

THE INDUSTRIAL AND EDUCATIONAL INTERESTS OF OUR PEOPLE PARAMOUNT TO ALL OTHER CONSIDERATIONS OF STATE POLICY.

Vol. 10.

RALEIGH, N. C., NOVEMBER 12, 1895.

No. 40

THE NATIONAL FARMERS' ALLIANCE AND INDUSTRIAL UNION.

President—J. F. Willetts, Topeka, Kan.
Vice-President—H. C. Snavely, Lebanon, Pa.
Secretary-Treasurer—Col. D. P. Duncan, Columbia, S. C.

EXECUTIVE BOARD.
H. L. Loucks, Huron, S. D.; Mann Page, Brandon, Virginia; I. E. Dean, Honeyoe Falls, New York; H. C. Demming, Secretary, Harrisburg, Pennsylvania; Marion Butler, Raleigh, N. C.

JUDICIARY.
B. A. Southworth, Denver, Colo.
B. W. Beck, Alabama.
M. D. Davis, Kentucky.

NORTH CAROLINA FARMERS' STATE ALLIANCE.

President—Dr. Cyrus Thompson, Richlands, N. C.
Vice-President—Jno. Graham, Ridge-way, N. C.

Secretary-Treasurer—W. S. Barnes, Raleigh, N. C.
Lecturer—J. T. B. Hoover, Elm City, N. C.

Steward—Dr. V. N. Seawell, Villanow, N. C.
Chaplain—Rev. P. H. Massey, Durham, N. C.

Door-keeper—Geo. T. Lane, Greens-boro, N. C.
Assistant-Door-keeper—Jas. E. Lyon, Durham, N. C.

Sergeant-at-Arms—A. D. K. Wallace, Rutherfordton, N. C.
State Business Agent—T. Ivey, Raleigh, N. C.

Trustee Business Agency Fund—W. A. Graham, Machpelah, N. C.

EXECUTIVE COMMITTEE OF THE NORTH CAROLINA FARMERS' STATE ALLIANCE.

A. F. Hileman, Concord, N. C.; N. C. English, Trinity, N. C.; James M. Mewborne, Kins on, N. C.

STATE ALLIANCE JUDICIARY COMMITTEE.

John Graham, Gatesville, N. C.; Dr. J. F. Harrell, Whiteville, N. C.; T. J. Candler, Acton, N. C.

North Carolina Reform Press Association.

Officers—J. L. Ramsey, President; Arthur Butler, Vice-President; W. S. Barnes, Secretary.

PAPERS.

Progressive Farmer, State Organ, Raleigh, N. C.
Caucasian, Raleigh, N. C.
The People's Paper, Raleigh, N. C.
The Yellow Boy, Raleigh, N. C.
The Flow-Boy, Raleigh, N. C.
Carolina Watchman, Raleigh, N. C.

Each of the above-named papers are requested to keep the list standing on the first page and add others, provided they are duly elected. Any paper failing to advocate the Ocala platform will be dropped from the list promptly. Our people can now see what papers are published in their interest.

AGRICULTURE.

Those who keep but one cow and save the cream until a sufficiency has accumulated for a churning will not succeed in making choice butter, as it is a mistake to mix the old and new cream. This is a fact that is frequently overlooked, and has been the cause of more failures than anything else.

The Russian thistle has moved a little closer to the East, and it is simply a matter of time when it will be established on the Atlantic coast. The rail road cars bring the seeds and scatter them along the lines. Good cultivation destroys it. It is not as severe a pest as the gypsy moth or the potato beetle.

The large varieties of beet have very few leaves in proportion to their size. These leaves make a valuable feed for cows and hogs, but must be used quickly, as they are very succulent, and decay quickly if left in heaps. The leaves are succulent rather than nutritious, and ought always to be fed with grain and other dry feed with grain and other dry feed. They are as good as the beets to increase the milk flow while they last.

The Jerseys in this country are gradually increasing in size, even when the breed is kept pure. This is not due so much to better feed, as to the fact that in this country, where the Jersey is most grown, the heifers do not begin to breed as early as they do in the warm climate of the channel islands. With increase of size will come greater vigor of constitution, which will remove one of the principal objections to this breed of cows.

