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THE PROGRESSIVE FARMER is the Official Organ of the North Carolina Farmers' State Alliance.

FARM NOTES

Bulletin No. 36 of Delaware, treats of potash. It states that the German Government, which has a monopoly of the potash mines, keeps the price too high. Fifteen years ago acid phosphate cost \$26.50 per ton; now it is only \$8.50. Fifteen years ago muriate of potash cost \$41 per ton; now, notwithstanding the enormous decline in the price of farm crops, muriate of potash costs \$40 per ton. The bulletin advises farmers to use lime and lead plaster to render soluble the stores of unavailable potash already in the soil instead of paying such monopolistically high prices for potash salts.

From advance sheets of Georgia Experiment Station on tests of varieties of corn and cotton for 1899, we gather a few facts of interest to farmers: Of 25 varieties of cotton, Jackson Lintless gave smallest yield of seed cotton, 1944 pounds, ranked 231 in yield of lint cotton 24 lb in yield of seed, and 231 in total value of lint and seed. Cullapp's improved gave the highest total value of lint and seed per acre viz: \$33.87, the next of the 25 varieties producing a value of \$27.95. Of 11 varieties of corn, Clark's P. 41 gave the highest yield 22.39 bushels per acre, the next 10.40 and the average of 17.70 bushels.

The latest issue of the Chicago Dairy Product Review reports a creamery butter to be 26 cents per pound and Egin creamery 26 1/2 cents. Markets firmer all round.

The following notes show something of what is being done in the creamery business in widely separated places. There is also a growing activity in Georgia and other points in the South.

A movement for a creamery is on foot at Salisbury, Ill.

The Kendall, Wis., creamery company will build a new creamery building next year.

The milkmen's association of Haverhill, Mass., has organized and will establish a creamery.

The new creamery building at Kelly's Corners, Mich., was about completed at the close of last week.

The eleventh bulletin on "Experiment Station Work" is now out. It is issued by the Department of Agriculture as Farmers' Bulletin No. 103.

Twelve subjects are discussed. The first calls attention to the danger from excessive irrigation and gives the remedy. The second treats of the cross-pollination of pears, and the third of clover root pruning of trees. These are followed by articles on "The Oxeye Daisy," "Poisoning by Wild Cherry Leaves," "Preserving Eggs in Water Glass," "The Period of Gestation in Cows," "The Linn. Clam," "Silage for Horses and Hogs," "Commercial Butter Culture as Used in Connection with Pastured Cream," and "The Slave Silo." The last mentioned article says that the silo is the most practical and successful silo which can be constructed and gives suggestions regarding the construction of such silos, together with four illustrations showing sections of the silo and general appearance of the completed structure.

Copies may be obtained on application to the Secretary of Agriculture, and all sent at once secure. It is full of up-to-date suggestions and help for the farmer.

FARM AFFAIRS.

THE PRESENT STATUS OF RICE CULTURE IN THE UNITED STATES AND ELSEWHERE

Correspondence of the Progressive Farmer.

Under the appropriation by Congress for the introduction of valuable seeds and plants from foreign countries the Secretary of Agriculture September 1, 1898, appointed Dr. S. A. Knapp, of Louisiana an agricultural explorer, with instructions to visit Japan, investigate the rice of that country, and purchase a stock suited to meet the requirements of the American system of rice cultivation. Rice in addition to its tropical or sub-tropical character, is a crop grown chiefly in wet lands where harvesting machines cannot be used. The crop must therefore be cut with a sickle, and the American hand laborer has been thrown into competition with the cheap labor of the Tropics, a competition that has not proved profitable to the American.

In 1880 a peculiar prairie region in the Lake Charles district of Louisiana was opened up by the construction of a railroad. In 1884 enterprising settlers began the development of a new system of rice culture, by which as now perfected, the elevated and normally or periodically dry prairie lands are flooded by a system of pumps, canals, and levees, and when the rice is about to mature the water is drained off, leaving the land dry enough for the use of reaping machines. Under this system the cost of harvesting, and therefore the total cost of production, has been greatly reduced and the industry has undergone a rapid development.

