

Monitor's Agricultural Department For the Use and Benefit of Farmers.

Correspondence, Suggestions and Inquiries welcomed to these columns.

Aeration and Cooling of Milk.

COOLING ESSENTIAL IN SUMMER. AERATION OF QUESTIONABLE VALUE.

Department of Agriculture, Ottawa, June 22.

By aeration of milk we understand the exposing of milk to air, under the forcing of air into milk, and Prof. Dean of the Ontario Agricultural College at the conference of dairy experts in Ottawa, last fall. The theory of the process is that the oxygen of the air purifies or improves the milk, and at the same time causes volatile oils which are not readily dissolved in water to pass away. If the air to which the milk is exposed, or which is forced into the milk, be perfectly pure, the result will undoubtedly be an improvement in the flavor and physical quality of the milk. The experiments at the College have not shown any advantages from aeration. From the conditions there, so far as the cow and the care of the milk are concerned, are better than those of the average farm. The farmer may be compelled to feed his cows in such a way, or the cows themselves may get such feed, that aeration of the milk would be an advantage.

AERATION IN THE BARNYARD.

In many cases, however, the air is not pure, and often as much harm as good is done. Instructive papers have mentioned that fifty per cent. of the cans in Eastern Ontario are left in the barnyard. Aeration of milk in the barnyard is one of the worst things a man could possibly do. We have milked out cows in the yard, which is kept a good deal cleaner than the average barnyard. We have put the aerator outside the fence, milked the cows and have the milk run down over the aerator. The result was that we got some of the worst milk we could possibly have. Unless the air be pure, it would be better to cool the milk with as little aeration as possible.

COOLING MILK FOR THE CHEESE FACTORY.

Cooling of milk is a most important point. The advantage of cooling it is that it prevents the growth of bacteria or organisms which are apt to develop had flavors in the milk. There are two ways of cooling milk. One is by the maximum of exposure to the air, and the other by the minimum of exposure to the air. The first method, the use of such a cooler as the Star or Champion, will cool milk rapidly, which is a decided advantage. A disadvantage is that one must have a water elevated or under pressure in order to use the ordinary cooler, and a great many farmers have not such a water supply. A second advantage is the labor of lifting the milk up to the cooler and of washing the cooler afterwards. The majority of farmers will not undergo this labor or necessary to do this work properly. To lift the milk up, let it run over the cooler, and afterwards wash the cooler, is more than the average man will do. Then there is the difficulty that by using such a cooler, the milk is largely exposed to the air, and the same risk is run as in the use of the aerator. Any form of cooler which cools the milk rapidly exposes it largely to the air. And while this gives an opportunity for the germs and volatile oils to pass away, impurities are apt to be absorbed. To overcome this difficulty, various devices have been suggested to cool the milk under cover. Probably the best plan is to set the cans of milk in tanks of cold water. Running water, at a temperature of 40 to 50 degrees, gives the ideal conditions. Where that is not obtainable, ice will be necessary to get the milk properly cooled. In that case the milk should be sufficiently stirred while cooling to bring the "cool" milk from the outside of the can to the center, and so facilitate the rapid cooling of the milk, with a minimum of exposure to the air. Milk for factory work should be cooled to a temperature at least below 50 degrees, to decompose it, if possible. Where the milk is paid for by the fat content, the owner is guaranteed of less and more uniform tests if he will stir the milk and keep the cream from rising.

Canadian Live Stock at St. Louis.

DEPARTMENT OF AGRICULTURE WILL DUPLICATE PRIZES.

The Hon. Sydney Fisher, Minister of Agriculture, has authorized the live stock commissioner to announce that any Canadian who exhibits horses, cattle, sheep, swine, or poultry at the St. Louis Exposition, will receive such services as are granted to exhibitors in other classes, and in addition the Department of Agriculture will pay to the exhibitor a sum equal to the prize money which he secures in the competitions for which he enters. The Exhibition authorities have asked that the Commissioner of Exhibitions take countermeasures to endorse the certificates of registration of pure bred stock. All entries or applications for space for live stock should be addressed to Mr. Wm. Hutcheson, Commissioner, at the Canadian Building, Exposition Grounds, St. Louis. All such matters will be properly and promptly attended to, and the intending exhibitors duly notified as to the conditions of the Exhibition in regard to their particular classes.

Yours very truly, W. A. CLEMENS, Publication Clerk.

It is Highly Injurious

To use a cheap drastic physic. Safest remedy for constipation and torpid liver is Dr. Hamilton's Pills of Man Drake and Butternut which loosens the bowels without gripping pain. Use only Dr. Hamilton's Pills. Price 25c.

A Steam Heated City.

Fancy a city that gets all the boiling hot water it wants by boring underground some 1,500 feet; a city that has steam heat furnished to its public and private buildings by water heated to 220 degrees Fahrenheit flowing from artesian wells under the city? Hot water is so plentiful there that it is used to sprinkle the streets. This is the unique condition of Boise, Idaho, and so elated are the citizens over the gift furnished by Nature that this week they are going to give a big celebration to Colonel Manning, the man who first suggested to them the idea of heating the city with hot water furnished from the interior of the earth.