All farmers' wives know that the wood from apple trees, especially from the twigs and branches pruned, is very rich in potash. The same is true of stone fruits, such as the peach or plum. The reason, apparently, is that the tree in fruiting makes large demands on the root for potash, and that the annual growth is made up from what is left over of the same kind of sap. Young fruit trees that have never borne have not so much potash, though they all have more than trees grown in dense forests.

THE CLOVER SEED CROP.

There has been considerable clover seed saved through Western North Carolina the past season, but nearly all the seed saved in that section contains a considerable quantity of weed seed, principally plaidtain, which makes the seed practically unmerchantable.

The farmers of this section will realize now the desirability of sowing clean clover seed. If this had been done, they would have obtained a much better price for their present crop. Some sections of North Carolina have long been notorious for the low grades of seed bought by its merchants to supply their customers, and the present experience of some of these farmers is a practical lesson that will have its results in causing them to be more careful in the quality of seed they sow in the future. "As a man sows, so shall he reap."—Southern Planter.

When a cow is dry she should not receive heavy rations of grain. Hay and fodder, with a small proportion of bran, is better than concentrated food, as such cows are non producers, and if fed too heavily will become fat, a condition which is not very favorable at the calving period, milk fever often resulting when the cow is too fat from overfeeding.

DIGESTIBILITY OF HAY.

In the consumption of hay and clover there is, perhaps, under ordinary circumstances, a less proportion digested and so rendered available in the growth or fattening of animals than is generally supposed. This has been pretty clearly demonstrated in a series of digestion experiments that have been conducted at the Maine station. The composition of the hay is given as follows: Protein compounds, 5.94; crude fibre, 28.89; nitrogen free extract, 47.41 and fat 2.67. Of the above there is, under ordinary circumstances digested—protein compounds, 2.7; crude fibre, 12.4; nitrogen free extract, 27.9, and fat, 1.4.

By the above it appears that only about one half of the nutritive principles of timothy are digested. In the case of clover hay the result is very nearly the same, the only difference of any amount being in the fact that clover hay furnishes about twice as much of protein compounds as the timothy. Assuming that 3,875 pounds of timothy is cut from an acre, there will be digested 1,046 pounds of protein matter, while from an acre of 4,075 pounds of clover hay would be digested 238.2 pounds of protein, with but little difference in the fat and nitrogen free extract. As the protein contains the substance for animal tissue, this is important in the feeding of growing and young animals.

HOW TO KEEP DAIRY CATTLE UP DURING THE WINTER.

Many of our Southern farmers either have not yet learned the importance of the silo, or they are afraid of its cost; hence the making of ensilage for cattle in winter is with them an untried step in agriculture.

It is to this class, especially, that I address the few following remarks on the subject of a winter pasture. My remarks are applicable to rye or barley, so the farmer wishing to follow my mode of culture can plant either. I prefer rye, possibly because I have grown it more than I have barley.

Of course there are other crops that could be planted for winter pasture—for instance, the clovers—but it is now too late for crimson clover, and red clover will be discussed in another article. My plan is to break the land as early in the fall as possible, with a two-horse plow; turning under all organic matter possible, in addition to the manure scattered broadcast.

Inasmuch as few of us in the South have barnyard manure enough to go over as large an area as a winter pasture would require, we have to supplement with cotton seed and commercial fertilizers. There are many brands of good fertilizers on the market, and fortunately for the farmer, in most States at least, they are worth all that is asked for them. But, according to my experience and observation, most crops would do better with a larger amount of potash than is put in the average fertilizer sold in the market.

I do not believe in the prescription theory for soils, but I do believe that some soils and some plants require more of one element to be added in a fertilizer than others. I find that the following formula

works well with the average Southern crop: Cotton seed meal, 750 lbs.; acid phosphate, 750 lbs.; and kainit, 500 lbs.; or muriate, 125 lbs., making in all one ton. Apply from 300 to 500 lbs. to the acre. For a rye crop in connection with manure, I would put on, say 300 lbs., and would apply broadcast, just after the spring-tooth harrow, or just after the disc harrow, and follow with the smoothing harrow. In other words, I break the land deep with the two-horse plow, sow the seed at the rate of one bushel per acre on this rough plowed land, then cover with disc harrow, then sow fertilizer broadcast and follow with a smoothing harrow. If the land is cloddy, I would advise rolling or dragging, to finish up with. Either process will pack the ground around the seed and cause them to germinate quicker and make early growth, which is very desirable for a winter pasture. If it is found that the stand is too thick, then a smoothing harrow or a "Z Breed Weeder and Cultivator" can be run over the crop to thin it out. This cultivation would be a benefit to the crop left, as well as thinning it out. This green crop in the winter will give the cattle a relish for the dry food, and it will have a telling effect on the milk cows, and the calves will be greatly benefited as well.

