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Agriculture.

THE WILD GARLIC OR ONION.

Prof. McCarthy Writes a Valuable Paper on a Common North Carolina Weed Pest.

Correspondence of The Progressive Farmer.

One of the worst pests known to agriculture is rapidly spreading in North Carolina wherever wheat is grown. This is the wild garlic or onion—*Allium vineale*. Like the garden onion—*Allium cepa*, this is a European plant. It has been introduced and spread chiefly as an impurity in wheat seed. The seeds of the wild onion or garlic are also found in samples of badly cleaned clover seed. It is more commonly a weed in moist pastures and meadows where it usually grows in clumps. It spreads slowly but surely, however, and soon overruns the field.

The wild garlic is a very hardy plant. With us its main growth is made late in fall and early in spring. It is one of the first plants to shoot in spring. In the absence of other green food cattle greedily eat this weed, though at other times they avoid it. The weed gives to the milk, butter and cheese of cows such a disgusting odor that few people with ordinary noses can be induced to touch such foods. The worst part of it is that a dairyman who may have a fine herd of cows and take great pains to keep his dairy house and vessels clean may by the unsuspected contamination of the milk by garlic disgust his best customers and get a reputation for filthy practices, ruining his business beyond repair.

The plant itself resembles the garden onion, but is smaller. It has cylindrical, hollow leaves which bear at the tips first a small umbel or bunch of flesh-colored flowers and then a bunch of bulblets like the "top onions" or "top sets" of the garden onion. The plant also propagates by offsets from the bulbous base and in some places, but rarely, by true black seeds. The plant thrives best on land free from lime. It is therefore most troublesome on the Atlantic slope east of the Alleghany range.

The bulblets produced at the tips of the leaves are the chief means of spreading the pest. These are about the same size and shape as wheat seeds and ripen about the same time as winter wheat. It is next to impossible to separate the bulblets from the grain. When wheat mixed with garlic bulblets is ground into flour, the flower has the sickening odor of the garlic plant and becomes practically unsalable. Moreover the bulblets gum up the rollers of the mill and so penetrate the stones of buhr mills that these have to be dressed down with chisels to get rid of it. The weed is therefore a terror to flour mill men.

But the chief damage is done to dairymen. It also taints the flesh of grazing animals. The flesh of a steer or sheep taken from a garlic-infested pasture and killed at once will have such a foul odor that the carcass is liable to be condemned and sent to the offal tank. If, however, such animals are yarded for three or four days before killing and fed other food, the garlic odor will all evaporate and cannot be detected in the flesh.

With garlic-tainted milk, cheese and butter the case is different. Milk absorbs odors very readily and holds them with tenacity. Dairy cattle running on garlic-infested pastures should be brought to the barn yard at least two hours before milking time. They should be milked either in the open air or in a draught and the milk removed as soon as possible from proximity to the cows. Furthermore the milk should be aerated while still warm by pouring from a height from one pail into another. If the odor of garlic still clings to it, the milk must be heated for 10 or 15 minutes to 155 degrees Fahrenheit. This is a very ticklish process. Nothing short of 155 degrees F. will drive off the odor, yet anything much above that temperature will give the equally objectionable taste of boiled milk. A good dairy thermometer must be used. The safest way is to place the milk in a deep open can and place this can in a larger kettle of boiling water.

There are many chemical "preservatives" and "deodorizers" offered to dairymen, but where these are not frauds they are dangerous. The least dangerous of them is nitrate of potash—a good thing to let alone.

The legs and coats of cows running on a garlic pasture are apt to be redolent of the odor. This gets into the hands and clothes of the milkers and so into the milk. Therefore in milking such cows the attendants should be careful to avoid touching the sides of the animals and also, too, to prevent the cows breathing upon upon the milker or milk vessels. By allowing the cows to stand in the barn yard for an hour or two before milking time a good deal of the odor on the cow's coat will have been dissipated.

HOW TO GET RID OF WILD GARLIC.

Garlic is one of the most difficult of all weeds to subdue when once it has obtained a foot-hold. It has three different means of propagating itself. It makes its chief growth at a season when the ground is bare of other vegetation and finally its odor is so disagreeable that scarcely any animal, bird, insect or fungus will attack it. It must sherefore be fought by hard work. Where the pest gets into a park or lawn it can be eradicated by digging it out root by root or by poisoning each individual plant with a teaspoonful of crude carbolic acid. This process costs from $10 to $25 per acre.