The Japanese rice average better than the American as far as their milling qualities are concerned, and for this reason it is desirable that Japanese rice be more extensively introduced into this country provided they maintain the same characteristics as in their native country.

The American methods of using machinery in the rice fields have resulted in a revolution in methods of cultivation. If, in addition, the same relative improvement can be secured in the rice itself, it varieties which yield from 80 to 90 per cent. of head rice in the finished product can be successfully introduced, American rice growers will be able to command for their products prices as high as any in the market of the world.

Dr. Knapp returned from Japan in the early spring of 1899 with ten tons of Kushi rice, which was distributed to experimenters in the Lake Charles district and elsewhere in the rice belt.

The result of the milling tests of the Kushi rice are therefore awaited with much interest. If the high milling quality of this rice is maintained under our cultural conditions, the complete success of an American system of rice cultivation will be firmly established.

For the purpose of diffusing information on the new American system and its relation to the general question of rice production, a report has been prepared by Dr. Knapp, which will soon be issued by the U. S. Department of Agriculture as Bulletin No. 22, Division of Botany, entitled "The Present Status of Rice Culture in the United States and Elsewhere."

This report gives a history of the origin of rice and its introduction into the United States, the conditions of production, and areas of lands suitable for rice culture. It says the outlook for the further extension of the industry, using the American methods, as developed in the district of southern Louisiana during the last ten years, is very promising. There is no satisfactory reason why the United States should not grow and mill all of its own rice, nor is there any reason why the United States should not become an exporter of rice. Rice cultivation in the Hawaiian Islands and in the Philippines is referred to, and then a full description of the methods of cultivation in the United States is given, and the obstacles to rice cultivation are mentioned. This is followed by some general notes on the culture and treatment of rice, describing the preparation of the ground, sowing the seed, injury to bloom, flooding, harvesting, thrashing, fertilizing, and milling.

There is also a fashion in rice. Fashion requires a high price and to obtain this the most nutritious portions are removed under the polishing process. Estimated according to the food values, rice polish is 1.76 times as valuable for

food as polished rice. The oriental custom, much used by farmers in the South, of removing the hulls and bran with a pounder and using the grain without polishing is economical, and furnishes a rice of much higher food value than the rice of commerce. In the process of polishing nearly all the fats are removed. In 100 pounds of rice polish there are 72 pounds of fats. In 100 pounds of polished rice there is only 0.33 pounds of fat.

Fashion also increases the cost of commercial rice by demanding whole grains and places a value of about 2 cents per pound more on head rice (whole grain) than on the same quality slightly broken.

The report then treats of the production and consumption of rice in Asia. Japan has about 43,000,000 people who must be sustained largely by the product of 7,000,000 acres of rice. The population of India, including Barmah, is about 287,200,000, and rice forms the principal food of this vast number of people. Nearly 60,000,000 acres are devoted to this cereal, and rice has been under cultivation so many centuries and under such a great diversity of conditions that many varieties, ranging into the hundreds, have resulted. China has more land adapted to the production of rice than any other country of equal extent.

Rice is an important factor in the commerce of almost all oriental countries, and its production is essentially upon the same general plan, but differs so materially from the methods employed in the United States that they are carefully noted in the report.

The bulletin concludes with a brief reference to the cultivation of rice in Africa, Europe, and Central and South America.

M.
Washington D. C.

The poultry business is made up of a good many details and it requires thought, time, work and a liberal supply of good feed to secure the best results.—Baine Finch, Cobden, Ill.

FARMING IN ALAMANCE.

Effect of Factories on Agriculture.—Negro Labor. Correspondence of the Progressive Farmer.

