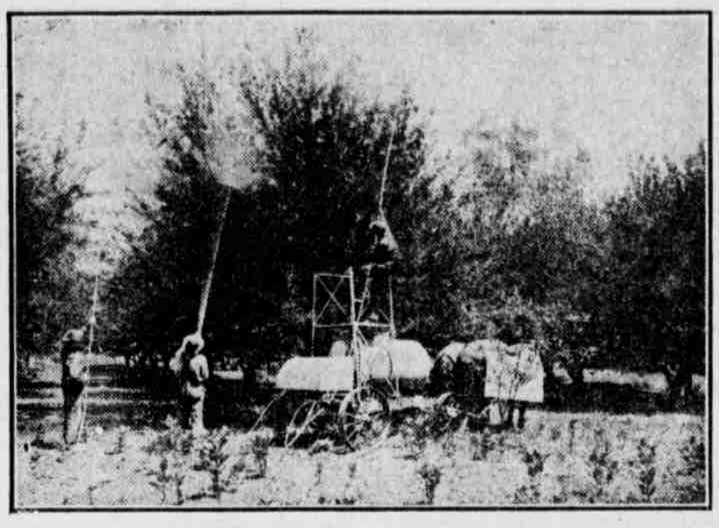
CO-OPERATING WITH FRUIT GROWERS; MOVEMENT FOR BETTER ORCHARDS

Department of Horticulture of State University Makes Proposition to Send Man as Demonstrator.

(By R. F. Howard, Department of Horticulture, University of Nebraska.)

THE unusual amount of interest exhibited by the fruit growers of Nebraska at last winter's session of organized agriculture at Lincoln has resulted in a definite movement for better orchard practices. The State Society of Horticulture at that time appointed a committee to investigate conditions and to recommend methods of procedure whereby the growers who are willing to give their fruit the care it needs might receive state aid by applying for it. This committee decided it would be well to call meetings in several different counties for the purpose of finding out what methods the growers are using and what their attitude was in regard to co-operating with the state.



SPRAYING AT TAYLOR'S ORCHARD (LINCOLN).

The writer, together with a representative of the state society, met with the growers of Washington, Douglas, Nemaha and Gage counties. The commercial growers of these counties have reached a stage when they no longer need to be told that perfect crops harvested from abandoned orchards is a thing of the past in Nebraska. They were looking for ways and means of successfully combatting the insect and fungus pests that have been gradually reducing the yearly income from their orchards.

The fact that many growers were using methods wholly unsuited for their conditions and that others were not doing anything in the way of improving the quality of their fruit, on account of the lack of some definite instructions, was apparent. Showers of such question as, "How can I control the worms that get into my apples?" "What is the right time to spray and what does it cost?" "How should I mix and apply the materials?" and "What is the proper time to prune fruit trees and how should it be done for best results?" were thrown at the speakers of these meetings. Bulletins, they said, served a good place, but they did not satisfy all their needs, since each man had local problems that could only be covered in a general way in such publications.

As a result of this interest, the departments of horticulture and agricultural extension of the State university made the following proposition to the growers of the state: It was stated that where the interest in any community was great enough among the growers themselves, these departments would send a man as a demonstrator for one season, the only expense to the growers being the demonstrator's local expenses. It was pointed out to the growers that the best results could not be expected from spraying apples unless the trees were first properly pruned, and that for this reason the university would not send its man to help mix and apply the spray materials unless they would first prune their trees under the directions of the demonstrator. The limited number of men that could be sent from these departments made it impossible to answer all the requests for help the past season.

To illustrate how eager many growers are to do the proper thing by their orchards, if they only knew what to do, a single case is cited of how one man in Douglas county took advantage of this proposition last season. He wrote to the university asking if some one could be sent to show him how to prune his orchard of 1,600 trees. The man was sent immediately, and upon going into the orchard found the work had progressed to the extent of two rows. This grower has one of the best twelve-year-old orchards in the state, though it had never been pruned. He had men armed with carpenter saws taking off about one-third of the branches, all from the lower portion of the tree, leaving the dense top untouched. He admitted that his only knowledge of pruning was based upon a statement he had seen or heard somewhere that "about a third of the wood should be removed from trees that had never been pruned," and that he supposed it didn't particularly matter what portion came off. When the demonstrator suggested that he was probably removing about the proper amount of wood, but that he would have more properly shaped trees, more highly colored fruit and could do a better job of spraying if he would distribute the pruning equally all over the tree, instead of taking off only the lower limbs, he immediately bought the proper kind of pruning tools and finished the job according to the above suggestions. This same man two weeks later bought a gasoline power spraying outfit and all the necessary spray materials for controlling the insect and fungus diseases. The demonstrator called at each of the first two sprayings and helped him to properly mix and apply these spray materials. This man did not stop at merely pruning and spraying his orchard. He bought the most up-to-date extension orchard disc and cultivated his trees all summer. This grower has a crop of apples now on his trees almost entirely free from insect and fungus blemishes that will probably realize him from $5,000 to $6,000. This is only a single case of what this kind of co-operation will do for the growers, the university and the state as a whole.

