THE PROGRESSIVE FARMER.

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

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Progressive Farmer,	State Organ, Raleigh, N. C.
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The Populist,	Lumberton, N. C.
The People's Paper,	Charlotte, N. C.
The Vestibule,	Concord, N. C.
The Plow-Boy,	Wadesboro, N. C.
Onslow Blade,	Peanut, 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.

Plants will starve in any soil, however fertile, unless water is present to dissolve the food elements and prepare them for the plants' use.

Southern farmers are now more than ever determined to grow all the hay and forage needed, instead of depending on the North for them.

Reports from all parts of New England show that vegetation is suffering considerably for the lack of rains. The hay crop will be unusually light in most sections.

As much care should be taken to keep water away from a well constructed road as is taken to keep it out of the cellars of the houses, or from leaking through the roof.

When on the pasture you can keep the lighter breeds of mutton sheep in flocks at large, but it is better for them and any sheep to be kept in as small lots as it is convenient to do. When thousands run together the Merino would do the best.

It is an absurdity to suppose that a tree can produce a full crop of sound fruit after its horizontal roots have been cut away by deep plowing or spading, or when large limbs have been cut away from the sides of the trunk by a sudden pruning.

Remember that the trade once dropped because of bad packing and poor fruit is hard to regain; if it ever can be. Send your good fruit sorted by itself, and if you send poor fruit, don't top out your package with good fruit; you will rue it if you do. If you don't do the packing yourself, watch the man who does.

Weeds should not be hoed during wet weather. The moisture on their leaves will prevent them from drying up, while the roots against the moist and loosened earth will get a root hold and send out new fibres. A weed once or twice transplanted is almost as difficult to kill as a perennial. The only way to kill such a weed is to cover it while wet with moist soil. Then the sap in the weed will cause it to rot, and this will effectively check new growth of the root.

YANKEE INGENUITY.

Correspondence of the Progressive Farmer.

WASHINGTON, D. C.

"The world do move," and first among those who "do move" with it, will always be found the ingenious Yankee.

The latest product of the Yankee brain is an invention by which common corn pith, which has been considered a worthless raw material heretofore, can be used in the place of cocoa cellulose, as a packing for the cofferdams of ships of war.

With a view of proving the merit of this new material, the Navy Department conducted comparative tests of the cocoa and corn pith cellulose, at the Indian Head proving grounds recently, in which tests the corn pith was found to be greatly superior to the cocoa cellulose. This very gratifying result has awakened a lively interest in the matter, and opens up the way for the establishment of a new industry in this country.

As above stated, coacoa cellulose is used as a packing for the cofferdams of war ships, and while it is manufactured in this country at Philadelphia, and in California, still the raw material is a foreign product, and its importation, coupled with the fact that the converting of this raw material into cellulose is virtually a monopoly, makes the manufactured article very expensive, besides the fact that it compels "Uncle Sam" to depend on a foreign country for material with which to protect his ships from the ravages of the ocean, when wounded by these same foreigners.

The Navy Department has recently had its attention called to this new material, under the name of "Marsden's American Cellulose, and the tests conducted at Indian Head were made with this home product.

Secretary Herbert was seen by a representative of the Associated Trade and Industrial Press, and his opinion asked in regard to this matter. Having been absent himself when the last tests were made, he referred the reporter to Conductor Taylor, who was a member of the board who made these tests. Mr. Taylor stated that the corn pith had proved, under a severe test of firing, much more satisfactory as a resistance to water than the cocoa cellulose, and that the only question now to be settled by the board, before the adoption of the American cellulose would be recommended, was the durability of the corn pith material. It had been urged, he said, as an objection to corn pith, that the presence of vermin would sooner or later render this home product unsatisfactory as a packing for cofferdams, when compared to the foreign product. This objection, (even admitting that all corn pith was a harbor for vermin) could be overcome by the fact that the corn pith was subjected to such pressure as to obviate any danger to the substance from this source.

However, no official report of the result of these tests can be obtained until further experiments as to these points, (which are now in progress) are concluded. Nevertheless, Mr. Taylor gave it as his opinion that the American corn cellulose was greatly superior and more desirable as a packing than the cocoa cellulose now in use.

The object in packing the cofferdams of war ships with cellulose is to prevent water from sweeping through shot holes in the ship's side, and to thus overcome any danger of the vessel sinking, no matter how fierce the firing from the attacking vessels may be.

Being an indigenous plant, the fibres of cocoa and corn, are so complicated and so thickly woven that they exclude a fluid; and it is this quality which makes them so valuable as a resistance to water which would come through the ship's side when pierced by a shot.

