

Farmer, Stockman and Dairyman

Seeding Clover—

Failure to secure a good stand of clover has been reported the past two seasons from many sections and upon careful examination nearly every case proved to be from too loose a seed bed at planting time.

The seed bed should be well firmed before planting the seed by the use of a corrugated roller, surface compactor or by going over the ground several times with a disc harrow set straight, or after the seed is planted good results can be secured by thorough rolling.

The small clover plants must have the soil firm so that they can establish a rooting system that will reach down to the moisture supply as the season advances. If the ground is loose and mellow the surface dries out faster than the roots of the clover plant penetrate the soil and consequently the young plants make a start for a few weeks and perish. This is frequently demonstrated in your fields by the appearance of a better stand of clover at the ends of the field where the ground is tramped by turning, or on wet spots in the field where the ground was more compact, or the seeder wheels firmed the ground.

County Fairs—

The annual county fair will soon be here, and many of our farmers are now in contemplation of attending, and probably of contributing some exhibit. A good county fair is a desirable institution, and when rightly conducted it is worthy of the support of everyone in the community. When free from objectionable features, such as gambling devices and immoral side-shows, it can be made a commendable educational factor in every locality, and a source of recreation to old and young alike.

It is probably impossible to conduct a county fair to the entire satisfaction of everyone, but the aim should be to make it square in its management and clean in its attractions. The fair should foster the resources of the community, and the management should always be awake to such inducements as will stimulate a greater interest in these resources and prove attractive to exhibitors. An able and pleasant secretary, with a good corps of assistants, can do a great deal toward the success of the fair, but polite attention to the exhibitors and care in the arrangement of the exhibits. When exhibits are properly classified, and well arranged, it facilitates the work of judging, avoids most of the causes of complaint on the part of exhibitors, and helps to please those who attend the fair to study and compare the exhibits.

All exhibitors should bear in mind that it is their duty to display the best they have, and to take a pride in showing the exhibit in the best manner possible. Also, the true exhibitor takes defeat with good grace, and never questions the decision of the awarding judge, except to learn his reasons for making an award.

Early Fall Plowing—

As soon as the binders have ceased to hum, the plow should be brought out and put into shape for work. Before the stacking of the grain is over, there will probably be several occasions when a half-day or more can be used in plowing land from which the grain has already been stacked.

The plowing must be done sometime, and while some farmers will plead that there is plenty of time in which to do it, they do not fully realize that if those days that might be worked in during the grain stacking, etc., are not attended to at that time, they necessarily attach themselves to the latter part of the season. Besides the possibility that this neglect may crowd the work in the last few days of the season, it should also be remembered that an acre plowed in August is usually in a far better condition for crop production than when plowed in November. It gives greater opportunities for saving and storing moisture, and aerating the soil. It hastens the decay of buried vegetable matter, and furnishes a good compact seed-bed the following spring.

Where insect pests are numerous and likely to cause trouble, late fall plowing is advisable, but under ordinary circumstances the best crops are grown on early plowed land. Early plowing also destroys the weeds. Replowing is advisable in late fall if it is necessary to destroy insects.—O. M. Mason, University Farm.

Gains From Fall Plowing—

Fall plowing of land which has been occupied by wheat or other small grains, and of all land which has been used for pasture more than three years in succession, is urged by the experts of the Minnesota Experiment Station on such a variety of grounds as would seem to make it, if not an absolute necessity to success in the operations of the following year, at least extremely desirable.

1. The breaking up of the soil ex-

poses it more fully to the mellowing action of air, sunlight and frost during the colder half of the year, and gives fuller opportunity for the settling of the furrow slice.

2. Deep plowing fits the land to receive and retain in larger measure the moisture from rain and snow; putting the surface in readiness for the final disking and harrowing necessary for this object in the spring.

3. The labor is more easily spared for plowing in the fall than in the spring, and the work is likely, therefore, to be more carefully done.

4. The turning over of the soil exposes to the winter frost the roots of a large number of weeds, thus promoting their destruction.

