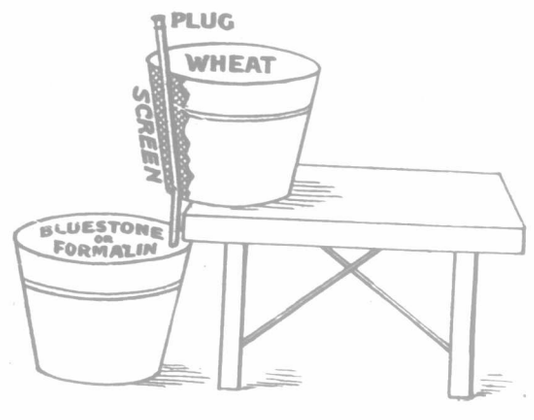
The fine particles of lime get in their teeth, and the vitriol gives them a sore mouth and a bad cough, and when a little Paris green is added it gives them dyspepsia, and they retire to their holes in the ground and are seen no more. Potatoes should be sprayed at least four times, or once every ten days until the vines cover the ground. Then when the report comes, as it did last August, that potatoes were rotting in Michigan and Canada, or that the blight has ruined them in Nova Scotia or New York, we feel that we shall get 100 bbls. of markets per acre, and sell them for $2 per bbl. In cutting the seed, if planted at once, land plaster or road dust should be sprinkled on to keep the acid in the phosphate from eating the freshly-cut surface. Digging commences here in August, when early varieties are sent to the Boston market, but the rush comes about the middle of September, when the starch factories open. The potatoes are handled in barrels, and dug by machinery. Anyone not familiar with spraying should have more information than I have given in this article. Perhaps, if the "Advocate" wishes, I will write another article later, telling its readers all about spraying potatoes, and answering anything I have omitted this time. W. T. ASHBY.

Aroostook Co., Maine.

[Our correspondent has said nothing about the best varieties for early and late digging, which is an interesting point.—Ed.]

For Pickling Grain.

Take a coal oil barrel and cut it in two, and bore a 1½ inch hole in bottom of one of the half-barrels; then put in plug to reach to top of barrel, as shown in cut; then take a strong zinc screen, with fairly large holes, and fit it in a semicircle on each side of plug, so as to let plug



work freely and prevent grain from running out. Set this half-barrel on top of bench, projecting over end, as shown in cut. Put your grain in top half, and dip from bottom, and pour it on till covered; now pull your plug. I have used this rig now for quite a number of years, and it has always given me the greatest satisfaction, and it is also very cheap. I. C.

Carman, Man.

Conditions for Sugar-beet Growing.

A gentleman who has had considerable actual experience in connection with the manufacture of beet sugar, in reply to an enquiry from the "Farmer's Advocate," writes us: "In reference to your question, 'Under what condition do you think it most desirable to grow beets,' we would answer this by saying the most desirable condition is to be within hauling distance of the factory, as these beets pay the farmer more on account of having no freight to stand, and they are the most satisfactory to the factory. Beets can be teamed profitably within a radius of six miles from the factory. Where there are exceptionally good roads it may be done within a ten-mile radius, but where a factory has to go a greater distance by rail than seventy-five miles it makes it expensive both for them and for the farmer, as each have to stand their share of the freight, and this in Canada is very excessive. In reference to your other question as to the size of the acreage, will say that this is a matter of opinion. The writer thinks it is more profitable to have small contracts for acreage with a large number of contracts than to have the same amount of acreage in large contracts, for the reason that in raising beets there is considerable labor and expense, and, therefore, a farmer should not attempt to raise more beets than what his labor and financial condition will warrant. A good, successful farmer, having a one-hundred-acre farm, could raise to advantage possibly ten acres without going to any extra expense for labor, and have money enough to take care of what labor he has hired, whereas if this same man wanted to raise fifty acres of beets he would find he would not be able to hire the labor or handle the business, and therefore it might show him a loss. The growing of beets is more like garden truck than a general crop, and in most cases it has been our experience that from three to five acres of sugar beets properly taken care of would yield the farmer more than ten to twenty acres which had been neglected."

The moral of the foregoing, as this paper has already pointed out, is to start beet growing with a modest area on well-prepared soil, and as experience is gained, gradually increase the acreage to the maximum.

The Rubber Culture Business.

To the Editor "Farmer's Advocate":

Sir,—Supplementing your editorial reference to the improbability of financial success following investments in rubber culture in Mexico, in your issue of 17th March, I beg to enclose extracts from a report of one of the highest authorities on successful tropical agriculture on this and kindred subjects.

If your correspondent will obtain the 1901 Yearbook of the United States Department of Agriculture, and read the article from which the passages herewith are taken, he will be in possession of the scientific and practical facts of the matter. Without such investigation, many are likely to be deceived by the literary ability of the hot-air artists who supply the alluring magazine ads. for these rubber companies. READER.

Killarney, Man.

"Popular interest in tropical agriculture is at present largely monopolized by the possibilities of rubber culture, as set forth in glowing descriptions in various prophetic calculations, and in the prospectuses of numerous companies which have been formed for establishing rubber plantations in Mexico and Central America. . . . It is known that many rubber plantations, established with the most lively expectations, have been abandoned because the anticipation of a profitable yield of rubber from cultivated trees proved to be fallacious. . . . Many of the current misconceptions regarding rubber culture result from the popular failure to realize that rubber is not like tea, coffee or cocoa, the definite product of a single species or genus of plants; rubber should be compared instead to starch or sugar, substances obtainable from a large number of plants of different types. . . . One thousand different species contain rubber, although commercial quantities have been probably obtained from only forty or fifty. . . . The culture of the different rubber plants must be dealt with on an individual basis, instead of through fallacious general principles. . . . In short, rubber culture is a very complex problem, which has not yet received the detailed investigation necessary to place it on a scientific and practical basis.