In the stems of an indigenous plant a cross section shows no distinct ring of wood, and no separation into pith, wood and bark; but bundles of woody fibre are irregularly scatterred through the cellular tissue, or pith, though they are less numerous in the centre than at the circumference of the stems. The corn stalk is an illustration of an annual indigenous plant stem, which while young has an epidermis, but no separate bark. Each one of its fibrous bundles contain all the elements of the exogenous stem. It is this peculiar quality of its fibrous bundles, and the fact that they are more numerous at the circumferences of the stems that will make our corn pith so valuable as a cellulose. Cellulose as made from corn stalks, in the loose state is very light, and susceptible to high pressure.

A test of the merit of corn pith cellulose, made in April, elicited the following facts:

A cofferdam was prepared and packed with corn pith to about the same density as cocoa cellulose, which is about seven pounds per cubic foot.

This cofferdam was fired at with a 6 pounder Drigg's gun; in one portion a single hole, and in another portion at the same level, five shots grouped in a circle of about 4 inches radius. A head of water was kept up, varying from four to seven feet on one side of the shot hole, and after three hours no water had come through on the other side of the cofferdam, the thickness of the belt being about three feet. At this time an examination was made, and it was found that the water had penetrated in the case of the single shot hole to a depth of eleven inches only from the orifice, and in the case of the group of five holes to a depth of twelve inches from the orifice.

These results appeared so remarkable that the Navy Department determined to make further tests, as cocoa cellulose has not been entirely satisfactory, and in these tests a very decided superiority has been shown over the cocoa cellulose now used.

It has been the desire of the inventor of this American cellulose to offer to the government a material practically inert and free from faults, with a view to its general adoption on all vessels; a native product both in growth and manufacture, as well as in invention.

He claims, with pride, that in putting before the public this corn cellulose, which will utilize a hitherto useless raw material, he is able to offer a clean, healthy, American product, superior in every way to any known material, and grown on American soil, (which naturally benefits our farmers) free from acids or other injurious ingredients, and with a low density of one pound four ounces per cubic foot, (cocoa cellulose being three pounds eight ounces.) It is nearly two thirds lighter than cocoa cellulose, and can be made absolutely incombustible.

The corn pith cellulose will not oxidize iron or steel, and has no injurious properties to act on or destroy any part of a vessel.

This material has been patented, and from the present outlook it will be adopted as a substitute for cocoa cellulose, in which case our farmers will come to the front in a new line.

Manures usually increase the moisture contents of a soil, by improving the mechanical arrangement of the soil grains, and in this way becomes a means to make its own food elements better available to the plant, besides unlocking fertility in the soil itself not before available to the plant because of insufficient moisture to dissolve it.

WEEKLY WEATHER CROP BULLETIN

For the Week Ending Monday, June 29, 1895.

CENTRAL OFFICE, Raleigh, N. C.

The reports of correspondents of the *Weekly Weather Crop Bulletin*, issued by the North Carolina State Weather Service, for the week ending Saturday, June 29, 1895, indicate another generally favorable week. The temperature has averaged one or two degrees above normal, with about the average amount of sunshine. Scattered showers occurred on several days at a large number of places, but there are points in all districts, especially in the northeastern part of the State, where rain is now needed. Local heavy rains, with some hail, occurred on the 26th and 27th without any serious damage. Cotton is blooming in the southern portion of the State. Corn is doing very well, and is being laid by generally. Threshing wheat has just begun. Fruit is coming in very abundantly.

Eastern District.—The past week is generally reported as having been very favorable in this district. Good showers occurred, but poorly distributed. Only one place in Columbus county reported an excessive rain-fall, but in the northern part of the district rain is beginning to be needed. The temperature has been high, with plenty of sunshine. Crops are in a healthy condition and continue to improve. Corn is tasseling; laying by is general. Tobacco is looking well and some beginning to top. Blooms are reported to have appeared on cotton at Elm City, 26th, Laurel Hill, 27th. Sweet potato plants are still scarce; many are still to be set. Large crop of field-peas being planted. Berry crop ripe and very large. Melons are late.

Central District.—The rain fall this week has been irregularly distributed, with enough rain, however, at most places to keep crops in a thrifty condition. Heavy rains, with hail and high wind, did some damage in parts of Cumberland, Chatham, Anson and Forsyth counties. A few stations report rain needed badly. Corn is silking and tasseling in the South; old corn is being laid by. Cotton blooms are also reported. Wheat nearly all harvested in good condition and being housed. Threshing has begun and will be general next week; many farmers report good results; others inferior. Oats about ready also. Spring oats are getting ripe. There are a number of complaints of chinch bugs, especially in northwestern portion of district. Peas are being planted in stubble land. Blackberry crop is very large and fine. Peaches ripe. Fruit coming in in abundance.

