fertilizer will be unnecessary.

Nitrogen costs this year just three times as much as the potash or the phosphoric acid. So if possible, this expense should be saved. If the legume crop was light, I would certainly make up a complete fertilizer. For this I would use the following formula, provided the cotton seed meal can be obtained cheaply:

Cotton seed meal,	700 pounds
Acid phosphate,	1,000 "
Kainit,	300 "
	2,000

Where the soil is rich already in nitrogen from the peas, then I should use the following:

Phosphoric acid,	1,400 pounds
Kainit,	600 "
	2,000

A ton of the latter mixture will be much cheaper than the former. Apply 400 to 500 pounds per acre, broadcast just after plowing and then sow the seed, putting on about two or three bushels. Some call this amount too much, but we are sowing for forage and not for grain.

Next run over the land with an ordinary cutaway harrow or with a spring-tooth harrow. This covers the oats and fertilizer, and levels off the land. Then the smoothing harrow should follow, and a drag or a roller should follow next. If the land is sandy, the roller is especially good, but if a heavy clay, then it is not necessary.

If desired, crimson clover or hairy

vetch could be sown with the oats, as both come off about the same time. Cut about one week before the crop matures, and the loss in grain will be more than made up by the gain in a fine quality of hay. Cut with a mowing machine, and treat as you would any hay crop. Curing with as little exposure to weather as possible is best. Cut one day, after dew is off, allow to lie on ground until the next day, then rake up in windrows after the dew is off. Third day rake heaps on the windows in the morning, and put up in cocks in the afternoon, being careful to put up in good snug piles and cap off to prevent rain from getting in the crown. Flat piles will ruin if it rains much before it is hauled into the barn.

Hay caps are quite helpful in curing hay, and no well-equipped farm should be without them. If those who are disgusted with the oat crop for grain will try the above plan, I am sure they will be pleased.

B. IRBY,
Agriculturist N. C. Exp't Stat'n.

AGRICULTURAL INTERESTS AT THE CAPITAL.

Interesting Matter From the Department of Agriculture—The Grout Bill—Rural Free Delivery.

Correspondence of The Progressive Farmer.

Rural free delivery of mails is proving a great success. Postmaster-General Emory Smith has framed his estimates to be submitted to Congress and will ask an aggregate of about \$3,500,000 for the rural free delivery service. By the close of this fiscal year, 4,300 rural free delivery routes throughout the United States will have been established and the general extension contemplated for next year will involve about 4,500 additional routes.

The preliminary estimates of the average yield per acre of corn in 1900 as published in the monthly report of the statistician of the Department of Agriculture, is 25.3 bushels as compared with an average yield of 25.31 bushels in 1899 of 24.76 bushels in 1898, and a ten year average of 24.1 bushels.

The following figures I have compiled for The Progressive Farmer from those given out:

Average 1900 corn yield per acre in bushels: Virginia 16, North Carolina 12, South Carolina, 7; Tennessee 19, Georgia 10. Average for the United States, 25.3.

Average quality of 1900 corn: Virginia 80, North Carolina 86, South Carolina 75, Tennessee 83.

Average 1900 yield of Irish potatoes per acre in bushels: Virginia 58, North Carolina 61, South Carolina, 78, Georgia 68, Tennessee 54. Average for United States 80.8 bushels.

Average 1900 yield of sweet potatoes per acre in bushels: Virginia 83, North Carolina 88, Georgia 85, South Carolina 61, Tennessee 76. In quality North Carolina and Tennessee stand head, each having 89.

Average 1900 yield of tobacco per acre in pounds: Virginia 545, North Carolina 490, South Carolina 750, Tennessee 660, Georgia 475.

While the average yield of 1900 hay in the United States was only 1.28 tons, the average in North Carolina was 1.41, Virginia 1.16, South Carolina 1.32, Georgia 1.69, Tennessee 1.18. The average quality was in United States 89.7, in North Carolina 92, Virginia 84, South Carolina 84, Georgia 96, Tennessee 86. With such an excellent showing, the people of these States, especially the Georgians and Tar Heels, ought to ponder on the advisability of growing more hay. Of the States named above, North Carolina had the best apple and grape crops.