5. Finally, there is nothing quite so destructive to a number of insect pests.

Changing Seed—

The records of Experiment Stations do not show a necessity for changing seed grains to produce good and satisfactory yields. On the contrary, these records show that as a new seed becomes adapted to a locality and its environments, the yield has increased, with a tendency to improvement in quality. These results have been attained by careful cleaning and grading each year. More than a thousand varieties of grains have been tested at the Minnesota Station and it has become a matter of common observation that "new varieties from distant sources seldom gain satisfactory results, until they become well acclimated."

Observation and experiment further show that the degeneration of varieties—or the so-called "running out"—results from "careless selection of seed and poor tillage rather than from natural causes." The Minnesota Station would reserve the best field of grain on the farm, or the best piece of that field, for a seed-plot, and seek by the use of the fanning mill and grader, to increase the yield and make the variety already grown more valuable to the locality.

Supplying Humus to Soils—

There are three general methods of supplying humus to the soil. The first and best is the addition of stable manure. When properly managed it adds large quantities of both plant food and humus. But manure is not always available. When such is the case, the best thing to do is to make it available. Raise more forage, keep more stock, and make more manure. But his takes time and capital, so that other means are sometimes necessary. When stable manure is not to be had, plant crops for the purpose of turning them under, thus adding large quantities of humus at comparatively little cost. Plowing under green crops is called green manuring. Under certain conditions this is an excellent practice.

A third method of adding humus is to grow crops like clover and timothy. These crops are usually allowed to occupy the land for two years or more. During this time their roots thoroughly penetrate the soil. Old roots decay and new ones grow. When the sod is plowed up, more or less vegetable matter is turned under. This, with the mass of roots in the soil, adds no small amount to the supply of humus. Another advantage from the cultivation of clovers and alfalfa is found in fact that they are deep-rooted plants, and when their roots decay they leave channels deep into the earth, thus aiding in the absorption of rains and letting in air to sweeten the soil. Perennial grasses like timothy are particularly valuable as the numerous fine roots leave the soil in very fine tilth.

Buttermilk on the Farm—

To the Editor: My trouble is about making butter. I have not had any farm experience until lately, so consequently I find buttermaking rather difficult. If you can enlighten me I will be grateful to you. R. R. Answer—There are certain definite rules that are very useful in buttermaking. I will enumerate them as follows:

- 1. Good butter can be made only from good, clean flavored cream.
- 2. Cream containing about 30 per cent fat is the best for buttermaking.
- 3. Keep cream as cold as possible until time to churn. Then warm it to 65 to 75 degrees Fahrenheit and hold for six or eight hours or until a mild acid taste develops.
- 4. Always use a thermometer to ascertain the right temperature.
- 5. Overripe cream makes a poor quality of butter.
- 6. The churning temperature should be such that the churning will require about 30 minutes and at the same time have firm granules—from 52 to 60 in the summer and from 58 to 60 in the winter.
- 7. Clean, scald and cool all churning utensils before using.
- 8. Stop churning when the granules are about the size of small peas.
- 9. Wash these granules with pure water of about the same temperature

as the buttermilk after the latter has been drained off.

10. What buttermilk is left must be washed out not worked out.

11. Add salt at the rate of three-quarter ounces to each pound of butter.

12. Work butter just enough to distribute the salt evenly and to give it a solid, smooth body.

13. Overworked butter has a sticky body.

Advantages of Thick Cream—
By V. D. Chappell, Assistant Professor of Dairy Husbandry, O. A. C. Among the many problems which the creameries are now compelled to solve is the difficulty which they experience in securing thick cream. After visiting a large number of creameries the writer has found that the average test for cream received is below 25 per cent butterfat.

There is no possible advantage to be gained by setting the cream separator to "skim cream of this consistency. The machine is properly operated will skim a heavy cream just as efficiently as it will cream with a small percentage of fat. The advantage of heavy cream are mutual to the farmer and the manufacturer of butter.

In the case of the farmers' co-operative creamery, the producer, of course, is interested in the manufacturing end of the dairy industry as well as the production end, and, therefore, receives what appears to him to be a more direct result. This condition enables the co-operative creamery to secure a heavier cream with less difficulty than the individual plant or centralizer.