Western District.—The week has been warm, with frequent showers; some places are becoming very dry, as in Caldwell county and the west, where gardens are beginning to suffer. In general, however, it has been another week of fine growing weather, farmers from all sections reporting crops making good progress. Wheat, except in extreme west, where it is now ripe, has been about all cut, and is being hauled in. Threshing has begun with what is thought to be a very good yield. Spring oats are looking well. Old corn is being laid by. Pea sowing has begun, and there will be a large crop planted this year. Peach trees are full. Fruit is plentiful in markets. Melon vines are poor. Gardens and potatoes are fine.

A sheep that loses her lamb early in the season will almost necessarily become too fat to make a good breeder. The best that can be done with such is to feed them extra, so as to fatten rapidly and turn them off to the butcher. The loss of lamb, unless it is from accident, one season is almost invariably followed by a like loss from the same ewe the following year.

SECURING THE HAY CROP.

Correspondence of the Progressive Farmer.

To the dairy farmer especially, a crop of the finest quality of hay, harvested at the right time and secured in the best condition is one of the greatest importance. For the most profitable results a variety of grasses, best adapted to any locality, is desirable. It is supposed that proper attention has been paid to this matter by the farmer.

Now concerning the harvesting and preparing for use. Both science and practice have demonstrated the fact that early cut hay is much the best for the production of milk and butter. The point at which the grasses are considered in the most profitable condition for this purpose is conceded to be as nearly as possible when in bloom. If cut earlier than this there will be a loss in quantity and an immaturity of crop; while if allowed to stand too long there may be a greater bulk but the quality will have seriously deteriorated. It will then contain far less of the most nutritious and digestible qualities, so much to be desired as a dairy or stock feed. Those farmers who have paid particular attention to the matter have found out these facts.

With the average farmer it will hardly be possible to secure all of the hay crop when in its best condition, as there will not be sufficient time for this purpose, but with good management and proper harvesting appliances this work can be so conducted as to be reasonably satisfactory.

First there should be good tools and machines for facilitating this work, as much will depend on this. Be ready to commence when the first of the grasses are ready for the harvest. It may even be better to begin a little too early than to be much too late in finishing.

In modern barns there should be room enough so that the different kinds or qualities of hay can be kept separate. This will be found of much advantage when coming to feed and wanting a particular quality of hay for a special purpose, as for dry cows, those giving milk, or young animals.

On most farms there will be some pieces or may be fields of grass that to make an average or fair quality of hay must be harvested quite early. These are the wild or water grasses, and those places where the white daisy or other kinds of weeds largely predominate. The native wild grasses are held in considerable esteem on some farms where they particularly flourish, and with proper management—always cutting at an early stage—possess considerable value as stock hay. The others are decidedly interlopers and should be no longer tolerated than possible to get them out of the soil. Cutting them before going to seed is a step in the right direction, after which the farmer should make them give place to a far more profitable crop.

After these kinds of fodder have been secured and placed by themselves in the barn, then the newly seeded fields which are largely composed of clover should be ready for harvest. There comes perhaps the most difficult part of haying, especially if there is a large amount of clover to secure. This is calculated to make the best kind of hay for milch cows when secured in right condition, but if it is allowed to stand too long before cutting, or is badly cured, then it may rate second or even third in quality.

For my own use I much prefer to have the first new seeded crop composed of a mixture of the medium red and alsike clovers and timothy, for my locality. Where this is the case these grasses can be readily and nicely cured with little more labor than is required for the timothy alone, and they make the best kind of hay for all kinds of stock, except perhaps horses.

With the red clover alone it will be necessary to go through with a more elaborate process, cutting when the dew is off, perhaps in the afternoon, and the next day after becoming partially wilted putting in cocks where it may remain for a few days to slowly cure and then after a little airing be ready for the barn. The idea should be to cure with as little exposure to the hot sun as possible, and thereby retain the leaves and blossoms—the most digestable portion—as well as the delicate aroma for which this kind of hay should be distinguished.

After the clover has been secured, then the timothy, red top and other later maturing kinds should receive attention. With such crops of these as the farmer should aim to grow, and harvested at the right time while yet quite green and succulent, considerable work will be required to secure in the best manner. But it will be found more profitable to do a little extra work here if necessary, thus securing the best quality of hay, than to allow the crop to stand until ripe when it will require very little drying and be far less as a milk or flesh producing food. With the use of the tedder the process of curing can be greatly facilitated, the hay being secured in less time and in better condition. As to how much hay should be dried will depend on conditions. It should be dry enough so as to come out of the mow bright, free from smoke or rust. Hay for horses may be allowed to become a little more mature than should be the case for cows, and in this way with proper foresight and management the entire crop on a well ordered farm can be secured when in its best condition for all kinds of stock, as with the present appliances for harvesting and the improved condition of our fields, the hay crop should be secured in one half the time required or occupied a generation or two ago.