Pasture lands badly infested should be plowed up, heavily limed—not less than 1000 pounds of stone lime per acre should be used—and planted to some cleanly cultivated crop, such as potatoes, cotton, tobacco or corn. In the fall seed the land to crimson clover. Cut this in the spring before the garlic comes into flower and plant again in a hoed crop followed by clover. It will take from three to 5 years to kill out the garlic. Until the garlic is got rid of no small grain should be sown on such land.

Persons purchasing young fruit trees, especially apples and pears, should examine carefully the soil clinging to the roots. This often contains the bulbs of garlic. The straw used for packing such stock may contain bulbs or bulblets of garlic. It should be burned. Baled hay often acts as a carrier of this pest.

GERALD MCCARTHY,
Botanist, N. C. Department of Agriculture.

COTTON GROWERS ORGANIZING.

Two weeks ago The Progressive Farmer referred to the great meeting of Georgia cotton growers at Macon, May 12th. At a meeting, a few days ago, of the executive and business committees appointed by this convention the President was authorized to proceed by correspondence with officials in other States, to secure the organization of the entire cotton belt by the middle of August. Other States will be asked to unite with Georgia in the movement and establish a central bureau which will exercise a general superintendence over all the different State bureaus. A committee of five members of the executive committee with President Jordan as Chairman, was appointed to confer with the Georgia Bankers' Association, which meets at Lithia Springs, June 13th, to secure the formulation of a plan on the part of the State banks for meeting the demand of the producers next season in regard to loans on cotton in storage. The movement of the cotton growers to perfect a plan by which the cotton crop of the South can be marketed during a longer period of time, thereby forcing a better price for the raw material before the staple leaves the farmers' hands, is creating great enthusiasm throughout Georgia and other portions of the cotton belt.

It will be remembered that a North Carolina Cotton Growers' Association was formed in this city during the last State Fair. Major W. A. Graham was elected President.

One of the best and most economical forms of farm insurance is to keep chimneys, flues, fireplaces, etc., in a safe condition.

THE CANNING INDUSTRY.

Our Rowan county Alliancemen are much interested in this subject, as was evidenced by Bro. R. L. Brown's report of the last quarterly meeting recently published in The Progressive Farmer. In fact, not only Rowan Alliancemen, but Alliancemen everywhere, and not only Alliancemen, but the most intelligent farmers throughout the State, and especially our Eastern truckers, are interested in the canning industry. This season's excellent fruit crop makes the subject of more than ordinary interest. Some valuable suggestions are contributed to the June Southern Farm Magazine by Mr. S. M. Sindall, of Baltimore—so valuable that we publish his entire letter herewith and commend it to our readers:

The eating of good, sound canned fruits and vegetables at the seasons when these articles cannot be obtained in their so-called fresh state, instead of so much meat and other forms of gross food, is attended by nothing but the most beneficial results. The people recognize this fact, and they put this convictions into practice, as is shown by the fact that the consumption of this class of diet has doubled during the past decade. The great demand for this kind of food, both at home and abroad—a demand which is constantly and rapidly increasing—has called into existence hundreds of canning factories, scattered throughout the land. Manufacturers of machinery and others are being plied with all sorts of inquiries relative to the canning industry. The whole trend of affairs indicates a widespread and almost universal interest in this industry, especially in the South. It is but natural for the South to take a lively interest in it, since that section has natural advantages of soil and climate which other parts of our country do not possess. It has thousands ef acres of kind, sandy, loamy soil, free of stones, plenty of bright sunshine and but little frost and snows, and, in fact, almost all the desiderata and almost none of the drawbacks. What can it not do, when we see what wonderful results have been accomplished by Maryland, the pioneer and leader of this business.

The best solution of the problem, "What are you to do with worn-out cotton lands of the South?" is to plant them in fruits and vegetables. If these plantations are well located with respect to transportation facilities a good part of this raw material may be sent to Northern markets, and when prices become too low to afford a good margin to ship in this way the remaining crop may be put into cans. If there is a lack of transportation faciliiies for marketing the earlier part of the crop in the raw state, then the whole may be canned.

It would undoubtedly be a wise thing for the farmers of the various trucking districts to unite and establish canning factories. With such an outlet for their raw product, in case the market should go down, especially in the case of the more perishable fruits and vegetables, they would feel secure in planting a large crop, and would not be at the mercy of the vegetable commission merchants and manipulators. With plenty of good, cheap raw material at hand and a little capital, what is easier or more profitable for the farmers of the South than to start canning factories?

