

# THE BOARDMAN MIRROR

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## WHAT IS PROPER PASTEURIZATION OF MILK?

A raw beefsteak and a bottle of raw milk are two of the finest food substances but it is not safe to consume either of them in that condition.

We all understand that raw beefsteak should be made safe by cooking but have not all come to realize that precisely the same sanitary reasons which deter us from serving raw beefsteak to our children should prevent us from giving them raw milk. Raw milk should be made safe by application of heat.

Fortunately we like the flavor of cooked meat but unfortunately we do not like the flavor of boiled milk. Therefore the home treatment of raw milk so as to make it safe and at the same time preserve its delightful flavor is a difficult undertaking.

Close observation has shown that the cooked taste begins to appear when milk is held for some time at or above 145 degrees Fahrenheit. Accordingly the problem of preparing a safe and palatable milk is one of determining the proper exposure at or below 145 degrees F. required to make milk entirely safe.

The studies of Doctor Theobald Smith of the Harvard Medical School, of Professor Russell and Hastings of the University of Wisconsin, and Doctor M. J. Rosenau of the U. S. Health service have all agreed that milk is made safe by holding it at 140 degrees F. for fifteen minutes.

Because in the heat treatment of milk we are safeguarding human life, it is customary and desirable to heat milk to at least 142 degrees F. for at least thirty minutes thus giving a margin of safety of 150 per cent. Such heat treatment will unquestionably destroy any disease germs which may have found their way into it and will render the milk safe.

## CHEESE BUYER APPROVES NEW GOVERNMENT METHOD

That the work of the United States Department of Agriculture in improving the methods of manufacturing Swiss cheese has been successful was shown not long ago when one of the largest buyers of this kind of cheese in the country made the statement to the chief of the dairy division that he bought all the product made in this way that he is able to obtain. He added that he considers Swiss cheese made in this way the finest made here. Another evidence of this man's preference is shown by the fact that he has hired the Government man who was in charge of this cheese work in the field and has made effort to get another man engaged in the work.

This Swiss cheese discovery consisted essentially in a method of controlling the "eye" formation. The organisms which produce this effect were found, and it is now possible to introduce into the milk the specific cultures which produce the desired result instead of leaving it largely to chance, as has been done for generations. It is now possible to produce a much higher percentage of the best quality cheese.

## WINTER APIARY LOSSES AMOUNT TO 12 PER CENT

The winter loss suffered by beekeepers in the United States, according to investigations made by the Department of Agriculture amounts to 12 per cent of the swarms. The conclusion of the investigators is that any industry which can stand a loss of 12 per cent of all animals in it can probably be made much more profitable by removing the cause, which is possible to a considerable extent. This winter's loss is the largest loss suffered by honey producers, but it is not so discouraging as losses from diseases, as a disease often menaces the entire apiary.

The department has studied the question of proper temperature and other environmental conditions of the hive in the winter and has published information which makes it possible to cut down the great loss. Many beekeepers have availed themselves of this information, but the great winter losses of bee population will not be much reduced until more persons in the business make use of what is known about management. The man who keeps up with the newest information is the one who will make the greatest profit from his bees.

An extension agent in Virginia called on the specialist in rural engineering for advice in the case of a woman who wished to install running water in her home. A report received by the United States Department of Agriculture states that after a survey of the premises it was found that the housewife was walking 140 miles per year and expending enough energy in lifting water to do the work of two horses in plowing 11 acres of land. A small hydraulic ram, overhead storage, kitchen sink, and waste pipe were purchased for \$49, which put running water into the kitchen.

Read the home paper.

## O. A. C. SILVER JUBILEE OF CLASS OF '99 TO BE HELD JUNE 6 AND 7

The Silver Jubilee reunion of the class of 1899 will be held June 6 and 7 on the college campus, when those who finished college a quarter of a century ago will return to their alma mater and renew old associations.

