

DAIRY and CREAMERY

WATER FOR DAIRY COWS.

Milk Cattle Require Large Supply. Warm the Drink in Winter.

Has proper provision been made for supplying water for the dairy herd? Is the water supply convenient and within easy reach of the cows?

Professor Eckles gives in his book, "Dairy Cattle and Milk Production," some very interesting examples of the water requirements for cows in milk. A record of the water drunk by Missouri Chief Josephine for a seven day period one month after calving shows that the average daily milk production was 102 pounds and the average daily water drunk was 250 pounds. A ten day average for two Jerseys was milk 26.8 pounds daily, water drunk 77.3 pounds for one and milk 13.3 pounds and a water requirement of 40.3



In color Dutch Belted cattle are invariably black, with a white band of varying width about the body in front of the shoulders. Sometimes this band narrows to even a foot in width or less, and again other specimens have it as a wide blanket. The fore part of the udder of the cow is also often white. In udder conformation and development these cows are rather inferior, the size being comparatively small, the fore udder abbreviated and the teats placed too closely together. The dairy importance of Dutch Belted cattle is its principal value, aside from the ornamental.

pounds for the other. An animal on maintenance would not require anything like this amount of water.

The cause of so large a water consumption is the amount of water necessary for the milk itself and the large quantities of dry feed eaten, much of which is hay, fodder or other dry roughage.

If the water supply is not easily accessible or if it requires a large amount of labor to furnish it each day, the tendency will be to give the cows less than their work demands. There is probably no better water supply than a good deep well. Freshly pumped water will come nearer fulfilling the ideal requirements than any other. This is not always practicable, and it becomes necessary to use a tank.

In cold climates tank water should be heated to at least somewhat above freezing—50 to 60 degrees would probably be best—before the cows are allowed to drink.

It will pay to keep sharp watch over this water question and see that the cows are not allowed to be neglected in this important item.—Hoard's Dairyman.

KEEP THE OLD COWS.

Good Dairy Animals Valuable For the Calves They Produce.

There is a tremendous loss to the dairy industry in this state as in other states, we think, because of the sale of eight or nine year old cows, says the Kansas Farmer. These are sold because they are considered as having arrived at an age when they are no longer useful in the dairy. A ten or twelve year old cow which has not been overfed should be a profitable producer of milk if she has ever been profitable.

It is to be recalled that Maid Henry, the famous Holstein of the Kansas Agricultural college, established a world's record in her thirteenth year. Cows of good breeding at this age are worth keeping for their offspring even though they are not profitable producers of milk.

The old cow is frequently sold at a low price and at a real sacrifice. The owner will the next day pay two or three times as much money for a younger cow of no better breeding. To make an exchange of this sort is foolhardy. A cow of good breeding and a liberal producer is worth keeping as long as she can eat well. After she passes this age, when it becomes necessary to sell her, she will bring as much money without teeth as with them, because she goes to the cannery

Sweet and Sour Cream.

There are many people who believe that sour cream tests less than sweet cream. If more people held this belief the probabilities are that less sour cream would be marketed than at present. The only correct method of testing cream is to arrive at the sample to be tested by weight. If this method is employed then a sample of the cream taken when sweet will test identical with that taken when the cream has become sour. It is a fact that it requires slightly more sour cream to weigh a given quantity than it does of sweet cream of the same density. In the old days, when the sample for testing was determined by measurement, then the man who sold sour cream received a little lower test than was coming to him. In these days all up to date creameries and cream receiving stations weigh the sample preparatory to testing.

DAIRY POINTERS.

If the cream is allowed to freeze it is impossible to make really good butter.

The temperature of the cream should be about 65 degrees in winter. The churn room should be kept at about the same temperature.

A reliable thermometer should always be kept handy and used. Guesswork doesn't pay when making butter.

Never allow milk to dry on the churn or on anything used in the handling of milk or butter.

The strong cow is one that will raise a calf every year and produce a large quantity of milk.

Filthy cows and in many cases unclean milkers also have their effect upon the milk produced.

