

Oregon Agricultural College is the Friend of the Farmer

Page of News Notes and Interesting Articles Specially Written by College Experts For This Newspaper.



View of Oregon Agricultural College, Corvallis, Oregon, the Sole Aim of Which Is to Aid Agriculturists.

THE clover seed crop is being threatened in many parts of the state by a surprisingly sharp attack of the clover seed midge. Clover suffering from this attack presents the appearance of arrested development in the half blown stage, the heads becoming brown and showing but few, if any, flowers completely blossomed. When the farmer observes this unnatural appearance he is urged to gather one or more affected heads, pull a floweret from it and examine the seed-pod closely for the larva of the midge that caused the trouble. He will probably find a small salmon-pink maggot about one-twelfth of an inch long, occupying the space where the seed should have been. This is the larva of the midge. If undisturbed it will feed on the seed embryo until fully grown, when it will drop to the ground and pupate just beneath the surface or in trash on the surface. In a few days the little fly will emerge, so small and swift of wing that its presence can hardly be noticed. But it will be on time to lay an egg in the flowerets of the next clover crop. The little insect is about the length of the larva, has long, fine wings that stand up almost vertically, and a long, flexible ovi-positor with which it can reach into the ovary of many flowerets while sitting in the same place. The damage done by the larva is confined almost wholly to the seed, and farmers are advised to cut the entire crop for hay as soon as the injury by clover midge is noticed. This process will not only save the crop for hay, but it will at the same time starve the larvae before it reaches the pupa stage, thus preventing reproduction of the succeeding generation. As in most other crop pest problems, eradication can come only from efficient co-operation among all farmers whose crops are attacked. Any single farmer gains but scant protection from the pest by destroying it in his own fields while his neighbors allow it to develop and reproduce in fields all around him. The attack renders the seed worthless for seed, and it should be cut for hay just as soon as possible after the attack has been observed.

Land Grant Colleges.

When land grant colleges were first established the principal, if not the sole function of these schools was residence instruction to young people, chiefly young men. In the development of the schools home making courses under one name or another were provided for training young women and facilities for practice work were provided. The work of experiment stations soon became a highly important feature of agricultural college training, and experiments with plans tried in other places or devised by those in charge, were made important features of the work. The next step contemplated a wider and more thorough knowledge of existing conditions and the securing of information upon which new experiments could be scientifically based. This tendency resulted in the development of the research phases of agricultural college work, when it seemed to many that the acme of perfection had been reached in agricultural training. The situation, however, soon revealed an anomalous character. It was as though a community or society of people had established a factory where the investigation and manufacture of valuable commodities were to be carried on so remote from the stock holders that the valuable products of the institution were simply stored out of sight. It was then that the extension phase of agricultural instruction began to assume its rightful place in machinery and agricultural education. The extension division was organized to bring back

to the people the scientific information that has been secured with their funds. By means of lectures, demonstrations, community organizations, construction of model farm equipment, county agricultural agents, demonstration farms, college bulletins and extensive publicity service, these college-made goods are taken directly to the people. The branches of college work, instruction, experiment and research have found practical application through the work of the Extension division.

Teaching Public Sanitation.

BELIEVING that one of the most important functions of the modern teacher in schools, both urban and rural, but particularly rural, is to better health conditions among the pupils with whom the teacher associates, the Agricultural College intends to emphasize the question of the proper training of teachers in the general lines of public sanitation. In rural communities in particular, it is the school teacher who, outside of the country physician, should be best able to offer advice concerning disease prevention and sanitary conditions in the community in which she is located.

It is primarily important that the teacher understand the factors which tend best to conserve the health of the pupil. The place which the teacher should occupy, therefore, should not be limited merely by his degree of learning derived from books. With this end in view at the summer school session there will be offered a series of lectures, given by the heads of the Bacteriological and Zoological Departments to the teachers in attendance. The subjects are those of most importance in dealing with the diseases of children. The lectures will be elementary and popular in character. They will be as follows, and will be illustrated by lantern slides:

1. "The Teacher as Guardian of Rural Public Health."
2. "School Inspection and Disease of Eye, Ear, Nose and Throat."
3. "Tuberculosis."
4. "Water Supply and Sanitary Conveniences in the School House."
5. "The Teacher and Sex Hygiene for Pupils."
6. "Colds, Lagrippe and Other Infectious Diseases of Children."
7. "The Importance of Self Study."
8. "Light and Sight in the School-Room."
9. "Air, Temperature and Attention in the Class Room."
10. "Furniture and Physical Deformity."
11. "Clothing Versus Comfort."

It is deemed important likewise that the College give certain instruction along these general lines to the boys who may be in attendance at the summer school encampment. Such instructions, therefore, will be given them in order to better fit them to live. It is believed that instruction concerning these matters cannot be started too early the child.

Knowledge of Insects Necessary.

A great deal of time, money and garden and orchard products could be saved if all producers would follow more closely Professor H. F. Wilson's oft-repeated advice that knowledge of the insect should precede the application of spray to destroy it. Without this knowledge the grower is likely to apply a spray that is not effective or he may destroy a harmless or even beneficial insect. "The mere fact that insects are present in large numbers on the plant is not sufficient warrant for applying spray," says Professor Wilson. "Begin the work of control by carefully studying the insect. If you know what the insect is and it is a

pest, secure the standard spray and apply it according to directions." Professor Wilson also gives some very general evidences by which the nature and habits of the insect may be judged, but perhaps the best source of identification available to Oregon farmers is the Biennial Crop Pest Report in which the most important insect pests are described and illustrated with photographs and drawings, many of which are printed in natural colors. I have used this book in school agriculture and by means of it succeeded in identifying and controlling every important insect pest that attacked the home and school gardens. Copies of this report may be had free of cost by writing for them to the Experiment Station, O. A. C., Corvallis, Oregon.