Too much stress cannot be laid on the importance of fresh, green food for cattle in winter, and the farmer who provides these delicacies for his cattle will be fully repaid.—Prof. B. Irby, in Southern Planter.

A few inches of dry earth over a pile of fermenting manure will effectually prevent loss of ammonia. This is a much more common cause of loss where manure is piled than is leaching. We doubt whether during summer and until cold weather the piles of manure left out of doors get more rainfall than is good for them. This is especially true of horse manure, which will burn into ashes and lose half of its manurial value if kept where rain cannot reach it. The waste from leaching of manure occurs mainly in winter and early spring, when the melting of snows and heavy rains drench the soil with water.

KEEP A RECORD OF WORK.

Every farmer is to a great extent a manufacturer, and ought to keep a record of his operations. This is the key to success in any business. But the soil-tiller should attend to some other matters in connection with his accounts. A writer in an exchange suggests that a map of the farm, with each field numbered, and its size, quality of soil, etc., specified, will be a great aid in keeping track of the year's transaction. How many farmers have such a guide and convenience? And how many kept such a memorandum the past year as will enable them to tell the expense of each crop grown? And how about the domestic animals? If you keep cows what have they paid you per head in the aggregate? And what of sheep, swine, and even chickens? How much did each contribute to your income, and which was the most profitable?

Those who can answer those pertinent questions must be well advised in regard to their financial position, and need no admonition; but we fear many are utterly unable to give any detailed account of their farming operations, or whether the balance is on the right or wrong side of the ledger. It is needless to say that such management would soon wreck any commercial enterprise, and hence the frequent complaint that "farming don't pay" is not surprising. We would suggest that you keep an accurate account of your doings, and you will not only be wiser, but ere long, richer in consequence. In fact, resolve that you will know how you stand at the close of another year.

This is the time of year when the breeders of fancy poultry are thinning off their flocks and disposing of the surplus. Most beginners in poultry growing and egg production wait until spring, thinking that thus they will save the expense of winter keeping. But the poultryer necessarily charges for this, and at higher rates than most private parties would pay if they kept them over winter themselves. There is nothing like buying fancy poultry when it is most plentiful. It is a good time, therefore, for farmers who have kept mongrel poultry to sell it all off and begin with a few of the very best. From a single trio bought now the flock may be increased next year to any extent desired.

NITRATES IN THE SOIL.

As soil fertility is of so much moment to farmers, and as the productiveness of a soil is directly proportional to the amount of nitrates which it contains, and the facilities or favorable conditions offered for the conversion of organic nitrogen into nitrates, the subject of nitrification becomes one of prime importance to agriculturists. Nitre or saltpetre is a compound of nitrogen which represents the form of combination in which nitrogen must be, in order that plants may use it as food. The organic nitrogen of the soil, as well as that contained in such fertilizer materials as cotton seed meal, castor pomace, dried blood, fish scrap, and tankage must be converted into nitrate of ammonia salts before plants can use it as food.

All nitrates are formed through the instrumentality of small microdemes or living organisms, which require certain conditions for proper growth and development. They require (1) air or oxygen, (2) a due amount of moisture, (3) a proper temperature, 98 degrees to 100 degrees F. being best, (4) phosphates and other ash ingredients of plants, (5) a mild alkali such as carbonate of lime, (6) organic matter containing nitrogen, and (7) shade is also favorable to their development.

The germs themselves are in greater or less numbers in all cultivated soils, and in order for a soil to furnish the conditions mentioned above, it must be loose and porous, so as to admit the air freely to it; it should be well drained and have good capillary action, so that at all times it will as near as possible have that moisture about it which is present when ground plows well, as this is the degree of moisture most desirable, and it should have plenty of organic matter in it to furnish nitrogen and favorably influence the supply of water.

Soils deficient in the nitric ferment germ are barren, while those which furnish conditions favorable for a nitre bed, conditions such as have been given above, are always fertile.—Prof. W. L. Hutchinson, in Southern Farm Gazette.

