

# THE PROGRESSIVE FARMER.

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

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## AGRICULTURE

### HARRY FARMER'S TALKS.

CXXI.

Editor of The Progressive Farmer:

In a recent article in The Progressive Farmer some one mentioned sowing oats and soja beans, and one said that soja beans were like garden peas. Now, these things are likely to mislead.

#### DIFFERENT KINDS OF LEGUMES.

The soja bean is a summer plant that grows upright like pepper and bears peas or beans in pods very much like garden peas, excepting that the pod is covered with a stiff down. The pea known as the Canada field pea is like the garden pea, and grows in the winter and early spring. It is sown with oats or barley to keep it off the ground. They are not suited for the coast region. The cool moist springs of the north or mountain parts of the South is where they thrive best. Vetch resembles them a little, but is much smaller. It does very well here. All of these plants are nitrogen gatherers and for this reason should be cultivated more by our farmers. The soja bean may be planted any time that beans do well. It is said that the plant makes good hay. We prefer the cow pea for our farm.

#### FIGHTING AN INSECT PEST.

We want farmers to give their treatment of land that is infested with what is known as the blue louse, blue bug, etc. It is a small insect very much like the lice found on collards, cabbage, turnips and similar plants in the spring. This insect lives on the root. The plant of corn or cotton will turn a little red and will not grow with all the care and manure you put on the crop. Late in the summer they stop working the crop, after it is too late to make a good crop. This insect is found on nearly all the best cotton lands of the eastern part of the State. It seldom does any damage on high, light sandy soils.

#### HOW BAD ROADS HURT FARMERS.

We are glad that the road laws are receiving more attention from the newspapers. We certainly agree with one writer who advocated aid from Congress. Millions of dollars are voted every two years for rivers, harbors, etc., for the purpose of helping exporters and importers. There are large amounts given to railroads and irrigation companies. Why not give

some for building public roads so that farmers can haul their products to market?

An up-country town needed fruits and vegetables to supply its market, which was bare, and such stuff was selling high. Farmers within only a few miles had apples, potatoes, cabbage, etc., which were spoiling on their hands and they greatly in need of all the money they could get for truck. And yet, it was just about as hard for farmers to carry their goods as it would have been if there had been a very wide river with nothing but a little birch bark canoe to cross in, instead of the boggy clay hills. Do you see who suffers in this case? The consumer suffers just as badly as the farmer. Both have to pay the penalty for the bad roads. This is not the only instance in which both lose; it is so nearly every year.

At least three-fourths of our people both in the cities and country, suffer from bad roads. This is politics, but is not the kind to help one class at the expense of another, for all are vitally concerned.

HARRY FARMER.

#### HESSIAN FLY IN WHEAT.

**The Pest is Becoming Unusually Destructive in Western Counties—Entomologist Sherman Tells of Ways of Combatting It.**

Editor of The Progressive Farmer:

There seems to be urgent need of informing the wheat farmers thoroughly as to the best means of dealing with the Hessian Fly, for it is evidently causing them much loss every year. A week or two ago we gave in The Progressive Farmer the essential points in dealing with it, but will repeat here more in detail as more serious reports have been received since the publication of that article.

The adult parent insect of the Hessian Fly is a very small, slender blackish, two-winged fly (there are a number of specimens before me) which resembles a mosquito. The adult female fly deposits its eggs on the wheat leaves, usually selecting those that are nearest the ground. The eggs hatch into small white maggots which work down to the stalk, feeding on it near the joints where it is beneath the base of the leaf. Here it grows to maturity, when it changes to what is known as the "flax-seed" stage. This stage is correctly known as the pupa and it

is brown and oval in shape suggesting the seed of the flax in general appearance. In this stage the insect is entirely helpless and takes no food; the maggot is simply transforming to the adult fly. We see then that there are four distinct stages of existence in the life of this fly: (1) the egg; (2) the maggot, which does the damage; (3) the pupa or "flax-seed," and (4) the adult fly.

All through the piedmont section of North Carolina there are two complete generations of the insect each year. One brood of adult flies appears and deposits eggs in the fall and another brood emerges and deposits eggs in the spring or early summer.

Let us now begin when the farmer sows his wheat in the fall and follow his field (and the fly) through a year, and we will then be able to discuss the matter of remedies intelligently.

Suppose the wheat is sown early in October and is nicely up by the 20th of that month. About the 25th a brood of the flies appear and deposit their eggs on the young wheat. The maggots which hatch from the eggs work around the joint of the stalk near the ground feeding on the tender juicy fiber. Here they reach maturity in about four weeks and change to the pupa (flaxseed) stage to pass the winter. The adult fly emerges from this pupa in April or May (specimens bred from stalks sent to me emerged between May 4 and 18) and after mating the female deposits eggs for another brood. The flies themselves do no harm other than to lay the eggs, and after they are deposited the flies die. The eggs thus laid hatch into maggots which continue the destructive work and which mature and transform to the pupa (flax-seed) stage by harvest time. The grain is cut and the stubble left standing in the field. Another field is sowed to wheat in early October and the brood of flies emerges from the old stubble in the latter part of the month, flies to the new field, deposits eggs and dies.

If there is no wheat up when this fall brood of flies emerges then they must die without depositing their eggs or they must deposit them elsewhere, and each fly only lives for a day or two after emerging, for it is the natural course of events, with many insects that they reach maturity only for the purpose of providing for the next generation, and they die a natural death of slow starvation after maturity is reached.

It is evident that it would be very expensive to apply any kind of remedy which should reach the insects on each stalk, but knowing the history of the insect's life we are prepared to combat it effectually. Note that the adult flies emerge in the fall in October or early November and that therefore they may be largely avoided by planting as late as possible. Note also that the insects are in the pupa (flax-seed) stage when the grain is cut in summer, so that by at once burning off the stubble they will be destroyed or if the stubble be turned under deeply and then rolled to pulverize the top surface, the flies will be suffocated and unable to emerge.

These are the two great points to be attended to in combatting the Hessian Fly and the advice may be boiled down to these two propositions:

1. Plant late as possible in the fall.
2. Burn off or turn under deeply the stubble of infested fields immediately after harvest.

Any farmer who will adopt these practices will realize great benefit from it, but the results will be all the more evident and beneficial if adopted generally by all the farmers in a community.

The Hessian Fly is a bad pest and will no doubt always continue to be so, but it will not seem nearly so serious when the farmer learns thoroughly the history of its life as here explained, and puts into practice the suggestions here given. There is nothing theoretical about this. Every farmer must see the common-sense of it, and all know that the very late-sown wheat is not so subject to damage by fly as that which is sown earlier. In teaching my classes at the A. & M. College for the past two years, and whenever I have had occasion to talk with farmers about this pest, I have always brought out the point of late planting and have never yet found a farmer who had carefully noted the results who did not admit its value. The turning under or burning off stubble is a point not so well known among farmers, but it is of value for the reasons here given.

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A man cannot have an idea of perfection in another which he was never sensible of in himself.—Sir Robert Steele.