

When a spore comes in contact with a white fly scale, it emits a vegetable thread which enters the scale, and, growing, fills it with a webby mould which afterwards resolves itself into a mass of spores contained in little spindle-shaped sacs. These sacs are excessively minute, perhaps one five-hundredth of an inch long and one-two-thousandth of an inch across and each contains five or six round spores, tightly packed together. So each little mass, nourished by a single white fly scale may contain as many as two million sacs of spores or say ten million spores each of which contains within itself the possibility of death to at least one white fly.

The brown Aschersonia fungus, common in the Manatee county groves, is very similar to this red fungus but seems to push threads more freely from the first infested scale over the surface of the leaf, reaching and infecting others that it may touch. This brown Aschersonia does not seem to be established in Lee county as yet.

The chairman, Mr. Walker, was authorized and requested to proceed to the southern counties and make arrangements to have the Board of Commissioners supplied with fresh leaves containing the kinds of fungus, to be distributed free of charge to all applicants in the county who wish to introduce these fungi into infested groves.

A resolution was also passed strongly urging all persons who have the white fly in their groves, to introduce this fungus, not as an absolute remedy, but as a useful ally in waging war upon the pest.

A resolution was also passed asking the United States Agricultural Department to inform this Board whether it is possible and profitable to import any other enemies of the white fly from its native country (which is believed to be somewhere in South America) and, if so, whether the Department could undertake the enterprise.

A resolution was also passed urging all persons planting nursery stock in localities not yet reached by the white fly, to defoliate such stock and promptly burn the leaves, since many nurseries in the state are already infested and the pest rarely, if ever, breeds anywhere except upon the foliage.

The meeting adjourned till next month when propositions are to be submitted from parties who desire to furnish a spraying plant and go into the business of spraying under the supervision of the Commissioners for such grove owners as way wish to employ them.

F. L. M.

#### Horticultural Commission.

The orange growers of Orange county seem to be very much in earnest in their efforts to get rid of the white fly, judging from a report of a meeting as published in the Orange County Reporter:

The Board of Horticultural Commission met at the court house yesterday with all members present, namely, Messrs. T. L. Meade, Geo. H. Fernald, W. L. Story, J. A. Smith and E. M. Walker.

The following resolutions were unanimously passed:

Resolved, That as the white fly breeds only on foliage, and as so many nurseries of citrus stock are already infested with this pest, this commission strongly advises and urges all persons planting such citrus stock in places not already infested by white fly to defoliate stock before planting, and to promptly burn all the foliage removed.

Resolved that the United States Agricultural Department be requested to inform the Board of Horticulture Commissioners of Orange county, Florida, whether it would be possible and practicable to import any parasites of *Aleyrodes citricola*, commonly called the white fly, from the native country of this pest, and if so whether the department could take charge of this work.

Resolved, That the chairman of this commission be requested to go to the proper counties and make arrangements with owners of groves where the Aschersonia fungus is abundant, for the supply of this fungus to be distributed by this board to owners of groves in Orange county, which are infested by the white fly.

Resolved, That the red and the brown Aschersonia fungus are recommended as a help in the destruction of the white fly and harmless to all vegetation, and all owners of white fly infested groves are advised and urged to introduce this fungus by pinning leaves containing it to their trees.

The commissioners will supply packages of fresh leaves containing the Aschersonia fungus for this use to applicants free of charge.

#### Highly Successful Southern Dairyman.

We do not think that there is any reason why dairying cannot be as successfully carried on in Florida as it can in Georgia. Therefore we believe that some of our Florida farmers might make as good a showing as the one mentioned in an article published in the American Agriculturist.

A model dairy farm well worthy of the name, is that of W. L. Williamson, of Jackson county, Ga. The farm is on a branch line of the Southern railroad in the northwestern part of the state near Commerce. The soil is a typical red clay and sells, usually for \$10 to \$20 per acre. The dairy development of the Southern states is in its infancy. What Mr. Williamson has done is a good example of the possibilities of success along these lines when properly conducted. In a recent address before a farmers' organization of Columbia, S. C., Prof. W. J. Spillman of the United States Department of Agriculture said, that Mr. Williamson had one of the best conducted dairy farms he had ever seen. The farm contains about 400 acres, but only 135 are in cultivation. The balance consisting of about 100 acres is in Bermuda and 100 acres in woodland pasture, (Bermuda and Lespedeza). The crops under cultivation are about 50 acres of peas, about 70 acres corn and four acres alfalfa. The corn is grown for silage and the peas for hay. The corn silage consists of three parts corn and one part sorghum so planted that when cutting the row there is no necessity of mixing the cane. The corn is planted in 4-foot rows, 20 inches in drill.

