

MILK PRODUCTION.

Dairying That is Satisfactory to Cow and Owner.

By Professor H. H. DEAN, Canada. Atwood says that one quart of milk has about as much nutritive value as a pound of beef. Now, we can purchase in milk nutritive material at about one-third the cost that you can get in beef. I would like you to bear in mind that milk is one of the cheapest of the nutritive foods which we may purchase and has this great advantage over beef—that it is almost entirely if not entirely digested. Man in the process of the study of this question looked for some animal which could give him this nutritive material at the smallest cost, and after experimenting with all the lower animals he came to the conclusion that the cow was the one which would produce milk in the greatest quantity and at the lowest cost.

We have in our stable a Holstein which has produced 2,522 pounds of milk in thirty days, within 500 pounds of the average annual production of cows of Ontario and Quebec. In seven days she gave us 643 pounds and in one day ninety-six pounds of milk. If we had cows like that there would be no trouble about having plenty of milk to drink. A man cannot afford to keep cows that produce only 3,000 pounds of milk in a year.

Two Factors of Success.

One of the factors that we must bear in mind regarding a good cow is that we must have a strong, healthy, vigorous one if we would have milk that has what is called vitality. I think it would be impossible to get the best milk for drinking purposes from a cow that is low in vitality.

Second, the cow must be fed the right kind of food. There are some men so generous that they will feed their cows straw all winter, give them all the straw they can eat and then swear at them because they will not give more milk.

It is little wonder that many farmers are unable to obtain satisfactory milk production. They do not feed.

Winter Feeding.

For five or six months of the year the farmer must substitute for grass such foods as mangels, carrots and corn silage. Turnips should not be fed to cows producing milk. Some people enjoy the flavor of turnips in milk, but the majority do not. If you want the best quality of milk do not feed turnips.

We should recommend the following ration for winter milk production: Eight to ten pounds clover hay, thirty to forty pounds corn silage, twenty to thirty pounds mangels, eight to ten pounds meal made up of equal parts of oats and bran by weight and one to two pounds of oil cake, gluten meal or pea meal, the ration to be given in two feeds daily to each cow. A cow does not need to be fed more than twice a day under ordinary conditions.

Water and Salt.

Give the cow plenty of water. How much water do you think was drunk by the cow that gave ninety-six pounds of milk in one day? Nearly 200 pounds. That does not mean that the milk was water, as her milk tested about 3.5 per cent fat. You cannot water milk through the cow. Only man has learned that trick.

Next give the cow plenty of salt. Treat her kindly. Treat her as if she were your friend.

The cow house should be kept clean and sweet and well ventilated. It is impossible to get good milk from a cow kept in a stable that is not clean.

Sugar Beet Lands.

Every observing man must have noticed that the advent of the sugar industry in Colorado has surely had an effervescing effect on land values, and this is one of the most satisfactory features arising from the business. We have seen land advance in price from \$30 or \$50 to \$200 and \$300 an acre, but we must imagine that the latter figure is about the limit when the earning capacity of a farm is based on its percentage of earning from annual crops. The effect of beet culture has been to bring down the average size of the farms to twenty or thirty acres, but of course we still have many of 100 and 300 in extent. As intensive farming is the rule, however, the ordinary grower finds twenty or thirty acres about all he can manage when put in beets, dependent, as he is, upon the uncertainties of such labor as may stray along. Another salutary effect has been the improvement in cultural methods, and this is shown tentatively in all other crops, says Denver Field and Farm. The introduction of alfalfa as a fertilizer to beet lands has proved a great stroke in advancing the science of farming, for the system is gradually coming into use in all other lines of farm production in places where the fertility of the soil is deteriorating.

Keep the Teams at Work.

There can be little doubt that deeper plowing will not only lessen the tendency of southern soils to wash, but that it will increase their general productive capacity. Bearing in mind these factors, pay no heed to those who say do not plow in the winter, but whenever the land is dry enough keep the teams at work, plowing and also subsoiling when the subsoil is a good clay or the land has a hardpan subsoil. Turn in all the vegetable matter which has been produced on the land. Do not burn anything which will make humus. Land so treated can be fitted quickly for crops in the spring by the use of the disk or cutaway harrow.—Southern Planter.

Half Sugar Mangels.