I have seen but little in your paper from Alamance during this year. As this is Thanksgiving Day with the weather all that one could wish or desire I feel like the old elder—"I feel thank ul that it is no 'wuss' with us than it is."

Now, considering that our condition is so much better than most people of other nations, we can, with the Psalmist, say, "Thy mercies are more than we can sum up." In fact, all things are good or bad only by comparison. Many claim that this is the most beautiful and pleasant fall season seen or experienced in this region within the recollection of the oldest inhabitant. And truly it has been a fine and pleasant one; but I have seen many such an one, when there were better crops, more apples and cider, more haws, persimmons, rabbits and possums, fewer deaths and more weddings.

I expected a friend, O. S. Harris, to dine with us to day; but he is called to attend the funeral and burial of Miss Fannie Turner, at Hillsboro. Her death occurred at the Normal College in Greensboro, yesterday. Perhaps no young lady in the State was more widely known or more highly esteemed. A recent letter from Greensboro to a member of our family states that quite a number of the people who remained on account of sickness are critically ill, while many who returned to their homes have died. So much for overcrowding and lack of proper sanitary regulations. Was it in the dairy drainage, the sinks, sewerage, ventilation, or what? A fearful responsibility rests somewhere.

It is stated that prosperity reaches the farmer last; the Alamance farmer, considering a number of things, however: Bad crops of wheat for several years; no fall crop of fruit for several years; no first class, all round crop of corn for many years (this year the crop is very heavy, ripe and waxy); a good crop for plug manufacturing; no general price all round 5 cents per pound (ie)—is forging ahead and slowly and surely bettering his condition; getting more home comforts; more conveniences; better stock. Our doctors are getting wiser; our preachers preaching more and better; our people have more and better school books, school teachers and school houses; more and better papers of all kinds; more gen-

eral intelligence and more money and wealth, even if it is not equitably distributed. Even the morals of our people are improving. There is less drunkenness, less theft and extreme poverty in Alamance than there was before the war or at any time before the present, all things are better and growing better.

A branch of the great Southern Railway runs through our county. The depots have been enlarged, side tracks lengthened. Oconeechee Mountain, at Hillsboro is being torn down for ballast. A long line of telephone is to be put up along the railroad.

Nearly all of our cotton factories have been enlarged or new machinery put in. Our cash and door and furniture factories are all on a boom.

But with all this prosperity for the railroads and factories, there are full as many drawbacks to the farmers. The railroads dump at our depots flour and meat cheaper than the farmer can really raise them here. They bring vast quantities of stale and poisoned vegetables to our factories, so that the factory people are sated, stilled and made sick before our vegetables are ready for market. Watermelons as big as water buckets, with enough malaria in each one to give a well person the chills, are brought by the car load and sold so cheap that the factory boy cannot resist, so he eats and is sick. So by the time our cabbage comes into market they say, "La, we've had 'em till we're just sick and tired of 'em." The boys say, "We eat some melons and they made us sick."

The factories have absorbed nearly all the white labor from the farms. A dozen negro men that used to find employment on the farms now pick up a precarious living around each factory and fully a score of women by washing and cooking so there is now no reliable labor, either white or black, that can be relied for the year round.

So our entire dependence for farm labor is on negro tenants. Most of them are one-horse, slovenly farmers, but it is that or none other. If these are deported the farming will have to be done by the old men and small children. We are not going to cross the bridge till we get to it; but it is best to consider the case beforehand.

B. F. WHITE,

Alamance Co., N. C.

It is a mark of thrift and enterprise for a farmer to have good, well-painted and well-kept farm buildings, and this condition, coupled with good roads and fences, always delights the eye of the traveler through the farming community and is everywhere regarded as a pretty sure sign of prosperity.—Charles W. Johnson, Grand Detour, Illinois.

FOR YOU TO THINK OF.

Correspondence of the Progressive Farmer.