Now, I do not wish to be understood as saying that any farmer who understands how to raise fruits and vegetables can rush into the canning business and make a success of it, but I do say that it requires less capital, in proportion to the amount of business to be done, than any other business I know of, and that anyone of ordinary intelligence and good, sound business capacity can go into it with a very great chance of success. The help consists mostly of women and children. The building may be of the most primitive kind—a mere frame shelter for men and machinery.

Machinery with a capacity of 2,000 three-pound cans per day can be purchased for $75; capacity of 3,000 three-pound cans per day, $125; 4,000 three-pound can capacity per day, $175; 10,000 three-pound can capacity per day, $250.

The kettles of this machinery can be set in brickwork for fire, under, or can be attached to a steam boiler if preferred; either way does the same good work. Perhaps the greatest obstacle the beginner has had to contend against heretofore has been the dogged persistence with which the knowing ones have struggled to keep all knowledge of their mysterious art from the vulgar eyes of those who see and learn. Besides this, there has been, until recently, no literature or printed information on the subject, and those seeking the desired information had to pick it up here and there as best as they could, and often from unreliable sources. It is no longer a mysterious art, a "dark secret," but a simple, practical business venture, with a very little "venture" in it. Anyone who will can easily find out what there is of mystery in it, and he will be surprised to learn how very plain and matter-of-fact it is. I will be glad to give any further information in reference to this industry that I can.

A plan has been adopted by the Grower's Association to control the California raisin crop for the next three years. The plan adopted involves the formation of a commercial packers' company to handle the raisin crop, including the seeding of raisins, coupled with an agreement that they, as an organization, would purchase and pay for the entire crop by Jan. 15 of each year. Prices of raisins are to be forced by the growers' association.

BUILDING AND FILLING SILOS.

Correspondence of The Progressive Farmer.

We are glad to see these old rules revived by Secretary McKean, of the Maine Board of Agriculture, and are glad to publish them in The Progressive Farmer for the benefit of wide-awake farmers interested in the silo.

We have read Maj. Alvord's sound article in the report of the Maine Board of Agriculture and believe if he were to re-write it now he would have little to revise. Secretary McKean has done well to start this article out on a new and larger "sphere of usefulness." We believe, as he shows he does by this publication, that it is better when something has been well said and sufficiently boiled down to repeat it, with credit, rather than try to re-tell the story and put a different name to it. F. E. E.

The well-built silo, properly filled with corn or other fodder at the right stage of growth, affords a food for stock which in my judgment cannot be equalled by any other method.

These are certain facts relative to the silo that have been so well established that they need no further proof, and I believe Major Alvord formulated them very fully in some rules which he laid down in a lecture delivered in 1884.

1. Silos may be made of any of the various building materials, and some very crudely and cheaply constructed have been found to do good service.

2. Silos may be above ground, or underground, or partly both; they should be water-tight and air-tight, and preferably frost-proof, although the latter point is not essential.

3. The situation, form and construction of the silo, and the arrangement for filling, covering and emptying, should be largely governed by local conditions.

4. Several small silos, preferably connecting, are better than one large one, and the depth should be considerably greater than the length, width or diameter.

5. Silos may be filled slowly or quickly, in all weathers, and heavily weighted or not weighted at all; the silage produced will vary in condition and quality, but these variations in management do not very materially affect the result.

6. Any plant or vegetable product good for cattle food when green or fresh may be preserved as silage in an edible and succulent condition throughout the year or for several years.

7. As a rule, all horses, mules, cattle and sheep, swine and poultry are fond of silage, if its material is such as is ever eaten by them. Most farm animals prefer it to the best forage, and often prefer it to good roots.

8. The best time to cut any plant to make good silage is when the plant approaches maturity, and is beginning to decrease in its percentage of water content.

9. The cost of preserving a green crop as silage does not materially differ from curing the same crop by drying, in a suitable season; but crops can be ensiloed and preserved in seasons when they would be lost if drying was attempted.

10. An acre of corn as silage will weigh four times as much as the same crop dried as fodder.

11. An acre of corn which is field-cured, stored in the most compact manner possible, will occupy a space eight to ten times as great as if in the form of silage.

12. In feeding, the best results follow a modarate ration of silage rather than its entire substitution for dry, coarse fodder.

13. Silage, and especially good corn silage, when compared with dry corn fodder or other feeding stuff, produces results so satisfactory as to surprise the chemist, and which chemistry cannot explain.

14. A silo or two well built, but not too large or too expensive, are convenient and economical, on most farms, to save crops which at times might otherwise be lost, if not to preserve some crops especially grown for silage.