The preliminary estimate of the cotton crop based upon reports from the Department's regular correspondents from ginners and individual planters will be issued this month.

Much interest is shown in the Grout bill which will come up in Congress Dec. 6th. In the Fourth North Carolina District during 1898 and 1899 the internal revenue collections from oleomargarine sales amounted to \$218; in the Fourth, \$212. Several North Carolina Congressmen voted against the Grout bill last spring.

Washington, D. C.

HARRY FARMER'S TALKS.

Correspondence of The Progressive Farmer.

Make a shelter for the sows and pigs. Wall it up on three sides, north, east and west. A farmer built a house and placed one sow and pigs in it. He had another sow and pigs as near equal to the first named as he could get them, which he let run out and make their beds where they could. He gave the first lot just half the feed given to the latter, with the result a decided advantage in favor of the housed hogs.

Be careful not to save all your eggs to sell on Christmas Eve. The market is apt to be lower then than it is a week or ten days before Christmas.

Don't forget Santa Claus. The little ones always should be made as happy as possible. When you go to purchase something for the small boy, a few useful little tools will often give more pleasure than anything you can buy. For instance, a hatchet, saw, drawing knife, &c.

Do you buy meat for your farm? If you do, plan this winter to stop it. Meat can be raised in this State as cheaply as in the West. Sow some oats or rye, about 1 acre for 8 or 10 pigs, or about an average of that. As soon as it begins to ripen turn the pigs on it. Plant another piece of land in cow peas about the same as that sown in oats or rye some time in late spring or early summer. Use an early variety.

About the 10th of July you can put your hogs on the peas. Now plow the field first pastured in small beds about 3½ feet apart and plant it in cow peas. You may let the pigs run in this field again three or four weeks from time of planting and they will keep the grass and weeds down so that the peas can grow.

You can feed your pigs three or four months this way and make meat at a cost of 2½ or 3 cents per pound. The pigs can be finished on sweet potatoes or corn.

Your land will steadily improve used in this manner.

HARRY FARMER,
Columbus Co., N. C.

HOKE SMITH TO THE COTTON GROWERS.

No speech delivered before the recent meeting of Cotton Growers at Macon, Ga., has attracted so much attention as that of Hoke Smith. In part, he said:

"While cotton today brings 10 cents a pound, it has only been three years since the crop was selling at 5 cents. What are the elements which have caused this variance in prices? Recognizing the laws of demand and supply, we must see that the depreciation in the price of cotton has been due to a production of the staple in excess of the demand for manufactured goods. A knowledge of the supply of cotton and of the demand for cotton goods for consumption will enable the producer to tell at the time of the year when cotton is picked and price at which lint cotton should sell. Another cause which has facilitated the depreciations of prices at the time cotton left the hands of the planter has been the unbusiness-like plan of selling it.

"More than 70 per cent. of the cotton which is used in the great cotton mills of the world is raised in our section. The mills run during twelve months. They need the cotton as much in July as they do in December. The plan of selling has disregarded the time of consumption. Instead of handling the crop so that it would be sold from month to month during the year, as the mills required it for use, it has been the practice of the planters in the South to rush their cotton on to the market during the period limited almost to two months, forcing its purchase by speculators, rather than holding the crop until the consumer or mill owner came after it. I am thankful to say that east of the Mississippi during the present year the planters have been informed as to the extent of the crop and as to the world's demand for their cotton. Realizing that it was worth at least 10 cents a pound, or more, they have declined to sell it for less. They have received 10 cents

for all they have sold. By the co-operation of the merchants and the bankers they have been enabled, so soon as the buyers succeeded in depressing the price, to take their cotton off the market, and as a result they today see the price of cotton going back to the figures at which it sold during the month of September, and I have no doubt the balance of the cotton crop thus cared for by our farmers will bring them over 10 cents a pound. This price, however, could hardly have been realized had the farmers raised 4,000,000 bales more of cotton.

There are three questions of vital importance which affect the price of next year's cotton crop. They are: How much will the mills of the world consume in 1902? How much lint cotton will the balance of the world produce for other than domestic consumption in 1901? How much will we produce in the South in 1901?