CLEANLINESS IN MILK PRODUCTION

(By H. A. Harding, professor of dairy bacteriology, University of Illinois.)

In producing clean milk the object of first importance is the cow herself. If she is covered with filth so that this filth falls mechanically into the pail during the milking process the milk will be filthy. If, on the other hand, the cow is clean and is milked by a clean individual into clean utensils the milk will contain very little objectionable material—that is, the milk will be clean in the ordinary sense of the word.

This word "clean" must be used in regard to milk with some understanding of what the situation really is. The cleanest class of milk on the market is "certified milk," which is prepared under unusual conditions with regard to the cleanliness of the cow and her surroundings. The results from the scoring of this certified milk at competitions in various parts of the country are available and indicate that only about one bottle of this milk in a hundred is so clean that foreign matter cannot be readily detected, either with the naked eye or with a low power reading glass. When the highest grade of certified milk is in this uncleanly condition it is not fair to insist that the ordinary milk which sells at not much more than half the price shall be absolutely clean.

The amount of foreign matter which will fall from the cow into the pail



The use of pure bred sires in dairy herds has come to be such a universal practice that large grade herds of almost any of the dairy breeds are to be found. Such herds quickly take on the characteristics of the breed of the sire. This is especially true of Guernseys, the prepotency of the blood showing very plainly in the characteristics of all the stock, so that even in the first generation we have a herd which very closely approaches in characteristics the pure bred type. A very fortunate coincidence is that the characteristics of the color and quality of the milk are found also. This is especially true where the Guernsey sire is used with native stock. The cow here shown is Taylor's Cream Cup, a pure bred Guernsey.

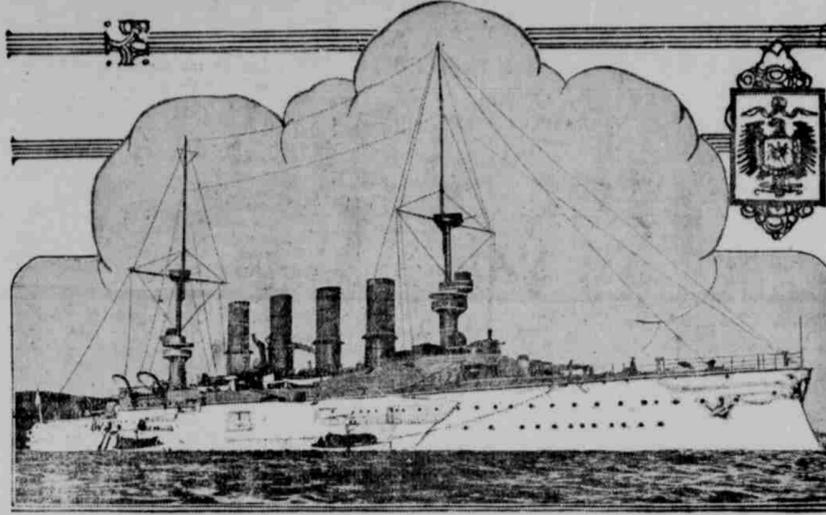
during the milking process can be very much reduced by using a milk pail which has the top partially covered. A milk pail with a cover having an oval opening 5 by 7 inches will cut out more than half and usually as much as three-fourths of this foreign matter.

The cleanliness of the cow is also helped by having the stall of proper size and construction, so that she may be kept out of her own filth. Proper use of bedding is also important, also use of currycomb and brush. The cleaning of cows in this way is unfortunately not as common a practice as it should be. It takes a small amount of time and causes a correspondingly small added expense, but because the cleanliness of the cow is all important in this matter of clean milk production the slight expense at this point gives very large returns.

Grain Ration For Dairy Cows.
A desirable grain mixture to feed in combination with silage and mixed hay is made up of cornmeal, 275 pounds; cottonseed meal, 150 pounds; dried brewers' or distillers' grains, 200 pounds; and gluten, 100 pounds. This grain mixture should be fed daily at the rate of one pound for each three pounds of 3 to 4 per cent milk produced. In the case of a cow producing twenty-five pounds of milk you should feed about eight pounds of grain daily. The cow should also be supplied with all the silage and hay she will eat.—Country Gentleman.