Silage is to be preferred to roots for all stock, sheep only excepted, and costs on our average farms not more than sixty per cent. as much as roots. The time for putting corn in the silo is correctly stated in Rule 8, and I would be inclined to let the growing process go as far as possible without danger of the silage business. I do not believe in the addition of water while filling, except in cases where the fodder is very badly dried by being frosted The economy of space is a very important factor. Silage should never be used as an exclusive ration, but may be used for at least one-half of the coarse food, affording a material saving in hay. In sweet corn growing districts for the purpose of preserving the fodder and the wastes from the factories, the silo is indispensable.

The results obtained from feeding ensilage as compared with dry fodder have been surprising to many. We are all willing to accept the teachings of the chemist that the value of any fodder depends upon the amount of digestible dry matter it contains. We are also ready to conclude with him that the putting of any article into a silo cannot add to its food values. Still, every farmer who has fed ensilage and intelligently observed results is willing to affirm that there is a value to it that the chemist does not find. This conclusion has also been reached by nearly, if not quite, all of the experiment stations where exhaustive feeding trials have been made.

B. WALKER MCKEAN.

I like your paper better than ever. The agricultural department is more practical than that of any other paper I see.—D. M. Arrowood, Gaston Co., N. C.

North Carolina Baptist: If you don't live there you have no conception of the magnitude of the berry interest in Eastern North Carolina. The season just closing has witnessed the greatest shipping ever done. The crop shipped has amounted to more than eleven million quarts and these have sold at an average of ten cents per quart. This means more than one million dollars from this one crop in less than a month. Thus from a very narrow strip along the railroad there is received 1-10 as much from the strawberry crop in a month's time as from the entire cotton crop of the State.

Give your stable plenty of air and light.

Poultry and Bees.

THE GROWING CHICKENS.

Correspondence of The Progressive Farmer.

The success one has with young chickens in spring generally makes beginners think that anyone can raise them at this season of the year, but unless favorable weather and good fortune attends the efforts the beginner is very apt to lose one here and there. A great many console themselves with the idea that this loss is small, and on the whole does not count. It may be, however, that these few losses may represent all the difference between success and failure. They would have been the profits of the year's work, but with them dead and lost the receipts do not much more than cover the actual expenses. Consequently some will say, chickens do not pay. They fail to see that if they had been careful enough to save the dead ones that they would have been just so many more dollars ahead, and their margin of profits would have been that much larger.

How can we prevent diseases among chickens that seem to be born to inherit all the complaints known to the poultryman? That is not a fair question, because chickens are not born with such hereditary dispositions to become sick all the time. It is the unsanitary surroundings and the poor start in life they are given that causes the trouble. Their systems are in a weakened condition from the first, and they naturally take cold easily and other diseases follow. Give them plenty of good food of the right kind; good yards, free from unnecessary dampness and bad odor, and let them have plenty of sun and shade. The growing chickens, to be healthy in the spring, need sun part of the day, and shade during the rest of the time. We must supply the shade artificially if trees and bushes are not growing in the yard. Sun and shade in equal proportions contribute to their happiness and growth, and they also combine to ward off diseases by making their surroundings clean, sweet and sanitary.

ANNIE C. WEBSTER.

The best esteemed of all flesh food is the duck, says the Western Rural, and yet there are a hundred chickens marketed to one duck. It may be that most people have not had an opportunity of experiensing the superb delectation of roast duck, or consider the diet too high-toned for ordinary mortals and calculated to make them forget matters that bind them to earth and forego the ordinary duties and privileges of humanity. Be this as it may, there is far less duck consumed than there ought to be, if the dressed carcasses were more numerous in market stalls, or the undressed on the farms. Ducks are easily grown, eat enormously, grow rapidly and sell readily. Why not grow more of them?

FIRST LESSONS IN BEE CULTURE.

Every farmer should keep bees for honey, for amusement, for instruction, to cross-fertilize his fruits. Most farmers pay little or no attention to the bees. They do not understand their value nor the importance of keeping a few hives on every farm if for nothing else than fertilizing the flowers, says Wallace's Farmer.

First, use nothing but movable hives. This is essential to success. The old-fashioned bee gums and box hives are better than nothing, as the bees will manage to do the farmer some good if let alone, but if you pay any attention to your bees at all use some form of hive with movable combs. The Langstroth, the hive in common use, is about as good any. Buy a movable comb hive from some of your neighbors, then have the frames in all your hives made exactly the same size so that any frame will fit any hive. This is the first point.

The second is to get Italian bees. If you have black bees get an Italian queen from some of your neighbors. Why Italian? Because they are larger than the common black bees.

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