

THE PROGRESSIVE FARMER.

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

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PAPERS.

Progressive Farmer, State Organ, Raleigh, N. C.
The Farmer, Raleigh, N. C.
The Agriculturist, Raleigh, N. C.
The Ruralist, Raleigh, N. C.
The Home, Beaver Dam, N. C.
The Populist, Lumberton, N. C.
The People's Paper, Charlotte, N. C.
The Vestibule, Concord, N. C.
The Plow-Boy, Wadesboro, N. C.
The Olden Watchman, Salisbury, N. C.

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

AGRICULTURE.

The South is making rapid strides in the direction of better stock of all kinds. Bantam chickens up to the finest. Good times will accelerate things when they come.

There should be care exercised in feeding new corn to animals. We believe that injury is possible from feeding too much, though it is a practice to feed especially all they will eat.

Know more about the horse's foot and its care, and keep it out of the hands of the bungling blacksmith. Study how to tend and shape the hoof.

A fine bodied animal may be a bungling gait or a lack of endurance from bad feet and it is too often the owner's fault.

Time adds no fertility or food; it makes a sandy soil more compact, and prevents a clay soil running together; it locks some forms of potash, and hinders the preparation of plant food.

On the vegetable matter in the soil every field needs lime no more than every man needs quinine.

Water under a grindstone should not be left in the trough after the stone has been used. The portion of the stone left in water is kept soft, while the rest is growing harder by exposure to the sun and air. The wet part fastens away, and the stone will soon be out of balance and unfit for use.

It is estimated that an acre of good soil, a foot in depth, should contain 20,000 pounds of nitrogen, 12,000 of potash, and half as much of phosphoric acid. To buy this in the form of commercial fertilizers would cost \$2,000. By wise cropping and plowing, so as to conserve its fertility, it can be kept up to its degree of productivity at slight expense.

An exchange says there is no future in low grade horses. The writer is a hard money crank, evidently. Why would only fine blooded horses be in demand and scrub stock unsaleable? The fine ones if you can, but you will find that under our present financial conditions blooded horses will bring scrub prices. Financial reform is necessary to make any sort of horses bring full value.

THE CARE OF BEES IN WINTER.

Correspondence of the Progressive Farmer.

The management of bees in the fall is a very important point with the bee keeper. His stocks require close attention to see if they have sufficient stores to carry them safely through the winter. The time for this purpose is in October and November. If any stock has not sufficient stores it should be supplied with honey or syrup, but where stocks are weak both in bees and honey it is a good plan to unite two or three, or enough to make one good stock. At this season there will be very little brood remaining in such colonies. The surplus empty combs can be stored away until next season and given to new swarms. If the beekeeper desires to retain all his stocks he should at once begin feeding honey or syrup.

Syrup is made by taking one pound of white sugar to one pint of water, or eight pounds of sugar to one gallon of water, and boiling the mixture until all has been completely dissolved. If this makes a gallon the syrup will be of the right consistency, but if no add more water. If too much water has been added boil it again until the right amount has been obtained.

The best way to supply the food is to have a very shallow vessel, not more than half or three quarters of an inch in depth; in which dry comb is laid, on which the food is poured to keep the bees from downing. This feeding process should be done during the night to prevent bees from robbing. A hole should be made in the top of the hive and the food placed by the side of it in the evening, with a cover to protect it from robbers. The bees will remove the supplies during the night, and next morning the vessels should be taken away before bees begin to fly out.

Besides this syrup, candy and honey mixed or sticks of candy may be given to bees. The candy and honey may be put into a coarse cloth, placed in the top of the hive close to the bees, and covered so that no heat can escape. When either honey or syrup is given to stocks it should be in sufficient quantity to induce the bees to cap it. Not less than ten pounds of sugar should be given to each stock.

When it is possible, honey should be given in sealed combs. This is a great saving of honey, as the bees will necessarily consume a good portion of liquid honey to convert into comb to seal the honey stored in the cells. As a general thing bees gather sufficient stores from the aster in the fall to carry them through the winter.

Those who winter their stock in cellars or other warm places should on warm, pleasant days remove them, so the bees can fly out and discharge their feces. It often happens that very good stocks are lost by neglect of this point. Bees are confined through the long winter months until late in the spring without an opportunity to discharge their feces, and it is at such times they are compelled to discharge them, and the stock is totally ruined.

Bees that remain in their stands will rarely need any protection from the winter's cold further than good shelter. The bees will pass the time more quietly and consume less honey. If they are placed so as to receive the southern exposure on mild days they will fly out which gives them an opportunity to discharge their feces. All stocks which have a southern exposure should be provided with a screen to prevent the warm rays of the sun from falling on the hives, tempting the bees to fly when they will be unable to return. Where stocks are very strong it is necessary to give the bees upward ventilation to prevent condensation of moisture in the hive.

