

DAIRY

DAIRY CATTLE ON DRY FARM
Government Begins Study of Dairying and Crop Possibilities in Southwest.

Prepared by the United States Department of Agriculture.
In order to study the possibilities of dairying and to develop better methods of crop utilization in the dryland regions of the Southwest, the United States Department of Agriculture has established a herd of purebred dairy cattle on a farm in the semi-arid district of northwestern Oklahoma. The farm is near the town of Woodward for many years, and has produced such crops as grain sorghums, corn, cowpeas, and alfalfa for the prevention of soil



Weighing Out the Proper Rations Requires But Little Time.

blowing, and winter wheat for pasture. From now on the farm will be used co-operatively by the bureau of plant industry and the bureau of animal industry. This is considered a necessary combination, as most of the feeds grown there are of the kind that must be fed largely to live stock.

The dairy division hopes to determine whether or not it is desirable to produce live stock under those dryland conditions, and to grow the crops which will give the largest returns per acre in terms of milk or cream. The question is not one of crop tonnage, but of the amount of finished dairy products that can be turned out. The work here is not designed to discover the best practices for any particular state, but to study practices that will be desirable in the large dry-land regions where only certain crops can be grown.

The people of this little Oklahoma town have shown great enthusiasm in regard to the investigations that the department of agriculture contemplates. The town purchased 100 acres adjoining the old government farm, and turned it over free to the government for a period of 99 years. The voters of the town were almost unanimous in favor of this donation.

The cattle that are being used on this farm are also in the country-wide breeding project being conducted by the dairy division and bulls have been sent from the government farm at Beltsville, Md. In this breeding project, which now includes more than 300 cows and 50 bulls, it is hoped to determine what are the best methods of breeding for the improvement of cattle. The large scale of this investigation should make the results particularly valuable.

CLEAN ALL DAIRY UTENSILS

Where Several Cows Are Kept Water May Be Heated by Means of Small Boiler.

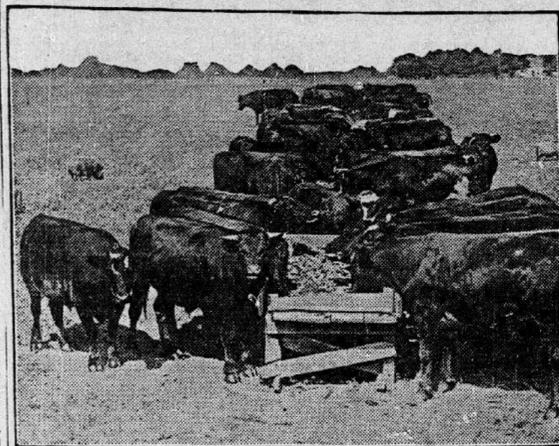
One of the greatest conveniences on the farm where cows are kept is some means for heating an abundance of water for washing the milk vessels. Where a considerable number of cows is kept, heating water by means of steam from a small, low-pressure, upright boiler is desirable, but on the small farm a stove with a basin fitted into the top (or it may be separate from the top) can be purchased cheaply and will serve the purpose, provided the water is properly heated. Water can be pumped from the well directly into the basin. In order to avoid heating the milk room and to do away with smoke and ashes, the water heater should be placed immediately outside of the milk room; and, if elevated, the water from it can be run into the washing vat.

PRUNE APPLE TREE PROPERLY

Orchardists Should Take Care Not to Cut a Hole in Top—Too Much Wood Taken Out.

In working on apple trees be careful not to cut a hole in the treetop. Many people read about opening up the center of the tree in order to let sunlight in and then make the mistake of cutting out too much wood. A tree properly pruned should never show where the limbs come from when viewed at a distance of 25 feet.

FEEDING CATTLE IS GOOD PLAN FOR MARKETING VARIOUS CROPS



Summer Fattening in Corn Belt on Grass, With Corn as a Supplement.

(Prepared by the United States Department of Agriculture.)
Although corn belt cattle feeders have lost money the last two years, yet on the average for five years or more the industry has been profitable on many farms and is a line of production which will continue to be an important branch of American agriculture.

The bureau of animal industry, United States Department of Agriculture, has recently issued Farmer's Bulletin No. 1218, "Beef Production in the Corn Belt," which contains valuable suggestions to the corn belt feeders on the economical production of beef.

The investigations on which the bulletin is based were conducted by the department on 806 farms of the corn belt and every phase of the problem, from raising calves or buying feeders to the marketing of the finished steer, is treated in considerable detail.

