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3-1-1943

### Milk for Victory : Better Feeding is the Key to Greater Production

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#### Recommended Citation

Cave, R. A., "Milk for Victory : Better Feeding is the Key to Greater Production" (1943). *SDSU Extension Leaflets*. 50.

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# MILK FOR VICTORY

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**Most S. D. Milk Cows Are**

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**Better Feeding is The Key  
to Greater Production**

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**SOUTH DAKOTA STATE COLLEGE**

**UNITED STATES DEPARTMENT OF AGRICULTURE**

630.732

So 87

No. 54

Rev. 1943

54

Revised March 1943

# MILK for VICTORY

The great need for increased production of milk, butter and other dairy products for our armed forces, our allies and the civilian population is a challenge to every milk cow owner in the nation.

One-hundred and twenty-two billion pounds of milk must be produced in the United States this year to fill the minimum requirements asked for by our government. This is two billion pounds more than the record production of 1942 under very favorable climatic conditions.

## Price Outlook Good

The price of 92 score butter in Chicago will be supported at 46 cents per pound until June, 1944, and for two years following January 1 after the war closes.

Every milk cow owner in South Dakota is anxious to help in this war emergency. He can help best by getting the cows he now has to give more milk.

How can this be done? The answer is simple: Better Feeding.

It is safe to say that if every milk cow in the state were provided with sufficient feed to furnish the food nutrients she needs that milk production would be increased by 25 percent.

That means:

**Feeding more farm grains now.**

**Planning a pasture program that will supply good pasture from early spring to late fall.**

**Planning a crop program that will provide at least two to three tons of high quality home-grown hay and fodder per cow for next winter's feeding.**

## Hay and Fodder Not Enough

The man who expects his cows to keep up their milk flow on hay, fodder or silage alone without grain, will be disappointed unless he has a large supply of good alfalfa or sweet clover hay. A cow producing 12 quarts of 4 percent milk a day will need nearly two pounds of digestible protein a day. To get that much protein she would have to eat 52 pounds of corn fodder, 61 pounds of sorghum fodder, or 70 pounds of prairie hay. Since the cow cannot eat that much of any of those rough-ages in a day, she will have to be fed some grain if she is to keep up her milk flow.

## Winter Feeding

1. Feed each cow giving milk a pound (1 qt.) of ground feed for each 3 pounds (3 pts.) of milk produced per day.
2. Give all cows 6 weeks rest before freshening and feed 5 pounds of ground farm grains per day during that period.

3. Feed 2-year-old heifers 5 pounds of ground farm grains per day for 6 weeks or longer before freshening.
4. Feed yearlings liberally for good growth and have them in good condition when they freshen at two years.
5. Feed one tablespoon of fish oil per day in the milk for bucket fed calves.
6. With cows of the dairy breeds and good producing cows of the non-dairy breeds, it will usually pay to add a pound of protein concentrate (linseed meal, soybean meal or cottonseed meal) to each 3 pounds of farm grains in the feed mixture when no alfalfa hay is available.
7. A mineral mixture consisting of equal parts of steamed bone meal, ground limestone and salt should be placed where the cows have free access to it. This is especially important where no alfalfa or sweet clover are fed.
8. Plenty of good water at a temperature cows will drink should be provided where they can get it comfortably.
9. Comfortable stables, free from drafts, and well bedded will add to milk production.
10. Cornstalk fields as a winter range for milk cows are unprofitable.

### Feed Requirements of 1000-lb. Cow Producing 30 lbs. of 3.8 Percent Milk Per Day

S. D. Exp. Bul. 231, pp. 61 and 62

	Protein	T.D.N.
Body Maintenance 30 lbs. 3.8% milk	.700	7.925
	1.560	9.810
<b>Total</b>	<b>2.260</b>	<b>17.735</b>

Rations that will furnish the above nutrients:

No alfalfa or silage		Silage but no alfalfa	
Prairie Hay	10 lbs.	Prairie Hay	5 lbs.
Sorghum Fodder	10 lbs.	Sorghum Fodder	5 lbs.
Grain Mixture	10 lbs.	Silage	30 lbs.
(Equal parts of corn & cob meal, gr. oats, barley, soybean oilmeal)		Grain Mixture	10 lbs.
		(Equal parts gr. corn, gr. oats, gr. barley, soybean oilmeal)	
Alfalfa but no silage		Alfalfa and silage	
Alfalfa	10 lbs.	Alfalfa	10 lbs.
Sorghum Fodder	10 lbs.	Silage	30 lbs.
Grain Mixture	10 lbs.	Grain Mixture	10 lbs.
(Equal parts of corn & cob meal, gr. oats, gr. barley)		(Equal parts gr. corn, gr. oats and gr. barley)	

## Spring and Summer Feeding

Good pasture is the cheapest and most healthful feed that can be supplied to the milk cow. Milk can be produced on good pasture at less than one-half the cost of its production under winter feeding conditions.