Twenty of the 30 living members of the class have already declared they will be there rain or shine. John Aldrich is coming all the way from Lincoln, Nebraska. Fred Edwards says he is going to go if he has to walk all the way from eastern Oregon. J. A. Van Groos is class manager, assisted by Mrs. J. R. Cooley of Cottage Grove, Mrs. J. T. Wiley of Portland, Fred Edwards of Fossil and Professor Harry Beard of Corvallis. These '99-ers are working hard for a 100 per cent return of the class. The member farthest away is William Henry Beach, Madison, Wis.

The drive now on to get the entire class together on the campus will not be repeated until 1929, when the Golden Jubilee will be celebrated. Fred Edwards says he expects to attend that also.

## '09-TEST RECORDS SHOW VALUE OF PUREBRED BULLS

A tabulation has just been completed by the Bureau of Animal Industry, United States Department of Agriculture, in which the records of 384 grade daughters of purebred dairy bulls were compared with the records of their dams. The average yearly butterfat production of the dams was 309 pounds, and that of the daughters 313 pounds. The daughters exceeded the dams with a margin of only 4 pounds of butterfat a year, but the fact that they exceeded such high-producing dams at all speaks very well for the class of purebred dairy bulls that is being used in the cow-testing association herds from which these records came. In this connection, estimates show that the average butterfat production of milk cows in the United States is only 150 pounds annually.

The records of the dams were arranged in five groups according to production of butterfat. These five groups averaged 100, 200, 300, 400 and 500 pounds respectively. The daughters of the first or 100-pound group produced 74 pounds more butterfat than their dams. The daughters of the second group produced 55 pounds more butterfat than their dams. The daughters of the third group produced 9 pounds more butterfat than their dams. The daughters of the fourth group produced 26 pounds more butterfat than their dams. The daughters of the fifth or last group produced 86 pounds less butterfat than their dams.

From these figures we may conclude that good purebred bulls are needed for every dairy herd and that purebred bulls selected from very high producing ancestry are required when the production records of the dams are above 300 pounds of butterfat a year. As the average production of herds advances better and still better bulls are needed to maintain and to increase production.

Attention to drain outlets is usually given at this time, and new tile systems for spring planned. Digging ditches between rains will help.

## SMALL VOLUME FARMING MAY CAUSE LOW PROFITS

Many Oregon farms who fail to make money fall because their total volume of farm business is too small, according to cost production studies conducted by the state college extension service. Gross receipts are so light that overhead and other expenses eat up all the profits.

The average annual receipts of 281 dairy farms, as determined by farm management surveys in 1920-22, totaled only \$2863. These were averaged size farms and the results fairly representative of that type of farming, says R. S. Besse of the extension service.

"Now from these gross receipts," Mr. Besse explains, "all cash expenses of production and operation and all interest on borrowed capital must be deducted. The balance represents the amount the farmer has left for interest on his investment and for his labor and the labor of his family.

"While these figures look a bit discouraging, there is very little about them to depress farmers. They represent averages. When all the facts are known about the individual incomes it is clear that many of the farmers were making nice profits, while others were losing money.

"Analysis of the individual records shows that while 90 of these dairymen had a gross income of less than \$2000 per year, 58 of them made from \$3000 to \$4000 gross income, 36 made from \$4000 to \$5000 gross income and 30 made gross incomes ranging from \$5000 to \$14,000 per year. The remainder, 67, fell into the class between \$2000 and \$3000.

"The farmers with the gross income of less than \$3000 had at best a narrow margin left for profit after all expenses were deducted. Farmers falling under that class may well afford to adjust their operations, in order to increase net farm income."

## SOUTHWESTERN TOWN TRIES ELMS INTRODUCED BY U. S.

One of the benefits from the introduction of plants from all parts of the world by the United States Department of Agriculture is emphasized in an article published in a local newspaper of Carlsbad, New Mexico. "The local park commission," says the paper, "is deeply indebted to the Bureau of Plant Industry for the interest and assistance which that bureau has shown in helping this section of the 'treeless' southwest in providing quantities of shade trees."