Two half sugar mangels—Vilmorin Half Sugar Roxy and Carter Half Sugar—are recommended as suitable stock for feeding purposes.

Farm, Field and Garden

UPLANDS CELERY.

A Marsh Crop Successfully Raised on Dry Soil.

Celery we all know is a plant that likes humus laden moist land; hence people who have not tried calmly state as a fact the cheerful fiction that celery cannot be raised on a market garden soil much above the water level.

Having raised the sweetest and crispest celery in our back yard (which has been tilled for a century or so as a vegetable garden), we had no hesitancy in planting various varieties



SPECIMEN PLANTS.

at No. 1 experiment station of the Long Island railroad, having been assured it would not even grow, but we took second prize at the county fair with this celery.

No. 1 station, according to the United States geological survey, is 112 feet above the sea level; therefore it required very little nerve to plant a small patch of celery at station No. 2. Although the soil is somewhat lighter, the altitude is only sixty-four feet above sea level. Humus is absolutely and entirely lacking, caused mainly by the annual "forest fires," due to cheerful neglect of precaution by neighbors burning brush to the north of us, in that section of the island at present given over mainly to cord wood industry. A shallow ditch was dug, humus was furnished by barnyard manure, celery plants set out, and occasionally, or, to be more exact, semioccasionally, the irrigation sprayers were turned on the celery plants, and, as is the ambition of all plant life, they grew, and station No. 2 turned out celery that holds its own in competition with that grown anywhere, writes H. B. Fullerton in American Cultivator. We shall continue to grow celery at stations Nos. 1 and 2, as it eats well, sells well and makes an excellent variety.

New Tobacco Varieties.

It is an established fact that there are great areas in the United States not now growing tobacco which have the soil, climatic and other conditions suited for growing valuable tobaccos and which for the welfare of American agriculture should supply the demand of the manufacturers. One of the most important phases of the development of these undeveloped sections is the production of varieties of tobacco adapted to their soil and climatic conditions.

The change of seed from one tobacco growing region to different soil and climatic conditions, particularly from the south to the north, is likely to result in the breaking up of the type of the variety and the appearance of plants with characteristics very different from the established type. These new types of plants can be propagated by using self fertilized seed, and uniform varieties of tobacco can be secured by continued selection of the best individual plants for seed production. The use of Florida grown and imported Sumatra seed for growing in the Connecticut valley during the past few years is a good illustration of the effect of a change of seed. The plants grown from this foreign grown seed were extremely variable, individual plants of new and unknown types of tobacco appearing in the fields. The seeds of desirable individual plants of these types were saved under bag, free from cross fertilization, and several valuable new varieties have been secured adapted to the conditions in the Connecticut valley and uniformly coming true to type year after year.—A. D. Shamel.

Damage by Field Mice.

Blackberries, raspberries, grapes, currants, gooseberries and strawberries are often badly damaged by field mice, and when the animals are abundant whole plantations are ruined. Strawberries are especially liable to injury because of winter mulching and also because the plants themselves furnish excellent food and shelter for the animals.

Fallen leaves in autumn and snow in winter drift and collect along rows of blackberry, raspberry, gooseberry and currant bushes and furnish cover for mice, which work along the rows and girdle the green stems, and when dead canes are left uncut and weeds are permitted to grow up among them the resulting tangle adds much to the liability of attack. Winter mulching of small fruits also increases the danger, and if practiced the utmost care should be taken to clean surrounding areas.—David E. Lautz.

Manure For Asparagus Beds.

A heavy application of barnyard manure any time during the winter will be an advantage to asparagus beds after the old stalks and other trash have been weeded clean off.

Farm, Field and Garden

FARM GATE.

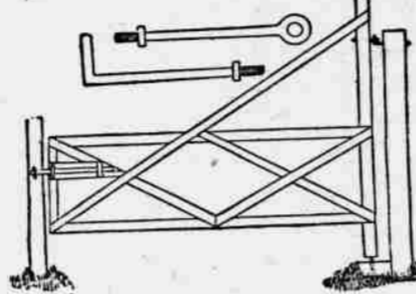
It Swings Lightly, Without Sagging, if Properly Built.