Every milk cow owner longs for the time to come in the spring when the cows can be turned on good pasture. Many are unable to resist the temptation to open the gate and allow the cows on the pasture as soon as it turns green. At this stage of growth the grass is high in water content and low in total food nutrients. The taste of the grass spoils the appetite of the cows for the winter rations and the milk flow is reduced. The grass plants have no chance to store up a reserve supply of plant food in the roots and are also injured by tramping.

Fortunate is the man who planned his pasture program in the fall and included a fall seeding of rye for early pasture, or

the man who has been able to secure a good pasture of crested wheat or brome grass for early grazing. Without these pasture crops winter rations should be continued until about the second week in May.

## Summer Months Most Difficult

The most difficult period in which to keep up the milk flow is during the hot summer months of July and August. Permanent pastures dry up, harvesting occupies the attention of the herd owner, and the cows are often neglected.

Production of cows in South Dakota cow testing associations dropped from an average of 866 pounds of milk per cow for last June to 549 pounds per cow in October.

## Sudan Grass to the Rescue

Sudan grass sown the last of May is the outstanding pasture crop for this period in South Dakota. It is well liked by milk cows, will provide a large amount of forage on a small acreage and is at its best when other grasses are dried up. More South Dakota farmers are using it each year as a pasture crop. See Ext. Cir. 153, "Pasture Crops for South Dakota," available at the county extension office.

## Rotating Pastures

Dividing the pasture into several fields and grazing one field while another gets a rest and a new start is a good practice as it usually results in more forage, greater palatability and increased milk flow. Where several fields are available the cows in milk can be pastured a few days on each field followed by the dry cows and young stock.

## Grain on Pasture

Even on good pasture cows producing more than 20 pounds of milk a day will need some grain if they are to keep up their milk flow. This grain can consist of the common farm grains such as corn, oats and barley.

Starting with 21 pounds of 3.5 percent milk a cow on good pasture should receive 2 pounds of grain a day. For each increase of 5 pounds in milk production above 21 pounds the grain ration should be increased 2 pounds. A cow giving 26 pounds of milk a day would require 4 pounds of grain, one giving 31 pounds a day 6 pounds of grain, etc. If the pasture starts to deteriorate, grain or other supplementary feeding will have to be increased in order to prevent a drop in milk flow.

## Hay Program

High quality, home-grown hay provides the next lowest cost feed for milk cows after good pasture. A program to sup-

ply two to three tons of such hay per cow will contribute greatly to low cost milk production next winter. Well-cured, leafy green alfalfa takes first rank as a hay for milk cows. Where alfalfa is not available, soybean hay, where it can be grown in the eastern part of the state, makes an excellent substitute. It is high in protein content and is very palatable to milk cows. The soybeans should be grown only on clean ground, they should be inoculated, and cut for hay just as the beans are forming in the pods. Oats cut when in the milk stage also make a very desirable hay to supplement the usual hay grown on the farm.

## Silage Is Valuable

Silage is a very valuable feed for milk cows and will usually enable them to produce more milk. This is especially true where the hay or fodder is not of the highest quality. Cows like silage, it has a beneficial effect on the digestive system and makes it unnecessary for them to drink as much water as if fed on dry roughage alone.

Corn and the sorghums make the best silage and the food nutrients obtained per acre are nearly doubled as compared to feeding them in the form of dry fodder.

Sweet clover has possibilities as silage to be used for supplementing short pastures in the summer.

## Types of Silos

Permanent upright silos are the best but many other forms of temporary silos can be utilized. Trench silos can be dug at low expense and if well packed and sealed with dirt, keep the silage without a large amount of spoilage. Crib silos, corn and sorghum bundle silos, and baled straw silos are also low in cost and have been used successfully in the state. They are especially valuable in making the best use of drought damaged crops.

Milk cow owners who carefully plan their feeding programs for the year in such a manner that their cows will be supplied with an abundance of high quality raw material from which they can make milk will benefit in increased income and at the same time contribute most to the "Milk for Victory Program."

By R. A. CAVE, *Extension Dairyman*

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### *Most Milk Cows*

## Don't Get Enough to Eat

"Not enough feed is the greatest cause of low milk production by dairy cows," says R. A. Cave, South Dakota State College Extension Dairyman. "An increase in feed will easily increase production of each cow one pint per day which will more than meet South Dakota's war time milk goals."

Feeding the milk cow to help her produce all she should is always good business. Right now it is a war time necessity.

This leaflet sent you by your County Extension Agent of the South Dakota Agricultural Extension Service is a brief concise outline of the best dairy production practices and rations recommended by the State College of Agriculture.

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