Flying machines, balloons, electricity as a substitute for steam in fast railway transportation, wireless telegraphy, electricity as a substitute for fuel—all these things are yet really in the experimental stage.

But getting heat from the centre of the earth to warm your home—a dream of the forerunners—is no longer an experiment. Away out in snow-bound Idaho it is a fact—a reality—an application that the community regard it as commonplace as Pennsylvania's regard oil wells, or California's goldmines.

Some idea of the thickness of the earth's crust in Idaho may be had from the fact that to reach a temperature of only 100 degrees Fahrenheit under the cities of New York, Chicago, or Philadelphia it would be necessary to bore to a depth of 6,000 feet, if the temperature at the surface were as high as 50 degrees above zero.

And at Boise, with a surface temperature of 30 degrees below zero, they have been obtaining a plentiful supply of boiling water from a depth of 1,500 to 2,000 feet.

In the world's modern scientific records of geological exploration there has not been any experiment as astonishing as the project at Boise.

From the middle of September until the first of May, Boise requires artificial heat, and coal costs \$30 a ton. For months at a time the city is snow-bound, and often coal cannot be had at any price.

By the tapping of the earth and piping hot water and steam through the town last winter, the citizens were enabled to save thousands of dollars, and besides, did not experience the annoying necessity of attending furnaces or grates or stoves.

The Budget Speech

The budget speech of Hon. Mr. Fielding, the Finance Minister, delivered in the House of Commons on Tuesday, 6th, indicated a prosperous condition of the trade and industries of the country and a full treasury. Mr. Fielding showed that the surplus of income over ordinary expenditures for the year ending with June, 1903, was \$14,000,000. For the current year the estimated surplus is \$71,000,000; the ordinary expenditures, exclusive of sinking fund payments, \$24,500,000, leaving a surplus of \$46,500,000. The estimated surplus for the year is placed at \$11,000,000, leaving a surplus over all current expenditures of \$35,500,000. The estimated surplus for the year is placed at \$11,000,000, leaving a surplus over all current expenditures of \$35,500,000.

Seedless Apples on Blossomless Trees.

St. Louis, June 11.—Sharing honors with the wild silk telegraph, smokes and automobiles, the most interesting feature of the World's Fair, is an exhibit of seedless apples. California contributed some seedless oranges and Florida seedless pears, but it remained for Colorado to produce the apple without core.

Not only has this fruit an absence of seed, but the tree upon which it is grown is blossomless. Mr. John P. Simpson, of Grand Junction, is father of the species, and he says that the seedless apple is also immune from the ravages of insects.

Horticulturists who visit the World's Fair are greatly interested in the exhibit, as the culture of the fruit is regarded as an important discovery. Mr. Simpson is now experimenting with the various varieties of apples, and he believes that he can develop a seedless Winesap, a seedless Gala, and other favorite species. If he is successful it is likely that other fruit growers will follow his example.

It is claimed that the seedless apple is not hurt by the frost because it has no blossoms. It is a hardy grower and thrives abundantly in the Colorado climate. These advantages in its behalf recommend it to all orchardists.

The Spencer display is made in the Colorado exhibit in the Palace of Horticulture. Several barrels of the fruit are on display, and the supply is constantly kept fresh.

To Get a Rink.

In almost every neighborhood one has died from an attack of cholera or cholera morbus, often before medicine could be procured or a physician summoned. A reliable remedy for these diseases should be kept at hand. The lives of the people for anyone to take Chamberlain's Colic, Cholera and Diarrhoea Remedy has undoubtedly saved the lives of more people and relieved more pain than any other medicine in the world. It can be depended upon. For sale by S. N. Wier.

ON THREADING NEEDLES.

My mother's sight has failed so that threading a needle is a task almost beyond her. After an absence from home of eight days a young friend having seen her difficulty had helped her overcome this little obstacle by threading her needles. She simply took the spool of thread and paper of needles, and without breaking a thread, threaded the whole paper of needles in one world's string length. When a needle of thread is of the right size, it will pass through the hole in the eye of the needle as easily as a string of beads. It is a simple and useful trick.

—I, Jane—Say, pa, what is classical music?

—It's father—Classical music, my son, is music that you can whistle, and wouldn't it you could.

—It's a bilious attack, take Chamberlain's Stomach and Liver Tablets, and a quick recovery is certain. For sale by S. N. Wier.

—The man who didn't get God in his own hand will find him nowhere, and he who finds him there, will find him everywhere.

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CHURCH SERVICES.

Parish of Bridgetown.

CHURCH OF ENGLAND—Rev. E. Underwood, Rector.

St. James Church, Bridgetown.

Sunday School every Sunday at 9 a. m. and 10 a. m. All other Sundays at 11 a. m. and 12 p. m.

Holy Communion: 1st and 2nd Sundays at 8 a. m. and 10 a. m. All other Sundays at 11 a. m. and 12 p. m.

Work day service in Schoolroom, containing Holy Communion, at 7:30 p. m. on Wednesdays and Fridays.

St. Mary's Church, BELLEVILLE.

1st Sunday in month, 10:30 a. m. (The Holy Communion is administered at this service.)

All other Sundays at 10 a. m.

Sunday School, 10:30 a. m. to 12 p. m.

Work day service, Thursday 7:30 p. m., other times according to notice.

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