It is generally said that the potato is exclusively a native of the Western continent, whence it was introduced into Europe about three hundred years ago. But the Chinese had the potato growing long before the discovery of America by Columbus. It is still found growing wild on the borders of Tartary, and in the western provinces of China the potato is as much a staple food as rice is in the eastern portions of the Empire. It seems certain that the potato was indigenous to both hemispheres, though it was unknown in Europe until it was introduced by Sir Walter Raleigh.

THE PRESERVATION OF VEGETABLES.

As ordinarily kept, the root crops of the garden soon become shrivelled, and lose their flavor, or in some cases become "pithy" and "woody." This can to some extent be remedied if they are packed away in the fall in dry sandy soil. While the shrivelling is for the most part prevented, the flavor suffers to a considerable extent. Perhaps the best material in which to pack them, and one that is unequalled in retaining the vegetables in their normal condition is found in the leaves of most of our forest and shade trees. Oak leaves are rather thick and coarse, but those of the maple, elm, poplar and other trees answer well. As they drop in the fall, they should be gathered and used at once. If allowed to become dry it will be well to rake them into piles, and either wet them down, or leave them until wet by rain. As soon as the excess of water has drained off they can be used. Dry leaves will answer if the vegetable room is damp. The vegetables should be packed in alternate layers in the leaves, in either bins or boxes.

Onions, like other bulbs, can be easily preserved if kept dry, and although, if this is observed, they will stand a considerable range of temperature, it is desirable that they have a temperature of from 35 to 45 degrees. When in a damp room they start readily, especially if at a high temperature, and as spring approaches the buds start even if kept comparatively cool. Care should be taken not to store onions in too large bulk, and to prevent heating they should be in shallow bins or in crates.

Although considerable trouble is experienced with the preserving winter squashes, they are among the easiest vegetables to carry through the winter. One source of trouble is that they are

often left too long on the vines and subjected to severe frosts. Even if not quite ripe it is best to gather them (if the vines are thick it is generally safe to risk one frost) and place them in some sunny spot where they can be covered at night. When freezing weather comes they should be carried to the house, and, unlike most of the other vegetables, should be placed in the warmest and driest place at hand. If one has a furnace and the squashes are packed around it, there will be little danger of their not keeping, even if no more than half grown.

The sweet potato is another vegetable that does not withstand a low temperature. They can often be bought cheaply in the fall and can be preserved, if packed in boxes, between layers of dry leaves and kept where the temperature does not fall much below 60 degrees.

It is generally thought that there is some secret about the keeping of celery as well as in raising it. There will be no trouble in keeping it if it is placed in a room where the temperature ranges from 35 to 45 degrees, and if it is supplied with sufficient moisture to prevent wilting. It should have been blanched while growing in the garden, and should be placed in the cellar about the tenth of November. For family use it may be packed in boxes or in half barrels, or other small receptacles that are a little deeper than the plants are high. Three or four inches of soil should be placed in the bottom, and the celery should then be packed in vertically, about as thick as it will stand, the soil be pressed firmly about the roots. If a large quantity is to be stored, it may be packed in the same way between boards placed on edge about twelve inches apart; but fully as good results will be obtained if it is packed in trenches in the open ground and covered so as to keep out the frost. As soon as packed, if kept in the house, it will be necessary to wet the soil about the roots, and at intervals during the winter, when it is found to be getting dry, the application should be repeated. In doing this care should be taken not to wet the stalks, as it is likely to cause them to rot. The water can be poured in from a watering pot through a short piece of tin or iron pipe, or a short hose may be attached to the end of the spout. Some have found small drain tile tiles inserted at intervals among the plants good for this purpose.

Cabbages and potatoes are too commonly wintered to require much attention here. The former should be put away with the outer leaves and stems attached to the heads. They will keep if left in thin layers in almost any way, in a cool room, but if placed in such a position that the roots can be covered with dry sand, they will be less likely to shrivel and lose their outer leaves. If many are to be wintered over for spring use, it will be best to select some well-drained spot out of doors and place them with their stems up, in furrows close enough together so that, when one has been filled with cabbages, the heads will be covered with soil when the next furrow is turned. When freezing weather comes they should be covered with three or four inches of light litter. They are most likely to be injured from alternate freezing and thawing. Potatoes keep best in a moderately dry room at a temperature of from 35 to 45 degrees, but if kept dry will not suffer, except from shrivelling, even if the temperature reaches much higher.—Prof. L. R. Taft, in American Agriculturist.