As soon as the corn is cut for silage the land is sown to rye which furnishes winter pasturage. The land where peas are sown is also sown in rye after the peas are taken off. This rye is sown from September 15 to November 15. The rye is taken for pasture within six weeks after sowing. In the spring, when the rye is about knee high, it is cut and fed green to the cattle. This cutting and feeding goes on until the rye gets in bloom. Then part of the rye is cut for hay and another portion set apart for seed rye. Where the rye has been cut to be fed green, sorghum is planted for an early feed. Where the rye has been cut for hay, the land is sown to peas and after the portion that has been set apart for seed rye has been cut, the land is planted in silage corn. In other words, the crop rotation is as follows: Corn followed by rye, rye by cow peas, then rye, and then corn again. Occasionally rye is ploughed under green, followed by sorghum. The purpose is to keep crops growing on the land all the time, both winter and summer.

The farm is located on a rolling and partly hilly plantation. Yet there is no terrace or wash on the place. The soil is ploughed deep, to hold the winter rains. The crops are given level cultivation. From ten to 12 tons of silage are cut per acre. Prof. Spillman says that the average from good farms in Illinois is about seven tons. A bulletin from that state says

the average is from five to eight tons. As soon as the silage crops are cut, they are carried to the barn and run through a machine and cut in one-half to three-fourths inches lengths. There are three silos at the barn; the two small ones have a capacity of 100 tons each, while the large one holds 320 tons. The cost of producing a ton of silage and putting it in the silo is from \$1 to \$1.25 per ton.

#### FEEDING AND MANAGEMENT OF THE HERD.

The cattle are also fed cottonseed meal, corn meal and bran. The plan is to feed each cow a mixture consisting of three parts each of these ingredients, giving each animal one pound of this mixture per day, for every pound of butter she makes during the week. That is, if the cow makes seven pounds of butter each week, she is fed seven pounds of this mixture each day. If a cow is fed six pounds, she should have 25 pounds silage and eight pounds dry hay. If alfalfa hay is fed, the grain mixture can be cut in half, or omitted altogether, though it would probably be better to feed some grains.

There are on this farm 145 head of cattle at the present time. There are 75 milch cows, mostly Jersey and grades, three Jersey bulls, besides the dry cattle and calves. These cattle are housed in a barn at night. The droppings are hauled out each morning and scattered over the land. At the cattle barn three men are regularly employed to clean up the premises, look after the feeding. At milking time they are assisted by three boys. The cows are brushed and rubbed thoroughly each day. They are then milked and fed. It requires about one and one-half hours to milk and 30 minutes to feed. Water is supplied by a tank and windmill. There is a drinking place between each two stalls. The drinking tubes are on a level and supplied with water by an automatic arrangement.

The products sold consist of butter and sweet milk. About \$150 worth of milk is sold in Commerce, a town of about 2500 inhabitants. About 80 pounds of butter are made each day. This is sold by contract to an Atlanta firm at 25 cents per pound. Sweet milk is sold locally at 15 cents per gallon. The gross income from this farm in 1903 was about \$5,500. The net income that year was about \$23 per acre. Improvements in the cropping system noted above were made last year and from figures furnished by Prof. Spillman, the indications are, that the gross income this year will be, from the 135 acres under cultivation, about \$67 per acre, or a net income of about \$49 per acre. Mr. Williamson pays his buttermaker \$30 per month. Helpers around the barn, \$13 to \$15.

A splendid lot of Duroc Jersey swine is kept. A bunch of these animals are shown in the accompanying picture. They are fed upon skimmed and butter milk. These pigs are readily sold at a good price. This farm has been run exclusively as a dairy farm for the past six years. Prior to that, for ten years, it was conducted partly as a dairy farm. Not a stalk of cotton has been grown on the place for six years. When the land was purchased about 16 years ago, it was worth about \$10 per acre. This farm is cultivated according to methods and plans prepared by Prof. Spillman who has charge of the diversification work of the United States Department of Agriculture. Early in August an institute was held on this farm. It was estimated that there were nearly 5,000 persons present. Farmers are greatly interested in this diversified farming and are profiting by these object lessons. There is room for many more such farms. American Agriculturist commends this splendid work by the department and hopes more of it will be conducted in the future.

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