If these suggestions are faithfully carried out there is no reason why the bee keeper should not succeed in carrying his bees safely through the winter. J. W. Hunter, N. C. Experiment Station.

Whatever you do, don't begin to slash down your fine timber with the axe this winter. Clear no forest land. Save the timber. You can plow deep and improve the land already in cultivation. Don't touch the forests.

FARMING AS A BUSINESS.

It is a remarkable fact, but none the less true, that the successful farmers are readers of agricultural papers and agricultural literature of all kinds. They make a study of their business, and by keeping posted on what others are doing in the farming line, are always able to take advantage of improved methods. There are many farmers who honestly think that they are not

to blame because their cows do not yield more than 150 pounds of butter in a year, and other crops in like proportion. Because they work hard they feel that they have done their full duty, and when they realize that they are continually running behind, become discouraged, and say there is no money in farming. True, and there never will be for these farmers. In the commercial world a large percentage of the business men fail, largely due to incapacity. It takes just as much, if not more ability to successfully run a farm as a commercial business. There was, perhaps, a time when it did not, but that time has passed never to return. In times of general depression the business of farming is no worse than any other business. There is money in farming for the brainy farmer, and there always will be. There is profit in a fruit orchard that returns \$50 to \$100 per acre, but unless a man knows how to care for his fruit trees so that they will yield good, clean fruit, there will be no money in it for him, and according to his experience, no money in the business. A writer in an exchange says on the subject:

"The trouble is, not that farming is going to dogs, and that the country has no more use for farmers, but largely, because they are so obstinately wedded to old ideas and methods. Business methods have been literally revolutionized during the last sixty years, and without complaint from business men; but the average farmer hates radical changes more than he hates sin, and never would change without the stimulus of something like financial ruin or starvation.

"If the season of low prices is hard on farmers, it has its phases of good. It forces them to think, and that to the man 'set in his ways,' is the most disagreeable of all work. He hates thinking as applied to his business, and the methods of his grandfather or great grandfather would still be in vogue, could he have his way."—Oregon Agriculturist.

Mulching and surface cultivation are based upon the same principle. Firing the top layer of the soil is almost or quite as effectual in retarding evaporation from the lower parts as is a coating of straw or manure. The farmer or gardener who takes no note of this fact stands squarely in his own light.

RISE OF THE BEET SUGAR INDUSTRY IN THE U. S.

It has required nearly a century to develop beet sugar in Europe until it has become the controlling element in the sugar supply of the world. In these latter days events move much more rapidly. It was some thirty years or more ago that experiments in beet sugar production were made in a regularly built sugar factory at Chatsworth, Ill., and now we find that California is coming to the front with a beet sugar production rivaling the cane sugar production of Louisiana a generation ago, and giving promise of a future development beyond any present conception that most of us have of it. As the sorghum plant seemed wonderfully well adapted to the somewhat arid lands of Kansas, so the sugar beet seems to find a natural habitation in California. Wherever it has been raised there the beets have been found to be of a superior excellence, the limited amount of rainfall really conducing to improve the quality of the beet. In this issue will be found a report of a committee of Californians who have been investigating the development there of the beet sugar industry, and the whole subject matter is so thoroughly well treated that it will be found extremely interesting to all who are interested in the sugar industry. A generation or two hence may find the centre of the sugar industry of America transferred from the low lands of the Gulf to the drier lands of California.—Louisiana Sugar Planter.

Let the brood mare be as near a model as possible in some respects; then, if the same rule is observed in selecting the sire, not forgetting their ancestry, you may expect a colt that will pay for his raising, but not otherwise. An old hack will not do for a brood mare, be the sire what he will.

THE ONLY INJURY.

An Irish paper said: "The day before yesterday Mr. O'Flynn fell from his horse and broke his neck but sustained no other injury." On the 15th inst., Mr. Cleveland's ass humped its back, threw the "old man" and broke his neck, while the country sustained no serious injury.—Hickory Mercury.

HORTICULTURE.

MARKETING FANCY FRUIT.

A discouraging fact to the fruit grower who is trying to put fancy goods on the market is that the vender will be sure to give buyers the wrong name of varieties. This nullifies much of the grower's efforts. About the only way to overcome his difficulty is to plainly brand each package with its true name. These "fancy" varieties could be shipped in one, two and four quart baskets in crates, as strawberries only, so as to go to consumers in the original packages. This is being done in a small way at certain markets. Each basket is stenciled with name of variety, private brand of the grower and his address. Consumers thus learn to recognize both grower and variety, and in time will insist upon having only his fruit.—Home and Farm.

Though common horses will no longer pay, farmers cannot seem to get their courage up to make the effort to breed high class horses. The range of prices between the ordinary horse and the best is growing wider. The medium and smaller horses are growing cheaper simply because no one wants them, as an exchange.

