

AGRICULTURAL EDUCATION

AND SUCCESSFUL FARMING.

By **ANDREW M. SOULE**

This department will cheerfully endeavor to furnish any information. Letters should be addressed to Dr. Andrew M. Soule, president State Agricultural College, Athens, Ga.

Protect the Fruit and Truck Crops

It is not worth while any longer to plant an orchard or garden unless one is willing to undertake to protect the fruit trees and the vegetables against the attack of predaceous insects and fungous diseases. Troubles of this kind are much more serious than they used to be. It is difficult for the layman to understand why this should be the case. One must remember, however, that the host plants of some fruit trees and vegetables have been destroyed through the development of our horticultural and truck industries. Moreover, a good many diseases and insects have been imported with the trees, shrubs and vegetables brought from foreign countries. At one time it appeared as if our orchards and gardens would be destroyed by insects and diseases. About this time the thought of protecting them through the use of various sprays or insecticides began to develop. Through the active assistance of our agricultural colleges and experiment stations a great body of knowledge concerning this subject was presently accumulated, and has now been widely disseminated, with the result that the grower who exercises foresight and industry can count on successfully protecting his crops against insects and disease. To do this he must be forehanded, for in many instances the control of a disease or insect is best accomplished by spraying the trees some months before they reach their maximum of activity. When we spray fruit trees properly, we can protect them from injury by worms of various kinds, and against the scab and rot. Injury to the fruit is also prevented, and the trees kept in a more vigorous and healthy condition, while the energy of those plants on which we depend so much for furnishing our tables with the delicacies of the season is devoted to the production of size, succulence and quality instead of being dissipated through the effort to grow and at the same time provide food for insects and fungous diseases. Any one who ever had a garden will appreciate the lucidness of vegetables which are grown quickly and under favorable conditions as compared with those produced under the trying conditions portrayed above.

That spraying is an effective protection against loss and a wise investment has been amply demonstrated by the State College of Agriculture in the various tests which it has conducted. In one instance, where apple trees were pruned and sprayed to the great amusement of the owner, 92 per cent of the crop proved to be of fine quality and fit for marketing, and only 5 per cent were not good. The object lesson not only convinced the doubting farmer but his friends and neighbors as to the wisdom of modern methods of pruning, spraying and managing an orchard. Just what to spray with and how to use these materials becomes a very important matter. Among the things chiefly relied on for the protection of the orchards is, first, arsenate of lead. This is used chiefly in the fight against biting insects and worms in peaches and apples. It is prepared by taking one pound of powdered or two pounds of paste to fifty gallons of water. An equal weight of quick lime can often be used to advantage with the arsenate of lead. The second important defensive material to use against insects is white wash solution. To prepare this boil 5 pounds of flour of sulphur and 4 pounds of quick lime in 5 gallons of water for one hour. Replace the water which has boiled away and dilute with 6 or 7 gallons of water. This solution can be used as a spray against the San Jose scale in the winter while the trees are still dormant. Another form of this material which can often be used to advantage is known as the self-boiled lime-sulphur solution. This is prepared by putting 8 pounds of quick lime in a barrel and slaking with hot water; next add 8 pounds of flour of sulphur which has previously been made into a

paste with water. Cover this mixture with hot water and allow to cook with its own heat for five minutes. Then add enough water to make 50 gallons. This is a good spray to use against fungous diseases, such as the rot and mildew.

The fourth mixture depended on in fighting insects and fungi is the Bordeaux mixture. This is prepared by dissolving 3 pounds of copper sulphate in 25 gallons of water. Next shake 5 pounds of quick lime and make up to 25 gallons with water. The two may be poured together into a barrel through a fly screen. This makes a fine spray to use against fungous diseases. Soap is particularly effective for use against lice on plants. It is made by dissolving 1 pound of hard soap in from 6 to 8 gallons of water and applying as a spray.

Thoroughness of application in the use of all sprays is a matter of the utmost importance. It is also essential that all solutions be thoroughly mixed and used in the exact proportions indicated. If the solution is not kept stirred one part of it may be more concentrated than another, and in that event some damage or injury might result, and by the thoughtless individual would probably be due to improper advice concerning its preparation, whereas, the result would be solely due to carelessness on the part of the operator.