"Fifty years have shown an increased demand for cotton goods, causing an increased demand for lint cotton of about 700 per cent. While the next decade may not show a proportionate increased demand, I have no doubt that by the end of 25 years the manufacturing of the world will consume over 30,000,000 bales of cotton annually.

"While the Southern planter should aim at receiving for his lint cotton its full market value, care must be taken that the South shall maintain her supremacy as the cotton-producing section of the world. England, Russia and Germany have devoted and are devoting great attention as nations to cotton culture. The United States, through the Agricultural Department at Washington, should give cotton culture a full proportion of attention and should furnish reliable information of the progress which is being made abroad in this great American staple.

"Accurate information should also be prepared by the Agricultural Departments of the States which are engaged in producing lint cotton, to the end that the planters may obtain before planting their crops the probable world's supply, and later on in the season when the time for beginning to sell cotton arrives, the planters should be reliably acquainted from these and other sources, with the probable product of our own cotton-raising section."

CURING MEAT AGAIN.

A Forsyth County Farmers' Plan.

Correspondence of The Progressive Farmer.

I have tried all the plans reported by Mr. Jones in The Progressive Farmer and discarded them long ago. Here is my plan: Kill, cut up and lay out. Add salt while warm. Let lay overnight, then salt down hams and shoulders in box. Let lay four or five weeks. Then take out and hang up in a good dry place, and let hang and dry till last of February or first of March. Then I take down and dust on or rub on, on end of hock and flesh part, black pepper and powdered borax. No need to apply on skin part. Do this well and you will have no skippers, no dust, no rust, but nice, clean sweet hams and shoulders.

HOW TO KEEP SAUSAGE FRESH THE YEAR ROUND.

Stuff in casing. Hang up and let dry six or eight days. Take down, cut in pieces for table. Put in good deep frying pan and fry slowly until done. Then pack them down in tin can closely. Let set till cold and then pour over hot lard till covered. Be sure to get all the water out and they will keep the year round nice, sweet and fresh. S. A. HAUSER,
Forsyth Co., N. C.

North Carolina stands third on the list of States producing the largest quantities of chewing and smoking tobaccos—34,952,401 pounds—and is only surpassed by Missouri and Kentucky. North Carolina has 29 manufacturing factories producing cigars and the output last year was 10,838,794. She also produced 994,396,500 cigarettes, using for that purpose more than 5,000,000 pounds of tobacco. In all she has 155 factories which last year turned into the finished product 46,290,962 pounds of raw tobacco.

SHREDDING CORN.

A Scotland Farmer's Interesting Experience. Correspondence of The Progressive Farmer.

Noticing several articles in The Progressive Farmer advising the farmers to make arrangements to shred their corn, I thought perhaps I could interest your readers by giving the result of my experiment in that direction this season.

To begin with, I bought one of the smallest shredders on the market. It weighs 500 pounds, and cost \$50. The manufacturers claimed that it could be run by a two-horse tread or a four-horse sweep power, but I had a six-horse engine and so proceeded to run it with that. (And brother farmers let me advise you, in buying machinery, always buy what is claimed to run with less power than you have; too much power is all right, but too little is all wrong). Some shredders shuck the corn but this only claims to snap it off the stalk and shred the stalk. It really shucks from one-third to one-half the corn and slip-shucks the balance. The stalk is shredded in little bits more nearly resembling pea hulls than anything I can think of and is eaten readily by both horses and mules, the only waste being the hard pieces of stalk near the bottom, composing probably 10 or 15 per centum of the whole bulk.

From this it is easy to see that shredding completely solves the rough food problem. The average one-horse farmer who raises ten acres of corn and "pulls" from two to three thousand pounds, of fodder at a cost of 75 cents per hundred, can cut and shuck the corn with the same labor that is required to pull the fodder, he can get it hauled to the shredder in less time than he can pull down and haul the corn, get it shredded for \$1 per acre, and have ten thousand pounds of feed instead of two thousand. These facts should teach North Carolina farmers that it is high time to quit buying Western hay. Besides being the cheapest feed available, corn stover is a great improvement on hay, either shipped or home-made in one particular, to-wit: dust. It is quite the cleanest feed we can have in this sandy country as all hay is more or less dusty.

I have also invested in a corn and cob mill, which I regard as a greater feed saver than even the shredder. I will give you my experience with that later. E. F. MURRAY,
Scotland Co., N. C.