The principle of hinge hanging may not be new, but I have never seen another of such light skeleton build as our nonsagging cattle gate shown in the drawing. The material used for its construction is generally to be found on every farm, so that all the usual necessary expense is that of having the blacksmith make the hook and eye hinge for the top of the gate, the lower hinge being merely an iron pin inserted in an upright end piece and set into a block at the base of the post, making the cost of construction very light.

The top and bottom boards are 1 by 6 inches and sixteen feet long. The hinge end upright is 4 by 4 inches and ten feet long, and the latch end is 3 by 4 inches and four and one-half feet long. The braces are all of 1 by 6 inch stuff.

When this gate is intended to turn other stock than cattle and horses, either woven or barbed wire, the former preferable, is stretched over the frame tightly and secured with staples.

To hang the gate bore a hole in the bottom of the hinge end upright and drive in a three-fourths or one inch iron pin that when set will project



CATTLE GATE.

about four inches from the bottom. This is inserted into the block shown at the ground line spiked to the post, first screwing or spiking on an iron plate, with hole to match size of pin, to prevent wear and working loose. A similar plate should also be fastened to bottom of upright for the same purpose.

The top hinge is made of a three-fourths inch rod, one end a hook, the other an eyebolt, with threaded ends, explains a writer in Farm and Fireside. Nail a substantial brace on the top of the gatepost and to a post set solidly in the ground in line with the fence (or a heavy twisted wire will serve the same purpose) to hold the post firm against weight of gate, and it will swing lightly and easily, remaining for years without sagging, provided the post is properly set.

Snow For Poultry.

The possibility of lessening the labor of caring for poultry by supplying snow instead of water has been studied at the Connecticut Storrs experiment station by C. K. Graham. When pullets and hens were fed wheat screenings and beef scrap from hoppers in colony houses on low ground frozen during most of the experimental period and covered with snow during part of the time the old hens did not furnish as many eggs or appear to be in as good condition as the younger birds.

The old hens were apparently affected by the snow, the egg production being smaller on the days when snow was on the ground and also considerably less when the ground was frozen—that is, on the cold days when water was not accessible. These conditions do not seem to have affected the younger birds, and they show an increase in eggs immediately after each snowstorm, gradually dropping back as the snow disappears.

In the case of other lots kept under much the same conditions in houses on higher and drier ground the cold weather did not affect the egg production materially, "but there was a noticeable increase in the amount of grain eaten during the cold weeks when comparison is made with the very mild ones. This, however, may have been caused by the birds foraging more during the milder periods. These birds did not appear to mind the cold, and there was not the slightest sign of frosted combs among them, nor were there any colds."

Texas Grows Oranges.

Southwest and southern Texas is this year entering for the first time into the orange market of the country, says a writer in Farm and Ranch. Satsuma oranges are being shipped in quantities and are yielding big returns. The Satsuma is grafted upon the Citrus trifoliata, originally imported from Japan and used as hedges. This tree, being deciduous, makes the fall of sap in cold weather overcome the danger from frost which the orange tree as an evergreen otherwise suffers. Satsuma oranges have been grown successfully in a latitude fifty miles north of San Antonio. Groves are being planted over this section, and southwest Texas is preparing to compete with California and Florida in the orange business.

Hemlock and Oak.

Over two-thirds of the tanbark consumed comes from hemlock and over one-fourth from oak; chestnut and other woods contribute the remainder. More extract is secured from chestnut, however, than from all other domestic woods combined. A small quantity of extract, or a little over a thousand barrels, comes from the roots of palmetto.—Forest Service.

Farm, Field and Garden

PLOWS AND PLOWING.

Wing's Adaptation From the French, in Use in Alfalfa Sod.

Four years ago, when first I went to study French farming, their plows made me smile, they looked so crude, with their immense wheels and beams, so awkward in design, says Joseph E. Wing in the Breeder's Gazette, Chicago.

This year I spent more time in France and studied their plows more carefully and at work. I now consider the French plow, with its two wheels, its rigid beam and all, as being a wonderfully effective tool and think it does its work easily for the horses as well. I took hold of the handles of these plows and found that they ran with extraordinary steadiness.