As to the time to spray, apples should be sprayed for the scale in the fall or late winter. For this purpose it is best to use the concentrated lime-sulphur solution. In fighting the scab, rot and worms, use the self-boiled lime-sulphur solution before the blossoms open with two pounds of arsenate of lead to each 50 gallons of water. As soon as the flowers fall repeat the treatment. Two to three weeks later use the same solution again. About five weeks after this treatment, use the Bordeaux mixture with arsenate of lead, and again two weeks later use Bordeaux again. It may be necessary in some instances to treat again with Bordeaux after an interval of two weeks more.

If spraying peaches for the scale use the concentrated lime-sulphur solution in the fall or late winter, preferably in the late winter. For worms and rot, use the self-boiled lime-sulphur solution. In fighting the scab, rot and worms, use the self-boiled lime-sulphur solution before the blossoms open with two pounds of arsenate of lead to each 50 gallons of water. As soon as the flowers fall repeat the treatment. Two to three weeks later use the same solution again. About five weeks after this treatment, use the Bordeaux mixture with arsenate of lead, and again two weeks later use Bordeaux again. It may be necessary in some instances to treat again with Bordeaux after an interval of two weeks more.

For grapes, Bordeaux mixture applied every three weeks from just before the buds swell to four weeks before ripening will be found to be a most effective treatment. Should worms attack the leaves add arsenate of lead to the Bordeaux mixture, as indicated above.

In protecting vegetables against fungous diseases Bordeaux mixture will be found the most satisfactory preparation to use; for insects that eat the leaves, use arsenate of lead; for lice, there is nothing more effective than the soap solution.

USING COMPOST UNDER COTTON AND CORN.

T. E. M., Albany, Ga., writes: I have a quantity of compost which I wish to know if I can use liberal quantities of this with acid phosphate on corn and cotton seed. I have used it on corn and it has given me a very good crop. I am sure that we cannot get college sugar for the inclusion of our hogs? I had my hogs treated the same way and they are now covered that the serum had been labeled and the limit was January 1, 1917, and another label had been pasted over this one.

If one has a good grade of compost and is in position to use several tons of it per acre it will not be necessary to use a large ration of cotton seed meal or other carrier of nitrogen under corn and cotton. Situated as you are we would be disposed to use 300 to 400 pounds of acid phosphate of the grade mentioned in your letter under the drill row at the time of planting the cotton. We do not think it would be amiss to use a sack of cotton seed meal at the same time. The compost will contain a fair amount of nitrogen if made in the manner indicated in your letter. This nitrogen will probably not be quite so quickly available, however, as that contained in cotton seed meal, and we suggest, therefore, that you use a little of this material under the drill row in order to give the plants a quick and vigorous start. We believe the best way to use the compost would be in a deep furrow underneath the cotton row. We would mix it well with the subsoil by means of a bull-tongue. It would be good practice also to mix the cotton seed meal and acid phosphate in the subsoil at the same time. Then draw two furrows together and make a low bed and plant the cotton therein.

A good ration for corn will be 250 pounds of 16 per cent phosphate and 100 pounds of cotton seed meal, along with compost as you are able to apply. If you only have two tons use at that rate. If you have a larger quantity use three, four or five tons, preferably the largest amount.

We are manufacturing serum at the college all the time. We are working to the full capacity of our plant which is a small one. If you will recall, two years ago the legislature cut off the appropriation which we had hitherto used

Pull Big Stumps by hand

Clear your stump land cheaply—no digging, no expense for teams and powder. One man with a K can rip out any stump that can be pulled with the best inch steel cable. Works by leverage—same principle as a jack, no powder. Shovel, shovel, shovel. Write today for special offer and free booklet on Land Clearing. Walter J. Fitzpatrick Box 42 182 Fifth Street San Francisco California

Stump Puller

Write today for special offer and free booklet on Land Clearing. Walter J. Fitzpatrick Box 42 182 Fifth Street San Francisco California

TO THE FARMERS OF GEORGIA

Your request mailed to the Market Bureau, Georgia Department of Agriculture, will bring blanks for you to list with the Bureau diversified products that you have on hand, or expect to raise and wish to sell. Your address will be forwarded to the buyers of the United States. You will also receive a list of the buyers most likely to be interested.