Am surprised that we grow so few onions when they require so little attention, if planted in August, September or March. They want well rotted and rich manure with land thoroughly cultivated before they are planted. The parsnip is worthy of extensive culture for family use and for cattle. The carrot should be grown for market and home use. These roots can stand in the ground or be put in hills for winter use. The Irish potato should be largely cultivated, as they are so valuable the year round; may be served in so many ways—stewed, boiled, fried. Hogs and cows will eat them. After planting them do not plow them; if any work at all is given, let it be a light surface work once and then let all grow together. The tomato is fine for the table the year through, when properly canned in glass cans or jars. Raw or cooked, good in many ways, so they may be served to the taste of anyone.

Why should the farmer have a bare table when there are so many simple vegetable dishes that cost him a mere trifle? His butter and hog meat are more costly and not so wholesome. Good coons with a supply of all these things may make a table shine at any season of the year. As to people that are not fond of any or all the above, it is in the manner they are served.

R. R. MOORE,

Guilford Co., N. C.

I have never in my experience known a man to engage in farming and stock raising, who used reasonable judgment, who was not afraid to work, who could make a living and something to lay by for a rainy day.—Charles Francis, New Leno, Ill.

TEN THOUSAND DOLLARS A YEAR AT TRUCK FARMING.

In The Progressive Farmer of Nov. 28th appeared a very practical article by Mr. F. J. Merriam, of Battle Hill, Ga., on "Conditions Necessary to Cheap Cotton Production." Our readers doubtless enjoyed Mr. Merriam's letter and it is probable that they will hear from him again through our columns. It may interest them also to learn that Mr. Merriam with his partner makes from \$5,000 to \$10,000 a year at truck farming. In a letter in the last issue of Farmers' Voice he gives the fundamentals to his success and, as the Voice says, "it would be difficult to find crowded into briefer space more of wise suggestion than the following narrative of experience and observation contains." Mr. Merriam says:

"In complying with your request for a short sketch of the methods which have contributed to our success in truck farming, I wish to say that I do not regard our success as at all phenomenal, but believe that it can be duplicated near any good market in this country, and there are many which are as good, or better, than Atlanta. We had the advantage of a good location for our garden, to start with, and the further advantage of being without any capital, besides a few hundred dollars. I say advantage because I have seen so many instances where people went to gardening with plenty of capital, but without knowledge of the business, and sunk every cent they put into it. The discouraging effect from the loss of money seems to paralyze the energies and warp the judgment so that nothing succeeds; therefore unless a man knows his business thoroughly and right where to put every dollar to make it profitable, he had better be without capital, and start small. This is what we did. We started small, and instead of trying to have a large general garden all at once, we made a specialty of one or two things; we studied these special crops, both with reference to themselves and our market, and we made them extra fine. This gave us control of the market along these lines, and a better chance to sell other things as we gradually worked into them.

"There are so many minute points which contribute to success in any business that it is hard to tell which are the most essential. A few that I know have helped me are: First, I have a congenial, honest, hard working partner. He attends to the sales department of the business, and keeps the books (our books cost us \$11).

"Second, I have been exceptionally fortunate in my success in dealing with men, both white and black, in bringing out the best there is in them, getting them enthusiastic about the work, and making my interests theirs. This I consider one of the main points, for I have seen a man's business entirely wrecked for no other reason except that he could not manage help.

"Third, We make it a point to know what we are doing. We make a study of every crop, its needs, the soil best adapted to it, and the fertilizers required to give the best results. Then we study every piece of land we have, and try to have the conditions just right to make it do its best. The failure of a crop is more often caused by its treatment than from outside conditions. Mistakes are caused by ignorance, and ignorance is the cause of failure nine times out of ten in any business."

FERTILIZERS AND THEIR APPLICATION.