Curing a Leaky Teat.
A leak in the side of a teat is no uncommon thing. It may be closed each day by applying colodion, but cannot be cured until she dries. Then cauterization or a scratch across the hole in two directions will cause a sore, which in healing will close up the orifice.—Farm Journal.

THE GERMAN CRUISER KARLSRUHE.



THE POULTRY YARD.

The hen has a good grinding apparatus, but you must furnish the grit.

Feeding new corn is risky, and most other grains are safer to feed when well cured and seasoned.

Clean your dropping boards at least three times a week and keep down lice and mites. Use a good disinfectant and put lice powder in the dust bath.

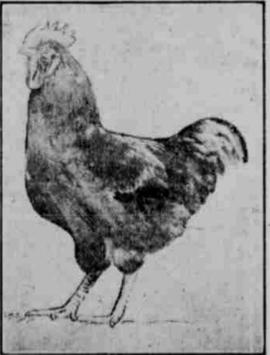
Watch out for roup and colds. Keep the flock dry and isolate any cases that may develop. Plenty of fresh air and no drafts are the preventives.

Keep your eye on the water jars, as they are likely to freeze these cold days and nights. Water is important and should be kept fresh before the fowls at all times.

INCUBATOR'S VALUE IN POULTRY RAISING

The incubator has made a place for itself in the country world and has taken upon itself the duties that used to belong to the hen, as far as hatching is concerned, says the Kansas Farmer. Instead of wasting her valuable time in hatching the hen can go on her way laying eggs. That part of her duty nothing can take from her. The large poultry plants discarded the hen as a hatcher long ago, and the fancy poultryman has followed their example. He can hatch his chickens at any time he pleases. If he wants his birds early he must hatch them in January or February, and there are very few hens that want to sit during these cold months. The modern incubator, whether large or small, fills the bill and does the work of hatching in a much more satisfactory way than the hen.

The hen works in nature's way, and when given a chance to make good in her own sweet way she will come out all right, but you sometimes want things outside of nature's way. For instance, it is nature's way for a hen to commence to sit in the spring and summer, and if you wait on the sitting hen your young fries and broilers will



There are two varieties of Rhode Island Reds—single comb and rose comb. Both varieties have the same standard requirements and are not unlike the Plymouth Rocks in conformation, though they are different in shape of back and shape and carriage of tail. Their rich red color makes them an attractive bird, and they are excellent both as market fowls and egg producers. In size they are smaller than Plymouth Rocks. The picture shows a Rhode Island Red cock.

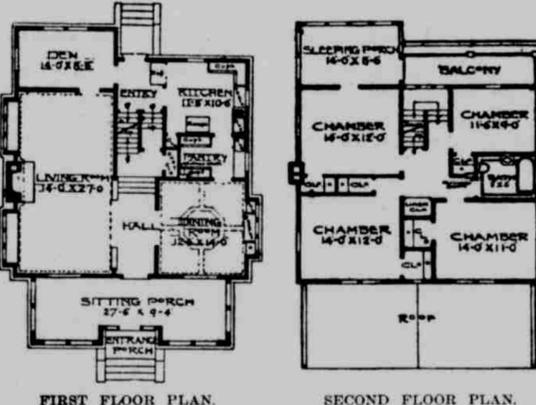
be very late in coming. You cannot get them in late winter or very early spring as you can with an incubator. The hen sometimes thinks she wants to sit, and then, again, she takes another think. She may stay on the nest for a week and then strike for more wages or another place to work in. After she is given a lot of fine eggs she will make all sorts of fuss and give up the notion of sitting entirely. The incubator, on the other hand, is trustworthy. You can start it as soon as you have the eggs, and if you at-

BRICK, TIMBER AND ROUGH CAST.

Design 618, by Glenn L. Saxton, Architect, Minneapolis, Minn.



PERSPECTIVE VIEW—FROM A PHOTOGRAPH.



