

# Oregon Agricultural College is the Friend of the Farmer

Page of News Notes and Interesting Articles Written by College Experts.



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

## TREATMENT FOR SMUT.

**O**REGON farmers annually lose many thousands of dollars from smut in their grain crops. This smut, according to Professor H. D. Scudder of the Agricultural College, greatly lowers the market value of wheat and also rapidly increases in amount from a very small beginning. Thus it becomes of the greatest importance that the farmer insure his crop against the ravages of smut by some effective treatment. Fortunately these treatments are simple and relatively inexpensive.

For the stinking or covered smut the seed wheat is fanned and a day or so prior to seeding time is given either the formaldehyde or copper sulphate ("bluestone") treatment. The first is decidedly the better. One of the simplest methods of treatment is dipping the sacked wheat by means of a home-made derrick into a trough containing formaldehyde. The proper mixture contains one pound or pint of formalin to every forty gallons of water. The sack of wheat should remain immersed in the solution until thoroughly wet to the center, which generally requires from five to ten minutes. It should then be taken out and the excess solution permitted to drain off. The grain should be allowed to dry out fairly well before it is sown.

A method rather more effective is to pour the seed into the solution stirring it and skimming off any smut balls that may appear, then taking it from the solution and partially drying it before seeding.

The drill itself, of course, should be disinfected with the same solution and the treated grain should be put back only into sacks that have been disinfected or new and unused. Where the seed is not sown immediately after treatment, it is better to dry it out by shoveling it over and spreading it thinly on a clean tarpaulin or floor, since the vitality of the seed is considerably affected by lack of care in drying it out thoroughly after dipping. It is of the greatest importance that farmers get formalin of guaranteed strength and purity. The commercial form of 40 per cent formaldehyde is the kind to be used in the ratio of one pint to forty gallons of water.

## HORTICULTURAL EXHIBIT AT AGRICULTURAL COLLEGE

**A** FRUIT, vegetable and flower show will be held by the Horticultural division of the Agricultural College on November 7. The following list of exhibits has been prepared for the occasion:

- A collection of apples from various parts of the United States;
- Competitive three plate exhibits by students, apples to be grown in any section of the country;
- A collection of 75 jars of nuts by The Oregon Nursery Co.;
- Collection of sub-tropical fruits by graduates of the college in California;
- Collection of sub-tropical fruits from Southern Florida;
- A by-product exhibit including canned fruits, vegetables and fruit juices;
- A chrysanthemum show;
- A demonstration of the proper methods of pruning roses;
- A demonstration of the potting and re-potting of house plants;
- A collection of plants suitable for student rooms and for homes;
- A collection of flowers from florists;
- A collection of vegetable garden-

ing seeds from various parts of the country.

A collection of vegetable by-products;

A collection of vegetable types from various truck farms of the state;

A collection of greenhouse vegetables;

A collection of vegetable packages and methods of packing;

A collection of implements used in vegetable gardening;

A demonstration showing best types of plants and methods of transplanting the same;

A contest among the women of the college on floral table decorations;

A contest by the women of the college on the best cooked apples.

All horticulturists are invited to attend this educational exhibit.

## CHEMICALS USUALLY BAD AS CIDER PRESERVATIVES

**T**HE use of chemicals in preserving sweet cider, as quite frequently recommended in some parts of the state, should not be undertaken by those unacquainted with the action and effect of chemicals. The three chemicals that are most frequently recommended are salicylic acid, calcium sulfite and benzoate of soda, and there are many reasons to believe that they exert a bad influence on the health of those who use them in preserved food products. Their use in food products offered on the market is either prohibited by law or greatly restricted. Our dairy and food commissioner has brought a number of prosecutions based on the use of sulfite, whose use is prohibited in Oregon. Benzoate of soda may not be used in excess of one tenth of one per cent, and in less strength would not control fermentation.

"There are three principal ways of checking fermentation," says Professor Tarter, chemist of the Oregon Agricultural College. Low temperature merely holds the ferment bacteria in check, the cider gradually becomes sour. A very high temperature will kill the bacteria, and if the product is then bottled and sealed it will keep sweet indefinitely. Unfortunately this temperature injures the quality and flavor of the cider. Chemicals strong enough to destroy the fermentative organisms are very apt to injure the health of those who use the products preserved by them. Digestion itself is largely a matter of fermentation that is brought about by the action of the so-called soluble ferments. The action is stopped or largely inhibited by these chemicals, so that their use involves a risk too great to be taken by the layman."