The general tendency in the corn belt to plow up permanent pastures and produce more cultivated crops caused a decline in beef raising, but the keeping of cows to raise calves has continued to be profitable on land too rough, too wet, or too infertile for cultivation. The reduction of pasture has been compensated for to some extent by the greater use of clover, alfalfa, and corn silage. However, since 1905 there has been some increase in feeder production in the corn belt due to the breaking up of western ranges for dry farming and irrigation.

The investigation, which was carried on for three years, showed that the feed cost of keeping a cow was 60 per cent of the entire cost of maintenance for a year, while 31 per cent represented interest, labor, equipment and incidentals. The total number of cows on the 806 farms was 23,258, an average of 29 to the farm. The per cent of calves raised was practically 85. It was found that costs could be reduced through three factors—increasing the credits from the cows, improving the herd, and economy in feeding.

Early Fall Buying of Feeders Best.
When feeders are not raised on the farm buying and selling ability plays an important part. In some seasons certain weights and classes of cattle may be purchased more economically than others. Ordinarily early fall buying is preferable, as competition between packers and feeders usually increases as winter approaches.

The higher the quality of the feeder steer the better use he will make of his feed, though he usually eats more of it. But this consideration should not cause the buyer to lose sight of the price. Fleshy feeders can often be used to advantage on short feeds, and when there are very good prospects for higher prices. The older the animal the quicker it will fatten, as it will use less feed for growth and more for fat production.

Mature feeders fatten in three to four months, two-year-olds in 5 to 7 months, yearlings in eight to ten months, and calves in ten to twelve months. Older cattle use roughages more advantageously, but in general young animals make more economical use of all feeds. Mature cattle require from nine to eleven pounds of digestible nutrients to make a pound of gain, whereas yearlings use six to eight pounds, and calves only four to six pounds.

Feeding cattle for the market is simply one method of marketing the crops. On 287 farms in the corn belt an average of 35 per cent of the 1919 crops was fed to cattle. Fully 90 per cent of the fattened cattle in this cent of the fattened cattle in this area are dry-lot fed and are marketed before July 1. The various methods of feeding and the feeds used are fully discussed in the bulletin.

Feed Alfalfa and Clover Hay.
Alfalfa and clover hay are by far the most popular dry roughages, as they take the place of commercial protein concentrates to a large extent. Grass concentrates, with the exception of timothy hay, with clover, are very little mixed with clover and straws used. The use of stovers and straws has a direct bearing on the economy of gains, and all such feeds should be used on the farm.

The most popular protein concentrates in the corn belt are cottonseed meal and cake and linseed meal. Corn, oats, and barley are the carbohydrate concentrates most used. Molasses concentrates and other miscellaneous concentrates are in much demand in some sections. Supplying protein is of more concern to the cattle feeder than supplying the other constituents of the

ration because it is usually purchased. Cottonseed meal, while it is used more extensively throughout the corn belt as a whole, is no more popular than linseed meal. Most cattle feeders prefer linseed meal, but it is not used so largely owing to its somewhat higher cost. Corn makes up 90 per cent of the carbohydrate concentrates. Oats are frequently used in the latter part of the feeding period to put cattle in better shipping condition. Barley is used only in a small way, although in Illinois it made up 10 per cent of the grain ration.

Purchase Price Is Half of Cost.
In fattening a steer the combined operating expenses usually more than equal the original purchase price of the feeder. The factors considered in operating expenses are feed, labor, building and equipment, interest, marketing, insurance and taxes. Feed usually constitutes about 80 per cent of this expense. All the other items are generally balanced by the manure and pork credits.

The preceding paragraphs are a very brief outline of the investigation of beef production in the corn belt. Those interested in a thorough study of the various operations and cost figures should secure a copy of the bulletin, which can be obtained free from the department of agriculture.

CREOSOTE TREATMENT IS MOST ECONOMICAL

Treated Posts Are Sign of Sound Judgment.

Large Saving Is Made in Replacement Where Short-Lived Timber Is Used—Decay Is Less Rapid in Northern States.

(Prepared by the United States Department of Agriculture.)

Although most expensive at the outset, creosoted posts are generally more economical to use than many kinds of untreated, short-lived woods, because of their much greater lasting qualities, the forest service of the United States Department of Agriculture has determined. The exceptions would be in remote localities with cheap wood and labor, and where it would be expensive to obtain creosote. The large saving in the replacement charges, which ordinarily mount up so high in maintaining a fence, and the use of cheap and inferior kinds of woods in the first place, much more than offset the increased cost of thorough treatment with creosote. Treated posts are a good investment, and their use where lasting woods are scarce or expensive is a sign of sound judgment in farm management.