Last fall we had sixty acres of alfalfa sod to plow, and alfalfa sod is notoriously hard stuff to manage. It takes a good plow, a good team and a good plowman to plow alfalfa sod at all. We learned that a walking plow is best for alfalfa sod. We really never had much success with a riding plow in such use, but we had learned that a wheel under the beam steadied the plow and was quite a help. The



WING'S HITCH.

wheels furnished by the plowmakers are about seven inches in diameter—too small, but useful. We started three plows, and one had no wheel. It occurred to me to adjust an old wheel from a sulky plow. Our blacksmith did this for me, and then came a further thought. Why not put on two wheels, as the Frenchmen do? I found two that matched well, one about thirty inches and one about eighteen inches in diameter, and the smith and I rudely adjusted them to a bit of one and one-quarter inch shafting for an axle. A 4 by 4 inch block went on this, and iron stirrups connected it to the plow beam. Thus one wheel could go in the furrow, one on the land, and it ought to steady the plow finely.

I put the thing in the buggy and hastened to the field, eager to test it. We fastened it to the plow, and I eagerly watched for results. The horses started, a rod was turned, and Frank looked around with an astonished expression on his face. "Why, it's all right!" He went a few rods farther and called back, "Finest thing I've ever seen!" The long and short of it is that we are using that plow today. It has turned now about sixty acres, and much of the time it has been used by an old man who could never have endured holding an ordinary plow in alfalfa sod. The work of that plow is perfect. It matters very little indeed whether one holds to the handles or not, it runs along and does business just the same. We made another carriage better in that the one and one-quarter inch axle has turns in it that make the wheels set on cranks, so that



WING'S FRENCH PLOW IN USE.

it is readily adjustable to depth, and this works with a lever. The plow goes along as exactly as a big plane.

Now, it seems to me that plow manufacturers should take a hint from this. Such an attachment as I have adapted ought to be sold for less than \$10 and, added to the already very good plows, would make for perfect work.

If the manufacturers will not do this, one can usually find old wheels either on his own farm or in the junk shop to make his own plow carriage. We find only one difficulty in adjustment. It is to keep the plow level, rather running a little on the land side, especially in tough alfalfa sod. This we manage by inserting a thin wedge of wood under the beam when clamping it down. There is a better way. One wheel might be arranged to be raised or lowered independently of the other.

Where Orchards are Small.

In portions of the country where individual orchards are small, but situated close together, a central cooking plant may often be used in co-operation or by an individual who supplies the lime-sulphur wash during the spraying season to the orchardists of the community. The practicability of this plan has already been demonstrated.

Farm, Field and Garden

THE BALDWIN.

It is the Uncrowned Apple King of Our Northern Latitudes.

From New England to Michigan and as far south as northern Pennsylvania and Ohio the Baldwin holds a leading place among market varieties of winter apples. In Vermont, northern New York and northern Michigan it is apt to winter kill somewhat, especially in high altitudes. South of Pennsylvania, except in the mountains, it becomes a fall apple of inferior quality and in the south and southwest is still poorer. From Colorado to Washington it is grown in many localities to equal or even surpass the fruit produced in the east. For export it is one of the best known varieties and most highly appreciated, especially in British markets. Such fruit as may be too inferior to



BALDWIN APPLE.

market can be readily evaporated or canned, and large quantities are used in this way, especially in western New York.

The tree is well formed, vigorous and long lived. Though somewhat slow in reaching maturity, it bears abundantly thereafter. Its chief fault is that if not properly managed this trait of bearing abundantly is apt to become emphasized in alternate years, but by properly training and thinning the young tree this fault, if such it be considered, can be corrected. On moderately light soils, especially if underlaid by sandy or gravelly subsoil, the fruit frequently has a high color early in the season and ripens somewhat earlier than on heavier soils, but produced on such soil the fruit is more apt to scald in storage than when grown on heavier land. One of the most striking characteristics of the variety is its great uniformity of size. The fruit in a whole orchard will frequently be of practically the same diameter, says New England Homestead. Few varieties produce so small a proportion of culls. The fruit when well grown will keep in ordinary cellar storage until rubarb can be gathered from the garden in April and in cold storage even later. No one can make a mistake in planting this apple either for home use, for domestic or foreign market.

Apple Cold Storage.