THE FLORIDA ORANGE CROP.

Weeks before the season arrives, when this fruit ordinarily begins to move northward, the very small crop has been entirely absorbed, selling on the streets. The price is \$1.50 to \$2.90 per box, depending on quality and distance from market, and the fruit is now going out in small lots. Trees are recovering remarkably well, but it will require years, according to the opinion of the best posted growers there, to reach the 6,000,000-bx crop again. Mgr. C. F. A. Bielby of the Florida fruit exchange places 60,000 boxes as an outside limit of the yield this year. It is only a guess to estimate what next year's crop will be, but the consensus of opinion points to a yield probably under rather than over 1,000,000 boxes.

While it is thus shown little or no fruit will be shipped from the State, most of the very small crop being required by Florida hotels who cater to northern guests, it is more than probable that unusually large quantities of fresh vegetables will be moved out. In some sections of Florida the acreage of peas, cabbages, beans, tomatoes and lettuce is unprecedented, many farmers who are obliged to look to other crops than oranges having gone more largely into the cultivation of such stuff. In spite of the fact that the production in some sections is being restricted by the use of a smaller quantity of fertilizer, it is believed the amount of fresh vegetables available for outside markets is liberal. Shipments will begin in earnest at an early date, prices up to the present time being nearly nominal. Cucumbers sell in such eastern markets as New York at \$1 to \$3 per crate, Florida and Norfolk green peas meet some favor, with string beans 60c. to \$1 per half barrel.—American Agriculturist.

Study your farm conditions and learn exactly what sheep will thrive best upon it. If you are not able to purchase even a small flock of pure bred or high graded sheep, then put all you can advantageously in a pure bred ram, and after that do the best you can in buying ewes. Start right, even if upon a small scale.

THE DAIRY.

CREAM RAISING.

Comparative tests of cream raising are frequently published in which it is shown that more cream has been obtained by one method or apparatus than by another. Extravagant claims of manufacturers are made in their circulars. When people are properly educated on the subject of cream raising these absurd claims will go in one ear and out the other.

A DUTY FOR EDITORS.

Milk set when first drawn, or at a temperature of 98 or 95 degrees, will yield all its cream as soon as or very soon after its temperature has been reduced to 45 degrees, if the reduction be quickly made. If there is any process, method, apparatus or device by which more than all the cream can be obtained, it is the duty of agricultural and dairy papers to ascertain what that process is and let the world know it just as soon as they can.

THE REAL QUESTION.

A comparative test amounts to but little, if it does not show that the process or apparatus producing the most

cream obtains it all. However, I do not remember ever to have seen in any published statement of comparative tests the additional statement that pails was taken to demonstrate that all the cream was obtained by the successful competitor. To determine the value of any system of cream raising a comparative test is not necessary, nor is it of any value unless the additional feature above mentioned is taken into consideration.

HOW TO SETTLE IT.

To determine whether all the cream has been obtained, especially where the cold, deep setting or Swedish system has been used, the creamed milk should be heated up to a temperature of 100 degrees or 93 degrees and reset—the temperature being quickly reduced to 45 degrees. If no cream comes to the surface it will be pretty good evidence that it was all obtained at first setting. There will nearly always be a slight scum that will come to the surface at such a time, but it will not be cream. There will be no butter in it.

Another way is to use the Babcock test, now acknowledged to be reliable and accepted as such in courts of justice.

A number of years ago Samuel E. Lewis, Oxford, N. Y., told me he set 400 pounds of milk in accordance with the cold deep-setting system and after taking off the cream decided to make a test to determine whether this scum he had always noticed at second setting contained any butter. With that quantity of milk he succeeded in getting enough so he could churn it. After exhausting all efforts with the churn he failed to obtain any butter. This was an opportunity to demonstrate a fact which could not be demonstrated where a small quantity of milk had been set. Mr. Lewis satisfied himself that there is no value whatever in the slight scum that rises at the second setting of milk, where milk has once been properly set, and the temperature quickly reduced to the proper point.

SHOULD BE DEMONSTRATED.

Any one who has experimented in this direction will readily notice the difference between real cream and the scum mentioned. Those who are raising cream for butter or other purposes should never be satisfied until they have demonstrated to a certainty that they are obtaining all the cream there is in their milk.

THE SWEDISH METHOD.

The cold, deep-setting or Swedish method, as its name indicates, was first practiced in Sweden, and was introduced to the notice of American dairymen in 1876 by the late lamented X. A. Willard through the columns of the Country Gentleman. All there is of this system is to set the milk at or near the temperature at which it is drawn and quickly reduce to 45 degrees or below. In cold weather it may be necessary to reduce the milk to 40 degrees; and if the milk becomes materially reduced in temperature before it arrives at the dairy room the temperature had better be raised to 98 degrees before setting. There has been a great deal written and printed by those who have attempted to explain the Swedish method of cream raising. The correct solution is a simple one. The reduction of temperature condenses the watery portion of the milk, thus giving it greater specific gravity, and thereby greatly increasing the original existing slight difference between its specific gravity and that of the oily portion.