The best treatment is that which results in the deepest penetration into the wood with the least absorption of creosote. The butts of the posts should be placed for one to two hours in creosote heated to a temperature of 180 degrees to 220 degrees F. It is important to treat the wood to a height of a foot above the proposed ground line. In the southern states the entire post should then be submerged into oil, at 80 degrees to 100 degrees F., for one or two hours, or for such a time as is necessary to get good penetration. In the North, where decay is less rapid, the hot treatment is applied only to the butts, which are allowed to remain for two or three hours in the cooling process, the tops being treated by painting or dipping in creosote.

Further information on creosoting fence posts will be found in Farmers' Bulletin 744, Preservative Treatment of Farm Timbers, available upon request from the Department of Agriculture.

STARTING TREE PLANTATIONS

Cottonwood and Willow Do Best With Cuttings of 12 to 14 Inches—Avoid Bruising.

Cottonwood and willow plantations are most easily started with cuttings. These are simply from 12 to 14-inch sections taken from the one or two-year-old twigs of living trees. The cuttings should be made with a sharp tool, to avoid bruising the bark. Cuttings should be collected during early winter and buried in moist sand in a cool place until the time for planting.

GOOD HIGHWAYS

ROADS CONSTRUCTED IN 1921

Approximately 28,000 Miles Built During Year Just Passed—Materials Lower.

(Prepared by the United States Department of Agriculture.)
Road building has recovered from the setback received during the war, and prospects are bright for the future. Approximately 14,000 miles of road were constructed during the present season by the states in conjunction with federal aid, according to the bureau of public roads, United States Department of Agriculture, and probably an equal amount independent of federal aid. More miles of improved road were built than during any other year.

Costs of road grading and construction with local materials is down practically to the 1914 level. Some reductions, also, have been made in freight rates on road materials. The importance of this item is shown by the fact that in some cases it has been estimated that increased freight rates have added 10 per cent to the cost of a road. Prices of manufactured road materials tend downward; the present level is materially lower than that of a year ago.

With the new appropriation by congress of \$75,000,000, added impetus will be given to new road construction. Many of the states are considering en-



Federal-Aid Road in Western State, Just Completed.

larged amounts of state aid, and the new law will have a tendency to encourage this policy. It will also secure the construction of a system of interstate and intercounty highways, rather than haphazard selection of roads as in some cases in the past.

HEAT INFLUENCES CONCRETE

Discovery Made That Edges Curl Up and Down in Response to Temperature Changes.

That the edges of concrete roads curl up and down in response to changes in temperature is the discovery recently made by the bureau of public roads of the United States Department of Agriculture in the course of experiments at the department's experimental farm at Arlington, Va.

Curling is caused by the unequal expansion and contraction of the upper and lower sides of the concrete slab under the influence of heat. It has been observed during the middle of the day when the surface of the road becomes hot it expands more than the cooler underside and causes the sides to move downward. At night when the surface is cool the contraction causes the edges to rise slightly. The extreme movement may be as much as one-tenth of an inch.

While the warping of the concrete is not in itself detrimental to the road, it may lead to failure of the surface under the wheels of vehicles which travel over it when parts of it are not resting on the ground.

HAUL PRODUCTS TO MARKET

Enormous Amount Carried Over Country Roads Shows Necessity of Better Condition.

The necessity of keeping country roads in good condition is shown by a report recently compiled by the bureau of markets and crop estimates, United States Department of Agriculture, showing the extent to which they are used in hauling farm products to market. According to the report, which shows the tonnage of 11 products hauled on country roads, giving the yearly average for the period from 1915 to 1919, there were 27 tons of these 11 crops hauled for every 100 acres of land. The average tonnage of the 11 crops hauled on country roads each year for the period mentioned amounted to 83,560,000 tons. The 11 crops referred to in the report are corn, wheat, oats, barley, rye, rice, flaxseed, cotton (including seed), tobacco, potatoes and cultivated hay.

Bonds for Good Roads.
Pennsylvania has just sold \$11,200,000 bonds bearing 4 1/2 per cent interest—the last of a \$50,000,000 issue for road work—for \$104.31, which shows that, however the market for other bonds may be, there's a mighty brisk demand for nontaxables.

Want to Spend \$15,000,000.
The Massachusetts department of public works wants to spend \$15,000,000 a year on roads and bridges of the state during the next 20 years.