The enthusiasm and interest with which the growers have met this proposition makes it seem highly probable that if this work is followed up for a few years, eastern Nebraska's real worth as a place to grow fancy, high grade fruit will be realized.

EARLY SELECTION OF SEED CORN

The early selection and proper care of seed corn in Nebraska has been given official recognition through a proclamation issued by the governor, setting aside Sept. 30 to Oct. 5 as "Seed Corn Selection Week." The early selection of seed corn will mean a big saving to the state in general and will obviate the necessity for sending for seed corn outside the state.

"The question of seed corn is an important one," says Professor C. W. Pugsley, head of the extension department of the state farm. "There is little seed corn in the state, due to the lack of seed early this year. Nebraska was ransacked from one end of the state to the other for seed. Then the supply was wholly inadequate. Many farmers were forced to send outside of the state and, as a result, their stands are not as good as those who have used Nebraska grown corn.

"With the early selection and proper care Nebraska will have plenty of seed corn next year and purchasers will not be compelled to pay fancy prices for corn that is not so good as home grown varieties.

"Early field selection insures seed which will grow. Well matured corn can be picked early, dried in some convenient place, and then is in no danger of being frozen. Freezing will not hurt well cured corn.

"Early field selection insures high yielding seed and also insures the selection of native seed, which is an important factor in producing high yields. Tests have proven that Nebraska grown seed will produce an average of 6.2 bushels more than seed imported from Iowa and Illinois."

A bulletin, containing suggestions for the selection and care of seed corn, compiled by university officials, will be furnished free of cost, on application to the bureau of publicity of the Commercial club of Omaha, or the Nebraska experiment station.

The rise in the price of corn in the last three or four years has been fortunate for hog raisers, if for no other reason that it will result in more rational systems of hog feeding.

Experiments where eight kinds of forage have been thoroughly tried out prove conclusively that pork can be made more cheaply and with less labor by the use of gree crops. Clover, alfalfa, rape, corn, rye grain, cowpeas, soybeans and sorghum were the various forages experimented with.

CARE OF MILK IN THE HOME

Recommendations and Suggestions of Professor Frandsen.

ELEVEN RULES FOR CONSUMERS

By J. H. Frandsen, Professor of Dairy Husbandry, University of Nebraska.

Sanitary milk is milk from healthy cows, produced and handled under conditions in which contamination from filth, bad odors and bacteria is reduced to a minimum. The production of clean and healthful milk is the most important subject with which the dairyman has to deal. Even from an economic standpoint the dairyman cannot afford to ignore the importance of producing a pure and healthful article, for we find milk produced under absolutely sanitary conditions selling

KATY GERBEN, OWNED BY UNIVERSITY OF NEBRASKA.
(Official record—19,161.2 lbs. milk; 776 lbs. butter.)

for practically double the ordinary price. Needless to say, for the production of sanitary milk the dairyman must have healthy cows, sanitary barns, clean bedding and dust-free air, clean barn yard, clean cows, clean and healthy milkers, clean milk vessels, and pure water. He must feed clean, wholesome feeds, must have a sanitary milk room and abundant facilities for cooling the milk and cream.

But no matter how good the condition of the product when delivered, if it is carelessly handled in the home, the milk or cream may quickly become unfit for food. The fact that vast quantities of good milk have been spoiled in the home by improper treatment prompts the writer to emphasize some of the points regarding care of milk and cream in the home.

Some customers have little knowledge of milk and consequently do not know how to properly care for it. Milk and cream readily absorb odors and collect bacteria and other impurities whenever they are exposed to the air,

VIEW SHOWING WHITE SUITS WORN BY MILKERS, UNIVERSITY OF NEBRASKA.

or placed in utensils that are not scrupulously clean. If this fact is generally understood it can easily be seen why it is so objectionable to store milk uncovered in refrigerators or cellars, where it comes in contact with vegetables or other food products possessing strong odors. As milk is a perfect food for human beings, so it is also a perfect medium for the development of certain bacteria which may gain access to it from the dust-laden air, flies and unclean utensils. Some of these bacteria may be the germ of contagious disorders; others may cause digestive disorders, especially in infants and young children whose diet is largely milk.