"NOTWITHSTANDING WIDESPREAD INTEREST AND THE INVESTMENT OF MILLIONS OF DOLLARS, IT CAN NOT BE SAID THAT RUBBER CULTURE HAS PASSED THE EXPERIMENTAL STAGE, IF, INDEED, THAT PERIOD HAS BEEN FAIRLY REACHED. Some companies are advocating the culture of Eucommia ulmoides for the sake of the gutta-percha. . . . It contains about three per cent. On this basis, gutta-percha would need to be worth $60 a pound before the culture of Eucommia would become profitable."

Well Worth $10 per Year.

The Farmer's Advocate:

Gentlemen,—Permit me to write to express my appreciation of the Advocate. For six years I have been a regular subscriber, and cannot speak too highly in its praise. It is welcomed by everyone in my household, and all find it full of practical information. I have highly encouraged my farmer friends who were non-subscribers to subscribe at once, and I myself would not be without the Advocate even if it cost ten dollars a year.

Hoping it may long continue to be published, and wishing you every success, I am,

Yours very truly,

FRED. C. COTE,

Essex Co., April 5th, 1904.

DAIRY.

March Notes from O. A. College Dairy School.

During the month two of the cheese made with pepsin, and their duplicates made with rennet, were judged by the class. The first pair, made January 22nd, 1904, scored 91 and 86, respectively, made with pepsin and rennet. There was such a unanimity of opinion among instructors and students that the pepsin cheese was so much superior to the cheese made from similar milk with rennet, that it was thought advisable to score another pair which had been made the day previous. In this case, the results were practically reversed, the rennet cheese being superior. It must be said, however, that the pepsin cheese of this second lot was the first one made, and sufficient pepsin for proper coagulation had not been used. This probably accounts to some extent for the inferior quality of the pepsin cheese. The lesson pointed out to the class was that it was not wise to draw hasty conclusions from one or two experiments. It is only after repeated trials under a variety of conditions, we are safe in concluding that given causes will produce certain effects. Others of these cheese will be judged during the instructors' course, from April 5th to 15th. A Cheshire cheese and one made in the farm dairy on the five-hour system were both pronounced good by the class.

BUTTERMAKING EXPERIMENTS.

Three lots of butter made the previous week from the same vat of milk were judged on March 22nd. One of these lots was made from the milk unpasteurized, the other from pasteurized ripened cream, and the other from cream, the whole milk of which was pasteurized before separating. The class was almost unanimous in pronouncing the sample made from the pasteurized-milk cream as being the finest flavor. This is another illustration of the value of making pasteurized butter, especially in winter, when it is more difficult to get a fine flavor in butter.

There is said to be "nothing new under the sun," but a few tests of making butter by pasteurizing cream, cooling to churning temperature, adding a pure culture, and churning immediately after separating, would lead us to believe that under certain conditions, and possibly under all conditions, this method may be considered an essentially new and favorable method of making butter. It would save all the labor and expense of cream ripening, the danger from developing bad flavors while ripening, extensive vat and cooling apparatus, as well as a great deal of worry on the part of the buttermaker, if this plan be feasible. It certainly seems worthy a trial. Further experiments are being made at the Dairy School. It is being adopted, we understand, in Quebec.

RELATION OF BABCOCK AND OIL TESTS.

As many cream-gathering creameries are now changing from the oil test to the Babcock test, patrons are asking what is the relation of the two tests to each other. From a large number of tests made during the past month, it has been found that a test of 100 on the oil test corresponds to 21 per cent. on the Babcock test. A test of 100 on the oil test is supposed to make one pound of butter for each creamery inch. Cream testing 21 per cent. fat will also make about one pound butter per creamery inch. Some creamery men are weighing the cream, instead of measuring it. For the benefit of those who wish to know the relation of creamery inches to pounds, if they divide the number of pounds of cream by 4.1 they will have the number of creamery inches. For example, 41 lbs. cream equals 41 divided by 4.1 equals 10 creamery inches. Some use the whole number 4, in which case, 41 pounds equals 10.2 inches.

EXAMINATIONS.

The final examinations for the term were held from March 23rd to 25th. On the evening of the 24th a pleasant "At Home" was held in the Dairy Building. The instructors were the hosts, the students and their friends were the guests

The results of the examinations are as follows, in order of general proficiency:

Factory Class—Geo. Matheson, Shellmouth, Man.; Alex. Irvine, Habermehl, Ont.; C. W. Holdaway, Ballance, N. Z.; Miss Gilholm, Bright, Ont.; C. H. Ralph, London, Ont.; Wm. J. Hopkins, Thorndale, Ont.; C. E. Ferguson, Cobourg, Ont.; A. S. Parkin, Lindsay, Ont.; P. J. Baxter, St. Paul, Ont.; P. J. Gray, Perrytown, Ont.; A. J. O'Hara, La Selles, Que.; F. C. Eastman, Arkona, Ont.; J. L. McNamara, Norwich, Ont.; F. Aleman, E. Aleman, J. A. Espindola, Argentine Republic.

Butter Specialists—G. S. Dobbie, Guelph, Ont.; L. Southworth, Cheddar, Ont.; E. E. Patterson, Cheddar, Ont.; J. W. Ball, Elsinore, Ont.

Farm Dairy—Miss Annie W. Green, Loyal, Huron, Ont.

Please take notice to the DATE of the address label on your Farmer's Advocate. If the date on same is not changed within three weeks from time of remittance, please advise us at once, giving full particulars as to how money was sent.