The Department of Agriculture, through the Office of Foreign Seed and Plant Introduction, secured seeds of the Chinese elm some years ago and has distributed many trees throughout the country. As a result of this effort, it may now be said that the species is fairly established in the United States, where it promises to become a popular and valuable shade tree in many regions. For it is a singular feature of this plant, whose native home is in northern China and Manchuria, that it succeeds equally well in the arid southwest, the Eastern States, and the northern Great Plains region.

## New Ladder Invented

An Illinois inventor has patented a step ladder that can be converted into a straight one by swinging the sections into alignment and fastening them.

## FARM POINTERS

(From O. A. C. Experiment Station)

Top dressings of gypsum on the meadow at this time will greatly increase the coming hay crop. Broadcast at the rate of 100 pounds per acre is the usual application. It is often advisable to leave a strip untreated in order to compare the benefits of the gypsum application.

Landplaster as sold on the Oregon market varies in price. It should always be purchased on the basis of percent of calcium sulphate contained. Landplaster analyzing 80 per cent calcium sulphate is worth only four-fifths as much as that analyzing 95 per cent.

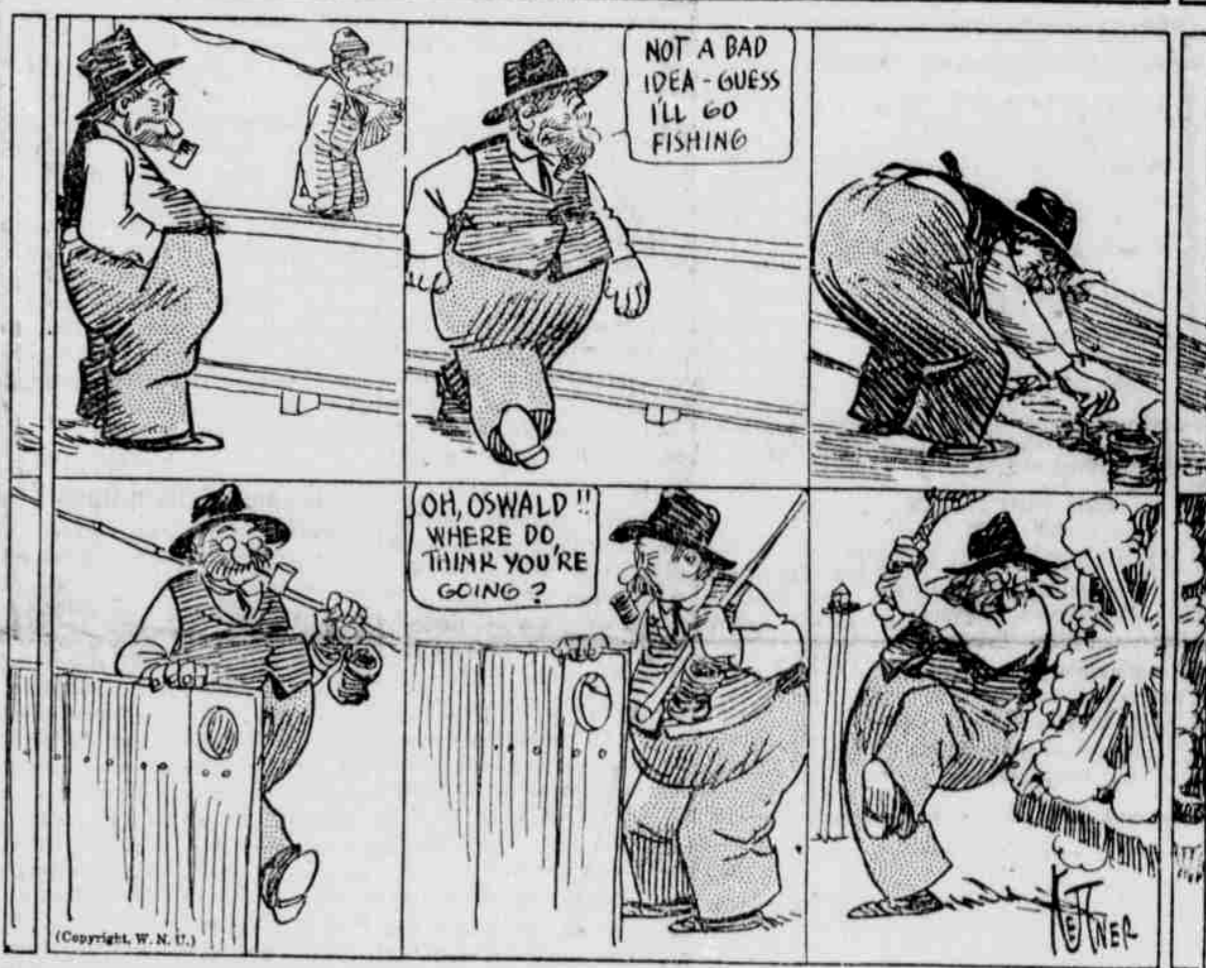
For powdery mildew of Jonathans, Grimes and Rome apples and d'Anjou pears, the best control is the prepink and the pink spray applications. Later sprays combined with cutting out of mildewed shoots will keep the foliage clean. The O. A. C. experiment station also uses sulphur dust against mildew in dry weather with excellent results.