MARKET BUREAU,
Department of Agriculture,
ATLANTA, GA.

How the Banks Can Help the Farmers

FEW of the southern bankers have at last realized the importance of helping the farmer take up live stock. From a business standpoint the bankers have begun to realize that they are helping themselves more than anyone else, and those who have undertaken this work have found out that it is just as safe and even better collateral to advance money on live stock such as cattle and hogs, the same as they have been doing on mules to raise cotton with for many years. While the work has just begun, there is an unlimited field for every bank in the country to help this work in a big way and enable hundreds of farmers to realize cash from live stock every month in the year that have never done so before.

We notice in quite a few papers nowadays that many banks are buying pigs and distributing them to their customers. They could not do more valuable work with their capital. Neither could they place their money where it will earn a larger per cent of profit. Every time they invest \$20 or \$25 in a pair of pigs and will allow the farmer to give them three pigs in return at the end of the year they are making at least 100 per cent on the investment, and if they will keep this work up for years there is no end of good it will do the country and help many a person who would not take up hog breeding were these opportunities unavailable. The same thing applies to the cattle growers, and especially to the dairy industry. There is possibly no large creamery or milk producing section in the United States but have financed the industry to keep their business going, and enabled hundreds of people to become independent by helping them in a safe business venture as has been done in very great milk producing section. The sooner our people take up this work and go at it in a small way at first they will soon learn how much value and good can be done with a small amount of money in many sections of the south.

There are today several towns in Georgia that are operating creameries and are advancing the farmers money to buy cattle, build silos and put their business in operation, and allowing the farmers each month to pay back a reasonable amount of this borrowed money from the sale of milk and cream. It is surprising how quickly a dairyman, especially those located on a farm, can pay for a herd of cows with a part of the cream check applied each month on this account. We know of quite a few dairymen who have become independent in this way, and if you will buy and use the right kind of animals and give them the proper care every dairyman can easily make a payment of \$5 per month on each cow they have borrowed money to purchase, provided they will use judgment in keeping up with their work and produce a good part of their feed at home.

The entire south offers today the most wonderful opportunities in dairying, beef raising, hog producing and poultry raising of any section of the United States, with possibly the best markets for the same quality of products that can be had. Great changes have been brought about throughout the entire south and many of our people who have never known or thought of the possibilities of this work have been surprised at what can be done in a small way, since so many have been forced to take up this line of work.

The great trouble now is that so few people are in a position to stock their places with either cattle or hogs, build barns and silos and buy the proper equipment, and they do not know who to turn to for help in this direction. It is a duty of the banks and men with capital to look into this work and see who they can help, and they will be surprised to find out they can make many far safer investments and help to build many safer bank accounts and more substantial loans than they ever dreamed of by investigating this line of work and giving help to those who are entitled to it. Much of this work can be done by women and children and by many who can not go out and do hard physical labor and will not attempt to do it on the average farm, but would become interested in dairying or live stock growing of some kind if they had a little encouragement.

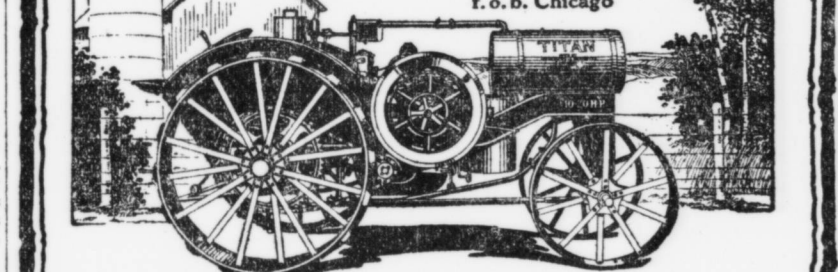
In doing this work, by our home institutions that have capital they not only keep at home an immense amount of wealth, but it will be showing their desire to help improve and build our country to its great possibilities, and enable many sections to be more progressive and independent than ever before. There is nothing that can be depended upon more safely 365 days in the year than a good milk route, or there is nothing that will help to build a farm faster and double its value quicker than the keeping of a dairy herd on the farm. The most serious drawback today that has kept this country from prospering in this direction has been simply for the want of encouragement and a sufficient amount of operating capital to do the business in a way or to say large enough to market a business or to make it profitable.