This exterior has a very attractive treatment of rough faced brick up to line of first story window sills; rough cast above, with Washington fir half timbers. Second story contains four chambers and a sleeping porch opening off from rear chamber. Size, 34 feet wide by 32 feet 6 inches deep over the main part. Full basement. First story, 9 feet; second story, 8 feet. Finish in first story is red oak or birch, second story pine to paint. Birch or maple floors throughout. Cost to build, exclusive of heating and plumbing, \$8,800.

Upon receipt of \$1 the publisher of this paper will furnish a copy of Saxton's book of plans, "American Dwellings." It contains 310 designs costing from \$1,000 to \$8,000; also book of interiors, \$1 per copy.

tend to your business there is no reason why you should not have a successful hatch. Don't get the idea into your head that some time everybody will be back again hatching with the hen. The incubator has come to stay and is already an indispensable part of every modern poultry plant.

Grain For Poultry.
As the cold strengthens the question of grain food for the indoor flock is pushed to the front. Wheat is almost a balanced ration. But it costs more in the south and east than some other kinds of grain. It can't be beaten as a grain food for poultry. Better, however, to have a variety than to feed too much wheat. Overfeeding with wheat sometimes results in a clogging of the digestive organs. Care should be exercised, too, or grain will be wasted by throwing out more than the flock requires. Examine the litter frequently to discover whether there is a leakage there.

Remedy For Creaky Leg.
Here is a simple and sure remedy for scaly legs in fowls. As a rule one application is sufficient: Take a small deep can and fill it with kerosene. Dip the feet and legs in it up to the feathers, but do not wet the feathers, and hold them in the oil for a second or two, no longer.—Farm Journal.

Sometimes.
"Pop, about a war horse!"
"Well, my son?"
"Is a war horse a hors du combat?"
—Baltimore American.

search and inquiry have been made to ascertain the present residence and whereabouts of the above named Defendant, Leroy B. Harris, or his unknown heirs, legatees, devisees or assigns, and it is not known and cannot be ascertained whether the said Leroy B. Harris is living or dead, or where he may reside, if living, or whether the apparent title, interest, claim or possible right in or to said lands has been by him assigned to any person or persons, or, if dead, whether he has personal representatives or heirs living, or where they or some of them may reside, if living, or whether such apparent title, interest, claim or possible right has been disposed of by will, or who were his heirs, legatees, devisees or assigns.

Therefore, on motion of O. G. Tuttle, solicitor for said Complainants, it is ordered that the above named Edward G. Bement, and Leroy B. Harris, or his unknown heirs, legatees, devisees or assigns, cause their appearance to be entered in this cause on or before the 10th day of June A. D. 1915, and in case of his or their appearance that he or they cause his or their answer or answers to Complainants' Bill of Complaint to be filed in this cause and a copy or copies thereof to be served on Complainants' solicitor within twenty days after service upon him or them of a copy of said Bill of Complaint and notice of this order, and in default thereof said Bill of Complaint be taken as confessed by said Defendants or so many of them as shall be in default.

And it is further ordered that within twenty days after the date of this order the Complainants cause a copy thereof to be published in the Alma Record, a newspaper printed, published and circulating in said county, and that such publication be continued therein at least once in each week for six successive weeks, or that a copy of this order be personally served on each of said Defendants at least twenty days before the time prescribed herein for their appearance.

KELLY S. SEARL,
Circuit Judge

Countersigned:
B. L. CASE,
Register in Chancery.

This suit is brought to quiet and remove clouds from the title to lands described in said Bill of Complaint as follows:

The southeast quarter of the southeast quarter of section twenty-three and northwest quarter of the northeast quarter of section twenty-six, all in township twelve north of range two west, Michigan.

O. G. TUTTLE,
Solicitor for Complainants. Business Address, Ithaca, Michigan. 187017

ESTATE OF FANNIE SMITH.
Order Appointing Time for Hearing Claims—

STATE OF MICHIGAN—The Probate Court for the County of Gratiot:

At a session of said court, held at the Probate office in the village of Ithaca in said county, on the 9th day of January, 1915.