MOTHER! CLEAN CHILD'S BOWELS WITH CALIFORNIA FIG SYRUP

Even a sick child loves the "fruity" taste of "California Fig Syrup." If the little tongue is coated, or if your child is listless, cross, feverish, full of cold, or has colic, give a teaspoonful to cleanse the liver and bowels. In a few hours you can see for yourself how thoroughly it works all the constipation poison, sour bile and waste out of the bowels, and you have a well, playful child again.

Millions of mothers keep "California Fig Syrup" handy. They know a teaspoonful today saves a sick child tomorrow. Ask your druggist for genuine "California Fig Syrup" which has directions for babies and children of all ages printed on bottle. Mother! You must say "California" or you may get an imitation fig syrup.—Advertisement.

Five-Pound Box, at That
In the good old days we could make a girl's heart flutter by handing her a lozenge with a love message stamped upon it; but nothing less than a dollar-a-pound candy makes any impression upon the cardiac organ of the modern girl.—Boston Transcript.

A Lady of Distinction
Is recognized by the delicate fascinating influence of the perfume she uses. A bath with Cuticura Soap and hot water to thoroughly cleanse the pores followed by a dusting with Cuticura Talcum powder usually means a clear, sweet, healthy skin.—Advertisement.

Taking the Fun Out of It.
Ho—"I see this hotel has adopted a rule permitting women to smoke." She—"I suppose now I'll have to quit."

DYED HER BABY'S COAT, A SKIRT AND CURTAINS WITH "DIAMOND DYES"

Each package of "Diamond Dyes" contains directions so simple any woman can dye or tint her old, worn, faded things new. Even if she has never dyed before she can put a new, rich color into shabby skirts, dresses, waists, coats, stockings, sweaters, coverings, draperies, hangings, everything. Buy Diamond Dyes—no other kind—then perfect home dyeing is guaranteed. Just tell your druggist whether the material you wish to dye is wool or silk, or whether it is linen, cotton, or mixed goods. Diamond Dyes never streak, spot, fade or run.—advertisement.

SEMI-MOURNING, AS IT WERE

Offer of That Red Skirt Made Caroline Reconsider Her Demonstration of Sorrow.

Every Saturday Caroline used to go forth on a cleaning job. One day she appeared robed in black.

"What's the matter?" her employer asked. "Oh, Miss Sophy," she moaned, "my uncle he is dead, and I've gwine to mourn. I've gwine to mourn for him four months."

The lady expressed sympathy and added: "I had out that red skirt of mine for you. I thought you might like it; but of course you won't want it now."

"No, Miss Sophy; I've gwine to mourn four whole months." Next week brought Caroline as usual.

"I been thinkin' 'bout that red skirt, Miss Sophy," she said. "It's just the kind of a red skirt I like, and I believe from now on I'll mourn from the waist up."—Everybody's Magazine.

A trust company trusts no one, and a trust is not to be trusted. What's in a name?

An undiscussed problem grows more complicated.

Yeast Vitamon Tablets Bring Real Beauty

Banishes Skin Eruptions. Puts On Firm Flesh, Strengthens The Nerves and Increases Energy.



Of what use are beautiful features if you have an ugly skin, flabby flesh, hollow cheeks or a scrawny neck? Mastin's VITAMON is positively guaranteed to give you new health, beauty and a well-rounded face and figure.

Mastin's VI-TA-MON—the original and genuine yeast-vitamin tablet. There is nothing else like it, so do not accept imitations or substitutes. You can get Mastin's VITAMON Tablets at all good druggists.

if it isn't MASTIN'S it isn't VITAMON

Doubtful.
North—Mrs. Jones said that I reminded her of her husband.
West—Is that a compliment?

ACOLD TODAY—DON'T DELAY

DRUGGISTS: CASCARA QUININE
Cures Colds in 24 Hours
Laxative in 3 Days
W. H. HILL, CO., DETROIT, MICH.
SALE: SUPER-REPUTABLE

GOOD JOKE ON DANISH KING

Monarch Jumped Too Quickly to Conclusion That Eskimo Was Actuated by Loyalty.

An amusing story of the king of Denmark's recent visit to Greenland was recently told by M. Aagaard of the Danish legation, to members of the Danish club in London.

As the royal yacht was approaching Greenland a dark speck became visible on the open sea. It proved to be a solitary Eskimo in his little cayak (native canoe). The Eskimo came on board and his loyalty in having braved the perils of the sea in such a frail craft assured him the warmest of welcomes. The king presented him with a cigar and, what the Eskimos most highly prize, a rifle.

On landing, the king described the incident to the Danish commissioner in Greenland and asked him who the man was.