We well know that the south is sending to the west every year thousands of dollars for butter and packing house products when we can produce feed and raise better cows and hogs here cheaper than probably any other section of the United States. While the money loaned the farmer does not come back every thirty or sixty days all in a lump as it requires a little longer with live stock to bring returns, it however is much safer than many other loans that are now made by the banks, and when it does come it doubles or triples in a much greater proportion than one can imagine. Cattle and hogs will bring in cash every day in the year and is a collateral that is easily converted into cash, and we hope to see more capital and more credit extended to our southern farmers in this line of work from now on. Look around you and see who are worthy and are good care takers and you will find many who can not only help you in your community but help themselves and many others in this line of work if you will extend them even a reasonable amount of credit.

Yours very truly,
Lois Brown

TITAN 10-20

\$950 Cash
f.o.b. Chicago



The Final Answer

To the Tractor Fuel Question

WE believe that a farmer who buys a kerosene tractor costing hundreds of dollars is entitled to get what he pays for.

We know that Titan tractors are real kerosene tractors. When you buy a Titan tractor you are safe. You have the written guarantee of a responsible Company that your tractor will do good serviceable work, using common coal oil as fuel at all loads. That is the final answer to the tractor fuel question.

Titan tractors are now built in three sizes, 10-20-H. P., the 3-plow outfit; 15-30-H. P., for 4 and 5 plows; and 30-60-H. P., for the heaviest work of the largest farms. All operate on kerosene.

The 10-20-H. P. size is a two-speed tractor, 1.85 and 2.50 miles per hour, with a smooth running twin-cylinder engine, slow speed, mechanically oiled, starting and running on magnet. It can be used for any field work you would expect nine or ten horses to do, and it will run any machine that takes up to 20-H. P. at the belt.

If you place your order soon you can have a guaranteed Titan tractor for the heavy spring work. Drop us a line so we can send you full information at once. Don't wait. Write now.

International Harvester Company of America

CHICAGO (Incorporated) U S A

Champion Deering McCormick Milwaukee Osborne Plano

\$310 Davidson Motorcycle

FIRST GRAND PRIZE

In the picture are hidden a number of faces. How many can you find? Some are looking right at you, others show only the side of the face. You'll find them inside down and every way. Mark each face you find with a pencil, clip out and send to us with name and address NOW. We will give away a \$310 Davidson Motorcycle, as First Grand Prize, and thousands of Dollars in Cash Rewards, Prizes and Special Premiums. There will be no losers. Solve the puzzle. If you can find as many as FIVE FACES we will send you immediately toward the \$310.00 Motorcycle and other Grand Prizes. We will also give away twelve 1917 model Coaster Brake \$20.00 Bicycles, and many other free and extra, regardless of who gets the motorcycle. Someone will win motorcycle. WHY NOT YOU?

FARM LIFE, Box 133 SPENCER, IND.

Armour's Fertilizers

You know where the ANIMAL MATTER in Armour Fertilizers comes from. You may have grown the hogs and cattle.

Armour Fertilizers are GOOD for your land—GOOD for your crops—GOOD for your pocketbook—GOOD for your disposition—a GOOD all 'round investment.

From the farm—
back to the farm

Armour Fertilizer Works

Atlanta, Ga. Jacksonville, Fla. Greensboro, N.C. New Orleans, La.
Nashville, Tenn. Baltimore, Md. Chicago, Ill.

GEORGIA COTTON MEN TO MEET ON JUNE 8 AND 9

Annual Convention of Manufacturers Will Be Held at St. Simons Island

The annual convention of the Georgia Cotton Manufacturers' association will be held this year at St. Simons Island June 8 and 9, and a great outing is being planned for the members and their wives.