Present, J. Lee Potts, Judge.

In the matter of the estate of Fannie Smith, deceased.

The above estate having been admitted to probate and Thomas Smith, of Alma, Michigan, appointed administrator thereof.

It is ordered that four months from this date be allowed for creditors to present their claims against said estate and that such claims will be heard by said court on Monday, the 10th day of May, next, at ten o'clock in the forenoon.

It is further ordered, that public notice thereof be given by publication of this order for three successive weeks previous to said day of hearing, in the Alma Record, a newspaper printed and circulated in said county.

J. LEE POTTS,
Judge of Probate.

BELLE JENNE,
Clerk of Probate. 187014

Notice of Hearing Annual Account—

ESTATE OF AMMI W. WRIGHT.

STATE OF MICHIGAN, County of Gratiot, ss.

Notice is Hereby Given, That the annual account of the executors of the estate of Ammi W. Wright, deceased, of Gratiot County, Michigan, will be allowed by me at the Probate Office, in the Village of Ithaca, in said County, on the twenty-ninth (29th) day of January next, at ten (10) o'clock a. m. of said day.

Dated, Ithaca, December 30th, A. D. 1914.

J. LEE POTTS,
Judge of Probate.

STATE OF MICHIGAN, County of Gratiot. In the Circuit Court for the County of Gratiot, in Chancery.

William B. Harris and Sarah M. Snook, Complainants, vs. Edward G. Bement, and Leroy B. Harris, or his unknown heirs, legatees, devisees or assigns, Defendants.

At a regular session of said court held in the Court House, in the Village of Ithaca, in said County, on the 26th day of December, A. D. 1914:

Present—The Hon. Kelly S. Searl, Circuit Judge.

In this cause it appearing by affidavit on file that the defendant, Joseph H. Drexler, is not a resident of this state, but is a resident of Hill City in the State of Minnesota;

On motion of O. G. Tuttle, solicitor for Complainant, it is ordered that the appearance of said defendant, Joseph H. Drexler, be entered in this cause within four months from the date of this order and that in case of his appearance that he cause his answer to the Bill of Complaint to be filed and a copy thereof served upon the solicitor for complainant within fifteen days after service on him or his so-

licitor of a copy of said Bill and in default thereof said Bill be taken as confessed by said defendant, Joseph H. Drexler.

And it is further ordered that the Complainant cause a copy of this order to be published in the Alma Record, a newspaper published, printed and circulating in said County, and that such publication be commenced within twenty days from the date of this order, and that publication be continued therein once in each week for six successive weeks, or that the said Complainant cause a copy of this order to be personally served on said Defendant, Joseph H. Drexler, at least twenty days before the time above prescribed for his appearance.

KELLY S. SEARL,
Circuit Judge.

Countersigned:
R. E. HUGHES, Register in Chancery.

O. G. TUTTLE, Solicitor for Complainant. Business Address, Ithaca, Michigan. 1875

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If you must have teeth extracted why not go to Dr. Wing, where it does not hurt?

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F. H. ROWLAND Real Estate D. L. JOHNSON Attorney

Margaretta Valentine M.D.

General Practitioner
Elwell (186814) Mich

STATE OF MICHIGAN—The Probate Court for the County of Gratiot.

At a session of said court, held at the Probate office in the village of Ithaca in said county, on the 23rd day of December, 1914.

Present, J. Lee Potts, Judge.

In the Matter of the Estate of George Farrough, deceased.

The above estate having been admitted to Probate and Will K. Ludwig of Ithaca, Michigan, appointed administrator thereof.

It is ordered that four months from this date be allowed for creditors to present their claims against said estate and that such claims will be heard by said court on Friday, the 23rd day of April, next at ten o'clock in the forenoon.

It is further ordered that public notice thereof be given by publication of this order for three successive weeks previous to said day of hearing, in the Alma Record, a newspaper printed and circulated in said county.

A true copy.

J. LEE POTTS,
Judge of Probate.

BELLE JENNE,
Clerk of Probate.

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