The commissioner, in accents of horror, replied: "The man's an escaped convict. He broke prison yesterday, stole a canoe and put to sea. We thought he had been drowned."

Funnest witticism loses all its point if it is greeted by "what?" for the third time.

Says Sam: It's a question which kills most people—germs or grouches.

Concentrated Tablets Easy and Economical to Take. Results Quick.

If you want to quickly clear your skin and complexion, put some firm, healthy flesh on your bones, increase your nerve force and power, and look and feel 100 per cent better, simply try taking two of Mastin's tiny yeast VITAMON Tablets with each meal and watch results. Mastin's VITAMON contains highly concentrated yeast vitamins, as well as the other two still more important vitamins (Fat Soluble A and Water Soluble C). Pimples, boils and skin eruptions seem to vanish like magic under its purifying influence, the complexion becomes fresh and beautiful, the cheeks rosy instead of pale, the lips red instead of colorless, the eyes bright instead of dull. The whole system is toned and invigorated, and those who are under-weight begin to get some firm "stay-cheer" flesh. So rapid and amazing are the results that success is absolutely guaranteed. Be sure to remember the name—Mastin's yeast-vitamin tablet. There is nothing else like it, so do not accept imitations or substitutes. You can get Mastin's VITAMON Tablets at all good druggists.

Are Positively Guaranteed to Put On Firm Flesh, Clear the Skin and Increase Energy When Taken With Every Meal or Money Back

Handy Dandy

3 in 1 Home, Shave and Blade Holder. Don't throw that blade away. A few strokes on the "Handy Dandy" renews and gives a perfect shaving edge. For sale at hardware and drug stores, or send \$1.50 to Olson Mfg. Co., 2216 Clinton Ave., Minneapolis, Minn. Give make of blade you use when ordering.

PARKER'S HAIR BALSAM
Restores Hair to Original Falling
Restores Color and
Beauty to Gray and Faded Hair
and \$1.00 at Druggists.
Parker Brothers, Inc., Framingham, Mass.

HINDERCORNS

Removes Corns, Calluses, Blister Blisters, ensures comfort to the feet, makes walking easy. By mail or at Druggists. Elmer Chemical Works, Pathecoque, N. Y.

DIDN'T SEE END OF INCIDENT

Gap Johnson Had More Important Thing to Attend to Than Witnessing a Hanging.

"While I was in Tumlinville yesterday," relates Gap Johnson of Rumpus Ridge, Ark., "a mob came 'rarin' around a corner hauling along a gent with a rope around his neck, and fang the end of it over a limb within forty feet of me."

"Did they hang him?" interestedly asked an acquaintance. "Doggod if I know! You see, just then a feller bantered me for a hoss-swap and drug me off to look at his nag, and I didn't learn how the anecdote came out."

"What had the gent done?" "Well, I heard somebody say that he'd either been selling bone dry licker to the mob or else he'd refused to do so; I forgot to ask which."—Kansas City Star.

Didn't Think It Possible.
"In my opinion," ventured Mr. Meekton, mildly, "the ballot for women has not proved as successful as I hoped it would be."

"What has caused your doubt?" "The candidate for whom my wife campaigned was overwhelmingly defeated. It's the only time I ever knew Henrietta to get the worst of an argument."

One third of your life is allotted to sleep. Do you get your share?

The most important period in the process of applying nutrition to the repair of the body is while you are asleep. For the most favorable transformation of digested food into nerve and cell tissue, so doctors tell us, sleep is absolutely essential.

Is it any wonder that those who suffer from lack of proper sleep are weak, pale and lacking in energy or ambition?

One of the causes of insomnia is nerve-irritation from tea and coffee drinking. Tea and coffee both contain caffeine, which has a tendency to cause undue stimulation. The irritating effect of caffeine often results in insomnia, depression, and a weakened nervous system.

You can easily overcome these troubles by drinking Postum instead of tea or coffee. Postum is a delicious, satisfying cereal beverage, and it is absolutely free from caffeine, or any other harmful substance.

Ask your grocer for Postum. Drink this delicious, refreshing beverage for ten days. Then see if you do not feel better and more clear headed, and if you do not sleep better at night—as so many other people have proved for themselves.

Postum comes in two forms: Instant Postum (in tins) made instantly in the cup by the addition of boiling water. Postum Cereal (in packages of larger bulk, for those who prefer to make the drink while the meal is being prepared) made by boiling for 20 minutes.

Postum for Health
"There's a Reason"

Made by Postum Cereal Co., Inc., Battle Creek, Mich.