E. E. TOWLE.

Franklin Co., Vt.

HORTICULTURE

HORTICULTURAL HINTS.

Some species of fungi have neither roots, stem, leaves, flowers nor seed and derive their nourishment through pores.

In cultivating your apple trees you may raise corn in it for a very few years, providing you don't plant it too near the trees, and will cut it up and haul it out early in the winter, and by no means make a shock around a tree.

Whether you plant yearlings or five-year-olds, they will be about the same size six or seven years after planting, with the chances in favor of the younger trees being the most firmly rooted. But up to that time the older trees will have paid decidedly the best.

One thing is certain, as a rule the horticulturist lives a little better than the average of men, as he always has plenty of fruit and vegetables to eat. He uses 400 to 500 loads of manure annually, and his grounds show it. His soil is an excellent one naturally.

TRAINING TOMATOES.

On this subject the *Farm News* says: There are several plans that are good. One is to drive four stakes around the plant about two feet apart and fasten crossties to them, making a square support and training the vines to grow up over these and droop down the outside. This does very well if the vines are to be allowed to grow as rankly as they will, and where the crop is of any size is about the best way we know of. For the number of plants that are grown in an ordinary garden we prefer to tie each vine to a single stake three feet high, and keep it pretty well pruned. We allow a branch to start out and grow until blossoms appear on it and pinch it off just above the blossoms. All the numerous branches that spring out along the sides are looked after and kept pinched off and the whole strength of the vine is reserved for a few bunches of fruit. This causes the fruit to be larger and to mature better and in the end about as much in weight will be produced as would be if the vine were allowed to run wild. Tomatoes stand any amount of fertilizing and need a great deal of water if the weather is dry, though they will survive the severest drouth. We cover the surface around the plants with scrapings from the barnyard and gradually work this fertilizer into the soil in the course of cultivation. When we have occasion to water the plants we put not less than two gallons to each plant, and the next morning cultivate the ground thoroughly. This liberal watering will do for three or four days as the cultivation makes a mulch of fine soil on the surface and prevents rapid evaporation. Tomatoes respond readily to good care, and it pays to give it to them.

IMPROVING CURRANTS.

Every one is familiar with the common neglect of currant bushes, often growing in grass under fences, and frequently treated with entire neglect. Old, overgrown bushes, which have grown into a mass of bush, should be thinned and old stunted wood pruned out, and enriching and mellow cultivation given. Or, often still better, the whole bush may be taken up, divided and replanted. The great point, says a writer, is to give rich, mellow and continued cultivation.

CAULIFLOWER.

The cauliflower ought to be much more generally grown by every farmer and every owner of even a small kitchen garden than at present, says a writer, and it ought to constitute a much more frequent part of the bill of fare in every household, rich or poor. It is one of the most nourishing, easily digestible, delicious, and easily and quickly prepared vegetables grown. There are scores of recipes for cooking this most delicate esculent. While cabbages require four and one-half hours for digestion, cauliflower can be digested in the course of two hours, and may be enjoyed with benefit by persons to whom cabbage would be ruinous owing to weak digestive organs.

FROM MECKLENBURG.

Correspondence of the Progressive Farmer.

CHARLOTTE, N. C, June 24.

I wish to say for the encouragement of the Alliance brethren throughout the State, that my Alliance district is on a bigger boom, alliancely speaking, than it has been since it left the Democratic party and went into politics. You know the bosses said that was what hurt it. I organized a new Alliance in Charlotte in March, that now numbers forty good men, and reorganized Polk Alliance, three miles from the city. They were dormant for two years. They number about twenty-five. On the 15th instant I organized a new Alliance in Concord with a good working membership. On the 22nd, last Saturday, I reorganized Davidson Alliance, in this county. Derita Alliance, in this county will be reorganized before the county meeting. Mecklenburg county meeting has been postponed till the 25th of July, for two reasons: First: the farmers will be well up with their farm work by that time, and will be able to turn out. In the second place, the Hon. A. C. Shuford, Vice President of the State Alliance, has promised to be with us at that time.

To close, Mr, Editor, I will say if you hear any of the old ring-tailed bosses talking about the Alliance being dead, just say to them that they had better keep their off eye on the old corps.

J. P. FOSSAMAN,
Organizer 11th District.

Orchard growers in taking their annual look through the trees of their orchards for the apple tree borers should not forget to pay the mountain ash a visit. These beautiful ornamental trees are favorite hiding places for the borers. As these trees are often planted by roadsides, and receive little care, hundreds of borers may be bred in them and afterwards make their way into the orchards.