At the recent session of the National Farmers' Congress in Boston the subject of fertilizers was discussed by Prof. E. B. Voorhees in a thoughtful and exhaustive paper, which is given here only in outline:

It is little more than a year since Sir William Crookes sounded his note of warning in respect to the imperfect methods of agricultural practice now prevalent and indicated a possible deficiency of the food supply of bread-eating nations. While I believe that his deductions are in part based on false premises, I do feel there is more truth, on the whole, in his conclusions than is accepted by most of the students of this question. Actual total production of breadstuffs is not correspondingly greater from year to year, and therefore largely increased demands cannot be met, unless those who cultivate this cereal increase the average yield very largely over that ob-

tained at the present time. I do not mean to say that this is not possible, but there is also the question of its probability. Farmers do not live up to, in practice, all they know. Even the statisticians, who have "put up a bold bluff" in respect to any possible shortage of our food supply, are at the same time pointing out the necessity of improved methods of culture, in order that the future may be secure. This is the saving feature of the situation. What I fear is not legitimate exhaustion of our soils, which naturally accompanies any system of farming, but unnecessary exhaustion, which results from improvident methods of practice both in the growing and the utilizing of our crops.

I shall first discuss the use of commercial fertilizers in relation to "general fertility," by which I mean the productive capacity of those soils that have been cropped for a long time, and that now, even under good management and the use of the natural wastes, do not yield a profitable harvest. In the first place, the action that must be made to these soils is nitrogen, phosphoric acid and potash, and I do not consider as a fertilizer a substance which does not contain one or more of these elements. But all three elements may not be required by a given soil. So you must first know your soil—what you want; and then your fertilizer—what you are getting. There is too much ignorant buying of commercial fertilizers on the tonnage basis. Then the application must be systematic, aimed to supply a definite need of the soil. Owing to the demand for cheap ton prices, the average brand of commercial fertilizer to day only contains about 300 pounds of actual fertilizing constituents to the ton. Yet it is quite as easy to make brands that will contain as high as 450 pounds of fertilizing constituents, and thus be 50 per cent. better than the present. And farmers should take pains not to buy elements of fertility which they don't want. In the continuous cropping of wheat, for example, phosphoric acid is the most rapidly exhausted. So the farmer wastes the money he spends for potash. Then there is also the question of profit. Fertilizers, in order to be profitable, must be applied to crops, the possible increase of which will bring more than the cost of the material used. This rule seems obvious, but is often overlooked.

But there are other conditions where the fertility demand is of a different character. There are what I term "special fertility" requirements as well as general. That is, there is a kind of farming where natural fertility, however great, is inadequate to meet the special needs of the crops grown. Here the farmer has to consider not only yield but quality; he sells his nitrogen, phosphoric acid and potash not, as it were, in bulk, but in neat and attractive packages, and therefore gets a high enough price for a given quantity of it to pay for a great deal of waste in the doing up. Take asparagus, for example; its market value depends on the size, succulence and sweetness. This perfection of quality can only be attained when the plant has at disposal an abundance of all forms of plant food during the entire period of growth. An application of \$50 worth of plant food will thus often prove more profitable for asparagus that \$2 worth to a crop of wheat. It is in this production of quality that the most lavish and profitable use of fertilizers will increasingly be found.

We have another point to consider—the relation of commercial fertilizers to the exports of farm products. We are exporting in wheat, rye, oats and nitrogenous feeds the potential wealth of our country from an agricultural standpoint. Now when we sell a bushel of wheat for 60 cents, we sell nitrogen for 41 cents a pound and phosphoric acid and potash for 14 cents. The difference between the prices received for these constituents in the wheat, and the prices paid for the elements as they originally existed in the soil, must include cost of raising and selling the wheat, as well as the farmer's profit. How much better to export flour and get twice the money for 60 per cent. less plant food! The same principle applies to other grains. Convert your plant food into beef, pork or butter, and you get enormously higher prices for much less costly articles. So I don't approve of the corn propaganda; I had rather see the maize go abroad in pork or beef.

[CONTINUED ON PAGE 8.]