Thick cream does not sour as quickly as thin cream. A larger amount of skim milk can be retained on the farm for feeding purposes. The bulk is reduced to a large extent and, therefore, makes transportation easier. Heavy cream can be cooled easier than thin cream, because of the smaller quantity obtained from a given amount of milk. Advantages to the creamery are important. Heavy cream reduces the quantity of raw product to be weighed and handled, and it can be pasteurized with a smaller loss of butterfat in churning. Heavy cream allows the addition of a large quantity of starter, therefore, enabling the buttermaker to control flavor to better advantage. The containers in which the cream is delivered are reduced in size and number, which reduces the labor in washing and sterilizing.

These advantages are all of great importance in making the dairy department of the farm profitable. They are also of great value in every kind of creamery, the large and small alike. In the new dairy sections where there is not a sufficient amount of the raw products to warrant the establishment of a creamery or cheese factory, the cream must necessarily be sent to the larger plants. If this is done, the long distance which the cream must be carried allows it to deteriorate very rapidly, especially if it has a large skim-milk content.

The germs which cause the souring of milk, work upon the milk sugar changing it to lactic acid. The greater amount of skim-milk there is with the cream the more liability for its souring. While there is no particular damage done from the souring of cream in the proper manner, there is a much greater chance for the over-ripening and consequently the development of objectionable odors.

The cream for churning purposes should not contain less than 35 per cent butterfat. After the cream is received at the creamery, it should be in such condition that it can be handled to best advantage and churned exhaustively. A cream that is thin is more difficult to pasteurize, and after being subjected to the heating process does not churn out as well as higher testing cream.

Starter plays a most important part in the up-to-date creamery and is absolutely essential when the cream is pasteurized. If the percentage of butterfat is small, the consistency of the cream is such that but a small quantity of starter can be added. This condition makes it very difficult to control the flavor of the cream, which plays such an important part in the manufacture of high-grade butter.

BRITISH SMASH GERMAN LINES

(Continued from page one)

All sorts of troops have been hurled into battle south of the Scarpe, as well as to the north. Many formations have been finished off almost as soon as they appeared. The ground is covered with large numbers of German dead. Just south of the Scarpe one place was carpeted with bodies in field gray.

There also was very heavy fighting in the Croisilles region before and after that town was stormed and captured. Fierce fighting has been reported from Croisilles ridge and the beaten Germans are said to be fleeing from Bellecourt and the surrounding country.

The capture of Croisilles eliminates a spot which had been holding up the British advance on this part of the battle front. Stiff resistance had been offered during the counter attacks and the British swung around on the flanks, driving especially down from the north and following the general direction of the old Hinderburg line, and the town became too hot for the enemy.

Sanguinary losses have been inflicted on the Germans in all the fighting in this general region. British guns placed back of Croisilles have hit the retreating Germans at many places, particularly in the neighborhood of Hendecourt. The gunners have had the unusual experience of seeing where every shot fired fell and noting the damage each did. The enemy artillery, retiring from the rear of Hendecourt, offered a fine target and shells were sent raining into the fleeing columns, cutting great gaps in them.

Dead Huns Cover Ground.

Vis-En-Artois, which was captured yesterday by the Canadians, was the scene of more hard fighting. The town is completely levelled and many dead Germans are mixed up in the piles of debris.

The enemy has even resorted to blowing great craters in the roads south of the Somme in his effort to check the advance. One 30-foot crater was blown in the road between Arras and Cambrai, just outside of Vis-En-Artois. North of here a group of prisoners captured said they had it all arranged among themselves to veer "Kamerad" as soon as the Canadians launched their attack.

Near Vis-En-Artois this morning when an attack was launched, a host of Germans suddenly got up out of the ground and ran like so many rabbits, leaving only a few machine gunners behind them. It is impossible as yet to obtain any accurate figures regarding prisoners.

Lane County Fair

Eugene, Ore., Sept. 18-19-20-21.

Help make this Fair a big success. Good premiums will be given on all kinds of Livestock, Farm products, Fruits, Vegetables, Grains, Grasses, etc.