## Weather and Umbrellas

The business of the umbrella dealer is, of course, to anticipate the demand for his wares in the season. A report received by the Weather Bureau of the United States Department of Agriculture states that an umbrella dealer, who is usually successful with having made the dollar fabulous locally, had ordered deliveries in bulk during the autumn; but on seeing a diagram of normal precipitation thereafter on the first of each month proportional to the number of inches of normal precipitation. Having a 30-day arrangement for remittances, he has since usually transacted business on the manufacturer's capital, has had a better opportunity to store his surplus stock and to follow styles, and has filled in the dry summer months with parasols. Through a period of years the climate can usually be foreseen in a general way if the specific weather can not. The umbrella season is no better defined in the country's weather records than are the fur-clothing, house-painting, or countless other seasons.

"Better sires and better feeding" is one of the things that we will make progress on in Kentucky this year. This statement in a letter from Wayland Rhoads, field agent in animal husbandry of the University of Kentucky, to the United States Department of Agriculture, was accompanied with 270 applications for membership in the "Better Sires - Better Stock" campaign. Each of the 270 persons had signed a pledge that he would use purebred sires exclusively for all kinds of livestock raised. Eighteen counties were represented.

## Our Pet Peeve



COMING TO  
**Umatilla**  
Saturday  
May 17  
**Smart Millinery Display**



The millinery section of the Hanger and Thompson Company, of Walla Walla, are bringing to the people of Umatilla and surrounding country, their first real opportunity to see this season's smart new hats for street, sports or formal wear. Mind you this is something new, for a large department store to bring their smartest creations to your community, and here's the reason—

Simply overstocked that's all. Due to a backward buying season. From NINE A. M. TO NINE P. M. these chic models will be on display at the

**Earl Brownell Store**  
Umatilla Oregon

Modish fabrics develop these new smart models, in straws or silks, crepes, a touch of lace, a sparkling pin, and chic ribbons trim the smarter shapes. A fascinating group for your approval at—  
UNUSUALLY MODERATE PRICES

MILLINERY SECTION  
**Hanger & Thompson**  
WALLA WALLA, WASH.

## OFFICIAL DESIGN OF THE OLD OREGON TRAIL ASSOCIATION



The design of the ox team and covered wagon symbolizes the spirit of the old west.

It typifies vision, endurance, hope, suffering and final accomplishment.

Over the Old Oregon Trail from the Missouri river the covered wagons came and won an empire for the United States.

The design is the work of Avar Fairbanks of the University of Oregon.