CONCLUSION.

The above explanation will enable the reader to understand that cream raising is simply a matter of gravitation, and if milk be set at the proper temperature and reduced to the proper one, all the cream must come to the surface as soon as, or very soon after, such reduction of temperature has been accomplished. It will also be understood that the practice of the cold, deep-setting or Swedish system of cream raising is not confined to any particular make of apparatus.

F. W. MOSELEY.

FACTS FOR DAIRYMEN.

Observe the following 12 points in your dairy operations: 1. That the production of butter is largely dependent on breed. 2. That there is a structural limit to the production of butter to each cow. 3. That when the cow is fed to this limit increased food cannot increase the product. 4. That the superior cow has this structural limit at a greater distance from ordinary feed, and more ready to respond to stimuli than the inferior cow. 5. That consequently the superior cow is seldom fed to her limit, while the inferior cow may

be easily fed beyond her limit; and, as a practical conclusion, increased feed with a superior lot of cows will increase the butter product, but if fed to an inferior lot of cows waste can be but the result. 6. That the character of the food has some influence on the character of the butter, but even here breed influences more than food. 7. That there is no constant relation between the butter product and the cheese product. 8. That the casein retains a constant percentage, and that this percentage does not appear to respond to increase of food. 9. That the casein appears to remain constant, without regard to the season. 10. That increase in the quantity of milk is followed by an increase in the total amount of casein. 11. That insufficient food acts directly to check the proportion of butter, and has a tendency to decrease the casein of the milk and substitute albumen. 12. That the best practice of feeding is to regulate the character of the food by the character of the animals fed; feeding superior cows nearer to the limit of their production than inferior cows; feeding, if for butter, more concentrated and nutritious foods than for cheese; feeding for cheese product succulent material, which will increase the quantity of the milk yield.

LIVE STOCK.

CRUSHED OATS AND CUT HAY.

To test the relative merits of crushed vs whole oats in feeding horses, one of the great London omnibus companies some years ago conducted an interesting experiment, says the Farmers' Advocate. Of the 6,000 horses in the company's employment one half were fed on crushed oats and cut hay and straw, and the other half on whole oats and hay.

The ration allowed per day to each horse, according to the one system, was: Crushed oats, 16 pounds; cut hay, 7½ pounds; cut straw, 2½ pounds. The quantity allowed according to the old system was: Whole oats, 19 pounds; uncut hay, 13 pounds. A daily saving of six pounds of food was thus effected, and this saving was not merely in the quantity, but in the value of the materials employed, for straw in the former case was substituted for hay in the latter.

The advantage of one kind of feeding over the other was far more apparent when reduced to money value. The saving by using the crushed oats and cut hay was nearly five cents per day for each horse, which was equal to \$300 per day for the 6,000 horses. And this saving was accomplished without any sacrifice whatever; for all the drivers and those having charge of the horses agreed that the difference in the horses was decidedly in favor of those fed on crushed oats and cut hay and straw.

PREVENTING THE RAVAGES OF HOG CHOLERA.

Very much has been written on the subject of hog cholera. The matter has been studied by government commissions, by veterinarians, by swine growers and by others generally interested, yet the results of their studies are of little practical value in the way of a remedy or remedies. The writer is one who is very firmly of the opinion that preventive methods are the only ones entitled to serious consideration. The foolishness and unscientific methods of growers are and have been largely, if not exclusively, responsible for the ravages of this disease in the swine herds of the West and South. Exclusive corn feeding and unsanitary surroundings have made our swine peculiarly susceptible to disease. We believe it is impossible to rear and fatten a hog on an exclusive corn diet and have him healthy. Then again, the breeders have thus given us an animal which is not robust or in a condition to resist disease. He is simply a mass of obesity, lacking in muscular development and constitutional—a ready prey for any contagion to which he may be exposed. If the low price of wheat and the comparatively high price of corn will continue another year, thus stimulating the practice of feeding more wheat and less corn, it will be a blessing in disguise to the swine grower. We believe that it is an easy problem to solve—that of avoiding the disease—if preventive hygienic methods are used. Give hogs range in summer, grass and water, more wheat and other cereals, with less of corn, and we shall in one or two generations of hog life have practically wiped out this scourge. The normal condition of our domestic animals is health, and if we care for them in a proper manner they will not get sick; but it is useless to violate nature's laws and hope to escape the penalty.—E. G. Fowler, in American Agriculturist.