SPECIAL PREMIUMS

on individual and collective Grange display, and Boys and Girls Industrial work. Call on R. H. Wood, Sec., at U. S. National Bank for premium list. Bring your exhibits and win a premium.



COOK WITH PEARL OIL

Makes Cooking a Pleasure

A New Perfection Oil Cook Stove takes all the drudgery out of cooking. Lights at the touch of a match and heats in a jiffy. Bakes, broils, roasts, toasts—all the year round.

No smoke or odor; no dust or dirt. Economical—all the convenience of gas.

In 1, 2, 3 and 4 burner sizes, with or without ovens or cabinets. Ask your dealer today.

STANDARD OIL COMPANY (California)

NEW PERFECTION OIL COOK STOVE

M. C. BRESSLER & SON Springfield, Oregon

MYSTERIES OF UNIVERSE

Distance of Farthest Star is Impossible of Calculation.

(Samuel Barton, University of Pennsylvania.)

We are often asked which is the farthest star from us. This is a big question. For one thing, it implies that there is a farther star. Is there a farthest star? The current opinion of astronomers is that the aggregate of stars which we call our universe is not limitless, and that it comes to an end if we proceed far enough; but this does not mean that there are not other universes, and as a matter of fact we believe there are. To say which star is farthest would mean that we had determined the distance of each of the stars, of which there are found to be 55 million as bright as the 17th magnitude, with the certainty that there are a much larger number of still fainter ones. As a matter of fact, the distances of but a few stars, say 200, have been determined, and many of these values are unreliable. The distances are too great for measurement.

The great star cluster in the constellation of Hercules, is a mass of stars, perhaps 100,000 of them, compactly concentrated in a small area of the sky, although no doubt the stars themselves are far apart. We have been able to determine an approximate distance of the stars of this cluster from us. We cannot say that it is the farthest object which we can see. We do not think it is. We do think that it is much farther than nearly all of the stars not found in such clusters. But this is the greatest distance that I know which has been determined on a scientific basis recognized as valid. The distance is found to be of the order of 100,000 light years. Its distance is thus almost too small a unit to measure it with.

A light year is the distance light travels in a year, traveling 186,000 miles each second for the 31,536,144

seconds of the year. It is about 5,800,000,000,000 miles. It is 63,000 times the distance of the sun. If the distance of the sun is represented by an inch, the light year should be represented by a mile. A watch which ticks five times each second would require 36,000 years to tick as many times as there are miles in a light year. If the scale of the universe were so reduced that the sun, 93,000,000 miles away, was only a foot away, an object a light year away would be 12 miles away, and the Hercules Cluster, if its distance is correctly determined, would be more than 1,000,000 miles away.

It is found that some spider threads are so light that enough of such thread to pass around the earth (25,000 miles) would weigh but seven pounds. Enough to reach a light year would weigh 790,000 tons. This would be a burden for 552 trains of 50 cars each, carrying 25 tons. If the earth were a great windlass winding up the thread, 25,000 miles per day, it would require 10 years to wind up the sun's distance and 630,000 years to wind up a light year.

NOTICE FOR PUBLICATION.

Department of the Interior, U. S. LAND OFFICE.

Roseburg, Oregon, July 23, 1918.

Notice is hereby given that Arthur F. DeSautel, of Oakridge, Oregon, who, on July 15, 1915, made Homestead Entry, Serial No. 010943, for SE 1/4 Lot 2, S 1/4 NE 1/4 Lot 2, E 1/2 SW 1/4 Lot 2, SE 1/4 NW 1/4 Lot 2, Section 4, Township 21 S, Range 3 E, Willamette Meridian, has filed notice of intention to make Final Three-year Proof, to establish claim to the land above described, before E. G. Immel, U. S. Commissioner, at his office, at Eugene, Oregon, on the 3rd day of September, 1918. Claimant names as witnesses: C. E. McClane, of Oakridge, Oregon; Walter Hornor, of Oakridge, Oregon; Charles Durning, of Oakridge, Oregon; John McClane, of Oakridge, Oregon. W. H. CANON, Register.

WANTED

Your Sweet Cream

EUGENE FARMERS CREAMERY.