HORTICULTURE.

NATIVE PLUMS.

Within the last few years native plums have been coming somewhat into prominence. The opinions of fruit growers differ as to their merit. The market demand for them is limited, although it is steadily increasing for the early kinds. They come into market about three weeks before the European varieties. One of our stations in propagating native plums, *Marinrus* and *morobolon* stocks are largely used. *Prunus Americana* is well adapted as to stock for northern climates. Methods of planting and cultivation do not differ from those used with the common plums except that mixed planting must be followed in order to secure the fertilization of many of the native plums. Native plums are not particular as to soil, although extremes in sand, clay and muck should be avoided. A soil too strong or too rich in nitrogenous matter causes a heavy growth of foliage at the expense of productiveness. There are about 160 varieties of native plums embraced in five species,

of which the most important are, *Prunus Americana*, *P. hortulana* and *P. augustifolia*. The most valuable of the native plums are DeSoto, Rollington, Weaver, Wild Goose, Miner and Newman, of which Wild Goose, DeSoto and Miner are probably the most popular. In general, the native plums are to be recommended to those who want plums for an early market; because of their immunity from diseases and insects, to the general farmer, and to large growers who want a greater variety of fruits.

CARE OF TREES IN WINTER.

When trees stand too thick, excluding air and sunshine (for each tree to bear well should be exposed to the light on all sides) then all inferior trees should be dug out, and many a cord of wood might be taken from most orchards and yet plenty of trees remain to serve their purpose better. Remove all rough dead bark from the trees with a scraper and whitewash the body of the tree nearly up to the limbs; this destroys insects, the bark will be renewed and the whole tree restored; the scrapings, however, must be burned or the pests will live on the ground.

To cause the insects burned in the ground to freeze and open the soil to atmospheric influence, it is important to dig up the soil around a tree from three and a half to six feet in diameter, then cover this piece of ground with ashes, lime or some other fertilizer. Older trees must be fertilized near the outer circumference of their crowns, where the finest roots are. The manure or muck water is put into rills or holes.

If planting in spring is intended, then it is well to dig the holes in the fall, says the North American Agriculturist. If the tree is to be planted in an old orchard, then the hole must be wide and deep. In early spring the holes will be well frozen out and should be refilled with a mixture of clay and rich soil several weeks before planting. This filling may be hauled in winter and allowed to freeze, to improve it. The autumn winds often loosen the support of young trees, and these should be looked after and refastened. These supports should be smooth and tarred at one end to make them last longer in the ground. Always place the supporting props on the south side of the tree, as this will protect the tree from sun scald. For ties use straw or willow, which are soft and will not cut the tree.

CREAM OF THE PRESS.

Hard Hits, Bold Sayings and Patriotic Paragraphs from Reform Papers.

By lessening the number of dollars you lessen the amount of business that can be done.—Labors' Tribune.

Prosperity is coming—a man can get a bigger job of work to do for 50 cents than ever before.—Emporia Times.

Carnegie's employees may look for another cut in wages soon. Andy is to found another free library.—Sound Money.

Dun's report is to the effect that in the last twelve months the average decline in prices of property has been over 8 per cent.—Chicago Express.

If you want to support the banker, the corporations, the trusts and keep their hiring tools, you should keep right on voting an old party ticket.—People's Advocate.

Are national bankers honest? They are all "sound money" men yet they persist in paying out dishonest (?) 50c silver dollars. Queer, isn't it?—Missouri Commoner.

Failures for last week were 263 and only 253 during the corresponding week of last year. That returning prosperity is coming too sudden; it knocks everybody off their feet.—Farmers' Tribune.

A poor fellow stole a bicycle a few weeks ago, out in Iowa, and was sent to the penitentiary for three years. Taylor, the defaulting State Treasurer of South Dakota, stole \$300,000 and is sentenced to two years.—Chicago Express.

"The money power within a generation has changed the financial features of the nation, wiping out the small manufacturer and trader, making the masses more and more the helots of the classes."—Washington Republic.

John Sherman says he is willing that Republicans shall divide the Senate offices with the Democrats and recognize the Senate on this basis; but the Populists must have nothing. The Bank of England will not turn John's picture to the wall.—Brooklyn Diamond.