Experiments have shown us that many germs which may gain access to the milk develop very rapidly while the milk remains warm. By this, we mean a temperature above 50 deg. F. For instance, milk kept at 45 deg. F. may be kept perfectly sweet for twenty-four hours, while if kept at a temperature of 70 deg. F. it may sour in

WASHING AND STERILIZING THE BOTTLES, UNIVERSITY OF NEBRASKA.

less than six hours. This should emphasize the importance of low temperatures in the preservation of milk and cream

The following brief rules should enable the consumer to properly care for the milk so as to have an article that is at all times sweet and wholesome:

1—If possible insist on getting milk in a bottle or other originally sealed package. Milk dipped out of a can in the street likely means that large numbers of bacteria from the air may have fallen into it.

2—Never allow the milk to stand in a warm place for any length of time, but place as soon as possible in a refrigerator, icebox or other cool, clean place.

3—Keep the milk or cream in the original package until needed for use.

4—Carefully wipe the mouth of the bottle before pouring milk or cream from it.

5—Do not pour back into the bottle any milk which has been exposed to the air.

6—Keep the bottle covered with cap or inverted tumbler as long as any milk remains in it.

7—Do not expose uncovered milk in refrigerator containing strong smelling foods.

8—Wash milk bottles as soon as empty and do not use milk utensils for any other purpose.

10—Special precautions should be taken with the baby's milk bottles. They should be rinsed in lukewarm water, washed in hot water containing a little soda and then scalded. In selecting a feeding bottle choose one with wide mouth and no corners. Never use rubber tube between bottle and nipple.

11—In case of contagious diseases in the house, such as typhoid, scarlet fever or diphtheria, return no milk bottles to the milkman without the permission of the health officers.

ROLLING WINTER WHEAT

By C. W. Pugsley, Superintendent Agricultural Extension, College of Arriculture, Lincoln, Neb.

Reports from farmers and grain men indicate that the wheat fields look exceptionally good, but that cracks or checks are appearing in large numbers.

Wherever these cracks occur, the roots of the wheat plants are exposed to the air and are dried out. In many instances they break off and consequently a portion of the root is killed. Examination has shown that in many instances plants die later because the roots have been so greatly damaged by the cracking or checking of the ground.

In addition to the injury to the roots, the checking exposes a larger surface of soil to the action of the wind, thus drying out the ground more rapidly. Every bit of moisture should be saved for the coming wheat crop. Harrowing the winter wheat would probably fill up to some extent the cracks and would create a slight mulch over the field, but it would tear out some of the plants.

In press bulletin No. 30, written by Professor E. G. Montgomery of the Nebraska experiment station, there are given the results of a four-year test of harrowing and rolling winter wheat, both broad casted and drilled. The average of the results shows that no increase in yield could be secured from harrowing, so this practice is not to be recommended if a better one can be found. In commenting on the decreased yield, Professor Montgomery has the following to say:

"It should not be assumed that the cultivation (harrowing) of wheat would not be of value in drier regions. Cultivation is for the purpose of conserving soil moisture, but in the years in which the data were taken on wheat, there was no lack of moisture. In fact in the two seasons when spring rainfall was below normal (1905 and 1906), there was some increase from cultivation."

On the other hand rolling winter wheat resulted favorably every year, the highest increase in any single year being seven and six-tenths bushels per acre, and the average for the four years was five and one-tenth bushels increase per acre per year. In speaking of the effect of rolling winter wheat, Professor Montgomery has the following to say:

"Rolling winter wheat in the spring has not failed in any of the four years to give an increased yield, the average increase being five and one-tenth bushels per acre. The rolling was given early in the spring, soon after the frost was out, and about the time growth started. Harrowing after rolling was not as good as rolling alone, probably due to loosening up the plants again after the roller has pressed them firmly in the soil.

"Early spring rolling of winter wheat, pressing the earth as it does firmly about the plant roots, produces good results. When frost comes out in the spring it is apt to leave the soil filled with small cracks or checks, especially around the plant. If these checks are examined closely it will be seen that a large number of roots are thus exposed, and if the weather continues dry they are killed or at least injured. We have taken up plants in the spring where half of the roots were exposed.

"If the soil is not wet at the time of rolling—and it should never be rolled when wet—rolling aids in no small degree to form a surface mulch. It does this rather than compact the surface."

This bulletin can be secured free of cost by writing to the director of the Agricultural Experiment station, Lincoln, Neb. Ask for Press Bulletin No. 30, on "Rolling Winter Wheat."