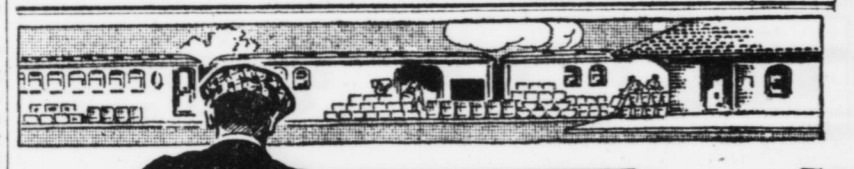
W. J. Vereen, of Moultrie, president of the association, was in Atlanta Tuesday

day conferring with P. E. Glenn, of this city, secretary-treasurer of the association, and with L. L. Arnold, editor of "Cotton," on plans for the convention. June 8 and 9 will be Friday and Saturday, and it is expected that many in attendance on the convention will stay over Sunday on St. Simons Island.

A splendid program has been arranged, with addresses by notable speakers on welfare work in cotton mills and other timely topics, and several boat trips have been planned, including a trip to the ship building yards at Brunswick.

Boll Weevil Burley Speaks

(Special Dispatch to The Journal.) ALBANY, a. Mar. 23.—"Boll Weevil" Burley speaks at Thomaston today, closing the "Hog and Hominy" campaign, and boll weevil crusade inaugurated in January, and then will attend the conference of all the agents at Macon on Thursday, Friday and Saturday. He spoke in eleven meetings last week and was heard by 1,100 farmers.



Use Express Service

With SOUTHERN EXPRESS service the markets of the city are at your door. A night's trip puts country produce in city pantry. Grow plenty of fruits and vegetables, raise lots of poultry, gather up the eggs, pack them securely, and fill promptly the orders you will get if you list your name in our Market Bulletin. Shippers and producers meet dealers and consumers through this medium.

Low Rates on Food Products
THE SOUTHERN EXPRESS COMPANY
"Serve the Public" (2)



GROW HONEY-DEW MELONS

They are a Money-Maker!

Net returns on 1 1/2 acres last year were \$3,600. They retailed in Atlanta at 60¢ a 75¢.



To introduce this fine Melon to our readers without expense to them we have arranged the following offer:

The Semi-Weekly Journal \$1
Eighteen Months

100 Honey-Dew Melon Seed Free

A SHORT HISTORY OF THE "HONEY-DEW" MELON. The original seed was secured from a melon shipped from Africa. This seed was planted at Rocky Ford, Colo., and crossed with the "Rocky Ford" melon by pollenization. The following season this hybrid seed was again crossed with the Improved Hybrid Casaba. "Honey-Dew" melon is named and vanilla predominating. The average size of the melon is six inches in diameter and seven to eight inches in length; weight, five to six pounds. Skin is smooth and creamy yellow when ripe. Flesh is emerald green, very thick, melting and fine grained, can be eaten to the extreme rind.

Use this Coupon

Enclosed find \$1. Send me The Semi-Weekly Journal 18 months and 100 Honey-Dew Melon Seed, a premium.

Name _____
P. O. _____
R. F. D. _____ State _____

EPAGE'S GLUE

HANDY TUBES
SEND IT TODAY FOR

Barnesville Beauty \$48

Barnesville Beauty and Pride Buggies are Best

Now shipped direct to you on deposit of \$10—60 days driving trial with a guarantee for all time against defects. They are the **Easiest-Riding, Lightest-Running and Longest-Lasting** buggies made.

Open Buggies \$38.00 up.
Top Buggies \$48.00 up, Harness \$5.95 up. ALL GUARANTEED.

Write for our Bargain Catalog of Buggies and Harness and the Free Watch Fob given our customers.

Address: B. W. Middlebrooks, Pres. and Mgr., BARNESVILLE BUGGY MANUFACTURING CO., 27 Main St., Barnesville, Ga.

GENUINE BARNESVILLE BUGGIES

We Offer You the BEST BUGGY MADE

Shipped direct from the largest and best buggy factory in the South, direct to you at lowest wholesale cost. The only Buggy in the world warranted on any road, under any load. Beware of imitations. Write today for free catalogue of our buggies and harness.

BARNESVILLE BUGGY CO.
Box 280, Barnesville, Ga.