## INCREASING THE PROFIT ON GRAIN FED TO HOGS

**B**Y PUTTING protein into grain fed to hogs the feeder nearly doubles on every cent invested economically in protein material. Skim milk or butted milk in the proportion of one and a half pounds of milk to one pound of grain will produce a much more efficient use of the grain, parts of which are not utilized when grain is fed alone. Grain does not contain all the feed elements in the right proportion to suit the pig's needs.

Where milk is not available, tankage makes the cheapest protein supply in Oregon. Ten pounds of tankage at \$50 a ton added to 90 pounds of grain at present prices increases the cost of 100 pounds of feed ten cents, but it increases the pork yield 2.65 pounds, which at 7 cents per pound amounts to \$18.55 per hun-

dred. The cost of this increase yield was but \$10.

"In terms of returns per hundred pounds of gain on the hog, the feeder secures 87.5 cents more by feeding tankage with grain than by feeding straight grain," says Professor Samson, who conducted the feeding tests. "In terms of the price that the pigs return for 100 pounds of grain the tankage causes them to return 23.3 cents more, which is \$4.66 more per ton. If pigs were paying only market prices for grain fed alone, this \$4.66 may justly be counted as the feeder's profit. This profit is further increased in the fertilizing value of the manure.

## FOUND HEREFORD HERD.

**F**OUNDATION stock for an Agricultural College herd of pure-bred Herefords has been purchased by the Animal Husbandry department. It had been the intention of Professor Potter, head of the department, to go east to get this stock, since only the best types were desired, but he found precisely what he was looking for in the herd of George Chandler, of Baker City, from whom the following fine animals were secured: One cow and calf, four yearling heifers, all breeding stock of the projected Hereford herd to match the splendid herd of college Shorthorns. At the same time four head of Hereford steer calves and four head of yearlings were purchased for use as class and show animals. In addition to these animals 100 head of two-year old Shorthorn steers were purchased for experimental feeding at the Union branch station, with which field peas and barley hay will be tried out and the value of grain with alfalfa hay ascertained.

## MILKING CONTESTS AT FAIRS.

**M**ILKING contests at various county fairs in Oregon are unique and valuable features reported by some of the Agricultural College specialists that judged the fairs. These contests are conducted by weighing and testing the milk of each cow entered, usually for a period of two to five days. The prizes are awarded, as previously announced, either on the whole amount of milk produced by each cow during the contest, on the total butterfat content of each cow or upon a combination of both points. These contests invariably arouse a great deal of interest among the visitors of the fairs, and undoubtedly result in a great deal of good. Not only do farmers learn the exact value of each cow as a milk producer, but they learn in a general way the type of animal most profitable in the dairy herd and the methods of testing that can be applied to their own herd.

## THE COUNTRY STORE.

**T**HE influence of the country store and its owner in National development has been a factor of tremendous importance," writes Dr. Hector Macpherson of the Oregon Agricultural College. "As the frontier planted settlements in its westward advance the country store became everywhere the first nucleus of social and economic progress. It was the clearing house of ideals, and the medium through which news from outside the new settlement reached the inhabitants. It became their first postoffice, and it was to a large extent the forum from which public opinion and neighborhood policy were crystallized. It bridged the gap between the pioneer community and the big world outside. The storekeeper brought in whatever goods the neighborhood wanted and was ever on the alert for markets for the community products. As the growing population began to practice division of labor the store was a medium through which the surplus products were exchanged. Families having more potatoes, butter, eggs, and other produce than they could use traded out their surplus with the grocer who resold them to families producing none for themselves. Abraham Lincoln was probably only one among hundreds who sharpened their wits and won their spurs over the counter of the country store."

## MAKING UP MEAT SHORTAGE.

**H**OG cholera alone takes enough meat from the visible supply to make up the present deficiency, is the surprising conclusion of Dr. Virgil Knowles, Federal and O. A. C. specialist now working on the hog cholera problem in Oregon. "The farmer bringing his drove of hogs right up to the marketing stage, putting his entire grain crop into them with the expectation that they will bring in a badly needed money supply and then seeing them die on his hands, has lost more than his hogs—he has lost confidence in the swine industry. It takes more pluck and presistency than the average man possesses to turn around after such an experience and take up the task of raising another drove of hogs. He will probably lack even the capital for producing a new herd, and if not he will not be very enthusiastic about doing so. But most of the losses from hog cholera are preventable, and there is no more promising way of making up the meat shortage than by banishing the disease from the state and the county. We hope with the aid of farmers and newspaper men to banish it from Oregon and to keep it out."

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