BURKE STOCKMEN ORGANIZE.

The Burke County Stock Association was recently organized at a meeting held in Morganton. The following officers were elected:

- Walter Forney, President.
- C. B. Kincaid, Vice-President.
- J. W. Avery, Secretary.
- C. A. Edmondson, Treasurer.
- Robert Winkler, D. C. Beck, J. D. Alexander, W. C. Gibbs and Vance Powell were elected a committee to look after the general interests of the Association and report any violations of quarantine laws, &c., at the meetings of the Association.

The next meeting will be held in the court house on Saturday, the 8th inst.

A reader asks how he may obtain the bulletins of the Department of Agriculture, the publication of which is noted from time to time in these columns. All Department bulletins or reports intended for free general distribution may be had on application to Hon. James Wilson, Secretary of Agriculture, Washington, D. C. The title of the bulletin and its number if possible should be mentioned in the request.

The shredder grows in popularity. Here's an item from the Laurinburg Exchange: Every one should see the new corn cutter and shredder of Messrs. Blue & Fairly which is managed by Mr. J. R. Jordan. The cutter is driven through the fields, cutting down corn, stalk, fodder and all, and bundling it. The bundles are then carried to the shredder which removes the ear and shucks it completely and cuts the stalk and fodder into good stock feed.

Horticulture.

NEW VARIETIES OF GRAPES.

Correspondence of The Progressive Farmer.

Mention is constantly being made of new varieties of grapes which have equal if not superior virtues to the old ones, but in my opinion it does not pay to raise these commercially on a large scale until their market value has been thoroughly tested. The fact is the grapes most in demand are the Concord, Delaware, Niagaras and Catawbas, with some call for the Isabella, Vincennes, and occasionally a few other varieties. When is there actually a demand for any of the so-called new varieties? The eating public has not yet cultivated any taste for them, and it seems satisfied with the four or five varieties now in general use. Of course if some of these new grapes should prove far superior to any of the old varieties there would be a call for them, and they would soon find an outlet. But at present they are sold to the wine merchant in trays at less than two cents a pound, sometimes as low as one cent. It is not because they do not possess good qualities, but because they have not proved themselves superior to the old established varieties, and lack the reputation of the former.

It is possible to find new varieties, I suppose, that will in time make their reputation. Moore's Early, for instance, is raised in the South for the early markets, and a good sale. This is due to the fact that the grape can be raised at such an early period that it reaches market while there is little or no competition. The quality which sells it is that of earliness. When a grape is found that will ripen a week or two earlier than this, it will pay to raise it for market, or if one can find a grape that keeps better through the winter than any raised at present, there will be commercial demand for it that will make it profitable to raise.

We have too many grapes recommended now. They are recommended because somebody has found pleasure in raising a few. They are excellent for household use, and I would advise every grower to raise a few of every good variety known. But do not plant them for commercial purposes. As good as or a little superior to Concord or Niagaras will not do. They must be away and above superior to these to command commercial attention. Until we find a grape that can command this enviable position, my advice would be to stick to the old, well-known reliables. They will make more profits for you in the end than all the so-called new varieties.

S. W. CHAMBERS.

FALL PLANTED TREES.

Correspondence of The Progressive Farmer.

This seems to me a very timely subject and a few things experience has taught me regarding it may not be out of place in The Progressive Farmer.

Where one can oversee the digging and transplanting of fruit trees in the fall there is less likelihood of their being set back by the change. It is a crying shame in many parts of the country to see the utter indifference with which nurserymen take up trees sold to farmers and ship them to their destination in a condition that will cause total or partial failure. The only way to make them more careful is to have inserted in the purchasing contract a clause requiring the nurseryman to make good any trees that die from exposure of roots or poor packing when shipped. As a rule it is safer to get your trees as near home as possible. In some localities it is not wise to do this on account of lack of any nursery where good trees can be found. It is the only absolutely safe way to drive your team to the nursery and have the trees dug up as you buy them, insisting that the roots shall not be disturbed, and that a good ball of frozen earth be taken up with each one. There are plenty who will tell you that it does not hurt young trees to be dug up in the late fall, and even if the roots are disturbed it matters little. That sort

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