It usually pays to store only the best grades of fruit. The poorer grades of fruit are generally of low commercial value and do not warrant the expense of cold storage except when the apple crop is scarce. Inferior fruit has been found to deteriorate considerably in storage from decay starting in worm holes, around scab spots and in other imperfections. A bruise or cut in the skin made with the finger nails, by dropping apples on each other in picking, by emptying them into the boxes or barrels and by handling the packages roughly becomes very conspicuous as the season advances and detracts from the appearance of the fruit, besides making an easy starting place for destructive rots. This is especially true of tender skinned fall varieties like the Wealthy. Most of the commercial losses in apples from decay are related primarily to the rough mechanical handling of the fruit.

Various temperatures for the storage of fruit have been tested. A temperature of 32 degrees gives the most satisfactory result in commercial practice, but the fruit keeps well for a shorter time in a temperature as high as 38 degrees if stored quickly after picking.

The most satisfactory result is secured when the fruit is withdrawn from cold storage and used while in prime condition. If held beyond this time it deteriorates rapidly after removal from the low temperature, and if withdrawn while the fruit is prime it appears to keep as long as apples in the same condition of ripeness that have not been in cold storage.—Experiment Station, Ames, Ia.

Only One End.

A young couple had been married by a Quaker, and after the ceremony he remarked to the husband: "Friend, thou art at the end of thy troubles."

A few weeks after the man came to the good minister boiling with rage, having found his wife to be a regular rixen, and said:

"I thought you told me I was at the end of my troubles?"

"So I did, friend, but I did not say which end," replied the Quaker.

Bacteria in Cream.

Careful experiments in testing cream at the Oklahoma experiment station have shown that the bacteria were found to increase in cream for a period of three days in summer and four days in winter, after which there was a steady decrease, but it is not to be assumed that old cream is better than fresh cream because it has fewer bacteria, for samples of eight day cream had an old, unpleasant odor.

Registration of Land Title.

In the Circuit Court of the State of Oregon for Benton County, Plaintiff, vs. Hannah Rowland, Polly Mitchell, heirs-at-law of Incretia Hatlock deceased, Sara H. Strahan, Claude Strahan, Fayne Lewis, heirs-at-law of E. S. Strahan deceased, and Henry Lewis and "All whom it may concern," Defendants.

In the matter of the application of Della Reed to register the title to the following: The original D. E. C. of Herman S. Hatlock and Incretia Hatlock, his wife, it being Claim No. 50, being part of Sacs 4 and 5, in Township 11, South, Range 5 West of the Willamette Meridian, Benton County, Oregon, described as follows: Part of the E. 1/2 corner of said section 4, and running thence 30 minutes east 45 chains, thence west 97 chains and 50 links, thence south 44 chains and 60 links, thence north 80 feet and 74 minutes west 25 chains and 57 links, thence north 98 chains and 58 links, thence east 60 chains and 95 links, and thence north 95 chains to the place of beginning in the quarter of lands subject to sale at Oregon City, Oregon, and containing 290 acres and 96,166 of an acre. To Hannah Rowland, Polly Mitchell, Sara H. Strahan, Claude Strahan, Fayne Lewis, Henry Lewis, and "All whom it may concern," Defendants.

"TAKE NOTICE"

That on the 24th day of January, 1908, an application was filed in the said Circuit Court of the State of Oregon for Benton County, Oregon, for initial registration of the title to the land above described.

Now, unless you appear or before the 31st day of February A. D. 1908, and show cause why such application should not be granted, the same will be taken as confessed. Notice will be given and complaint will be forever barred from appearing the same.

Dated at Corvallis, Oregon, this 6th day of January, 1908.

T. T. VINCENT, Clerk Circuit Court of the State of Oregon for Benton County.

NOTICE FOR PUBLICATION.

DEPARTMENT OF THE INTERIOR, Land Office at Roseburg, Or., Jan. 8, 1908. Notice is hereby given that F. H. L. Williams, of Monroe, Benton Co., Or. has filed notice of his intention to make final five year proof in support of his claim, viz: Homestead Entry No. 11619, made October 1, 1901, for the N 1/2 of SE 1/4, Section 8, Township 14 South, Range 6 West W. M., and that said proof will be made before County Clerk and Clerk of County Court at Corvallis, Oregon, on Friday, March 6, 1908. He names the following witnesses to prove his continuous residence upon, and cultivation of the land, viz: Walter J. Sisson, Wallace Wilson, Albert Oakes, and James Oakes, all of Monroe, Oregon. BENJAMIN L. EDDY, Register. Re-advertisement.

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