Bee Keepers Will Make Exhibit at State Fair.

OREGON bee keepers will have an exhibit at the state fair next fall," says Professor H. F. Wilson, entomologist at O. A. C. and superintendent of the bee and honey exhibit. "It is time to begin preparing for this exhibit and it is hoped that as many as possible will send material to the fair. The fair commission is very generous with premiums offered this year as the following schedule of prizes indicates:

Lot No.

- 1—Specimen of comb honey, not less than 24 pounds, quality and manner of putting up to be considered. First \$5.00; second, \$3.00.
 - 2—Most attractive display of comb honey. First, \$10.00; second, \$5.00.
 - 3—Specimen of extracted honey, not less than 24 pounds, quality and manner of putting up for market to be considered. First, \$5.00; second, \$3.00.
 - 4—Most attractive display of extracted honey. First, \$10.00; second, \$5.00.
 - 5—Specimen of beeswax, not less than 10 pounds, soft bright yellow wax to be given preference. First, \$10; second, \$5.00.
 - 6—Most attractive display of beeswax. First, \$10.00; second, \$5.00.
 - 7—Honey vinegar, not less than one gallon, shown in glass. First, \$3.00; second, \$2.00.
 - 8—Single comb nucleus three-banded Italian bees. First, \$5.00; second, \$3.00.
 - 9—Single comb nucleus Golden Italian bees. First, \$5.00; second, \$3.00.
 - 10—Single comb nucleus Carniolan bees. First, \$5.00; second, \$3.00.
 - 11—Single comb nucleus Caucasian bees. First, \$5.00; second, \$3.00.
- Sweepstakes.**
- 12—The largest, best, most interesting, attractive and instructive exhibition in this department, all things considered, \$15.00.

Further directions and rules for preparing and offering the exhibit will be furnished exhibitors by press notices and by letters, and any information desired may be had by writing to Professor Wilson at Corvallis, or to Frank Meridith at Salem.

Lime Sulphur Spray.

The lime-sulfur spray contains neither free lime nor free sulfur when applied to the plants, according to investigations made by Professor H. V. Tartar, agricultural chemist at the college. Professor Tartar has made extensive investigations with a view to determine the exact chemical composition of the lime-sulfur spray, the sources of its action, and the most economical and effective ratio of mixture. In these pests he identified the presence of sulfide, polysulfide and thio-sulfide. There is also present as a residue an insoluble sulfide. This latter is useless and represents a waste of

material. The other ingredients exercise insecticidal qualities by absorbing oxygen necessary to the insect's respiration, by resolving into free sulfur in oxidation, by melting the wax-like coating of certain small insects and thereby gluing them to the plant, by liberating a poisonous gas in absorbing carbon oxide from the air, and possibly in some other ways not yet known. The economical ratio of mixing lime-sulfur is one part lime to slightly more than two parts of sulfur.

Beet Sugar.

Science has demonstrated that beet sugar is identical in composition with cane sugar and that it is just as valuable for all purposes when pure. This is contrary to the general belief and a knowledge of the fact should enable housewives to purchase sugar for preserving fruit according to the price, regardless of whether it is cane sugar or beet sugar. In many parts of the state it is sometimes impossible to secure the cane sugar, called by certain dealers fruit sugar, at the same price that is asked for the beet sugar. A general knowledge of the equal value of the two sugars should tend to equalize supply and price.

Forest Conservation.

The people of Oregon are manifesting approval of certain phases of the government's forest conservation policy in the most practical way possible—by imitating it. While there were some objectionable features connected with the administration of the law the features of saving the range, the additional features of protecting forests from forest fires, using only ripe timber for manufacturing purposes and reseeded of deforested areas, are widely approved. The extent of approval is shown in the unusual demand for trained foresters. Every member of the graduating class in forestry at O. A. C. was appointed to positions in forest work before finishing his course.

Extension Work.

Under the Lever Bill for agricultural extension, Oregon will receive in the year 1915-16 about \$14,000. During the following year the state is eligible to receive \$18,000, and for the next five years \$21,000 annually. After 1922 the state will be on the eligible list for \$40,000 annually. Following this date the National government will appropriate annually for all the states \$4,580,000. In order to secure their share of this enormous fund the states must add by direct appropriation \$4,100,000 annually. This makes a grand total of \$8,680,000 available for agricultural extension work. These funds cannot be applied as purchase or lease prices of land or to any teaching or lectures in college. During the present year Oregon receives \$10,000.

Look Out For Hog Cholera.

Indisputable evidence that hog cholera in epidemic form is rapidly approaching Oregon is seen in the federal government's apportionment of the anti-hog cholera funds. A very little of these funds has been appropriated for Oregon, but extensive appropriations have been made for some of the neighboring states, notably Idaho. The simple directions for avoiding contagion, found in another column of this issue of the Farm and Home Magazine, should be followed very closely by everyone engaged in the swine industry. Immunity from this scourge can be secured almost without expense by following the few simple directions given by Dr. Simms, while to fight it after it has been once introduced costs vast sums of money.