Dairy Cattle Club

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Purpose of the Dairy Cattle Club

The purposes which every organizer of dairy cattle clubs in Montana should have in mind may be summarized as follows:

1. To teach boys and girls the general principles of thrift, and to develop leadership, business ability and initiative.
2. To interest and assist boys and girls in the movement for better dairying, to teach fundamental principles of selection and care of dairy cattle.

General rules for the Dairy Cattle Clubs of Montana are as follows:

1. Members must enroll with county club leader or county agent.
2. All club members shall follow as closely as possible instructions sent out by the county leader or State Club department at Bozeman.
3. Members must keep a record of all work done in connection with project. Blanks from the State Club office will be provided for this purpose. The original records sent to the club member are his property, but a summary of work will be made on final report blanks. Final report blanks shall be sent by club member to county leader between November 1st and November 10th.
4. A full membership card will be sent each member. This must be returned as directed on the card, otherwise the boy or girl is not entitled to enjoy the privileges of the club.

In addition to conforming with the general rules, a club member who wishes to enter the Dairy Calf Club (Beginning project) must meet the following requirements:

1. Secure a high grade or pure bred heifer calf or a pure bred bull calf, and take charge of feeding and management for a period of six months.
2. Calf should be selected from the following breeds: Guernsey, Ayrshire, Holstein, Brown Swiss, and Jersey.
3. This project shall begin not later than the 1st of May.
4. The calf should be under six months of age when the project is started.
5. Calves will be weighed at the beginning and close of project. The date of weighing is the date of officially entering the project.
6. The following basis of awards shall be used in determining championships:
1. Individuality and condition of animal ........................................ 40%
   (a) Size of animal, according to age and breed ....................... 15
   (b) Body, medium fleshed, conformation .............................. 10
   (c) General health as indicated by loose, pliable skin, prominent eyes, and alert disposition .......................... 15

2. Methods of feeding, ration selected, amounts fed and growth made 30%
   (a) Daily gain in weight .............................................. 10
   (b) Cost of production ............................................. 15
   (c) Knowledge of rations and feeding methods .................... 5

3. Records and written story of feeding, care and management, and cost of raising calf 30%
   (a) Neatness .................................................................. 5
   (b) Completion of required statement ................................ 5
   (c) Accuracy of computations ........................................ 10
   (d) Story (Use of data and experience, at least 200 words) .... 10

DAIRY HEIFER CLUB

To become a member of the Dairy Heifer Club (advanced project) the club member must satisfy the general rules and meet the following additional requirements:

1. Secure a high grade or pure bred heifer, selected from one of the following breeds: Guernsey, Ayrshire, Holstein, Brown Swiss and Jersey.

2. Calf should be approximately one year old (10 to 14 months) at time of entering project.

3. This project shall continue for a period of at least six months, ending October 1st or earlier.

4. When possible, a club show should be held before heifers are due to freshen.

5. Basis of awards:
   1. Individuality and condition of animal ........................................ 40%
   2. Methods of breeding, rations selected, amounts fed and growth made .... 20%
   3. Individuality and breeding of bull to which the heifer was bred ........ 20%
   4. Records and written story of feeding, care and management and cost of raising the heifer ........................................ 20%

DAIRY COW CLUB

The following requirements must be met in addition to general rules for a club member to become a member of the Dairy Cow Club:

1. Secure a high grade or pure bred heifer of a recognized dairy breed.
2. Project shall start at time heifer freshens and shall continue to the end of her first lactation period.

3. When possible, hold a club show at the end of this project.

4. Basis of awards:
   1. Individuality and condition of animal.......................................................... 20%
   2. Methods of feeding, rations selected and amount fed...................................... 20%
   3. Production of milk and butterfat................................................................. 40%
   4. Individuality and breeding of bull to which the heifer was bred....................... 10%
   5. Record and written story of the feeding and care of the cow and the cost of producing milk................................................................. 10%

The projects are outlined so that a club member, local leader or county leader may carry out any one of the three years' work as a special project, or start on any one of the three years' work and continue the other two in their logical order.

ATTENTION!
Every Boy and Girl

Record-keeping is one of the general requirements of all club work. This is the business side of the "game." It is no fun to carry on any business proposition and not know where we stand on income and profits. Do not neglect to fill in all blanks on your reports. Keep a note book handy in which you can enter things you have done and learned in your project. This will help you write a good story and make a good final report. Step out, boys and girls. Be a leader.

The Junior Dairyman's Creed

I believe in the great, beautiful, God-made country. I believe in the peaceful valleys, the eternal hills, the sparkling waters, the silent forests, the clear blue sky, and the pleasant sunshine. I believe in Agriculture and the Dairy Cow. I believe that the foundation of all wealth lies in the soil, the most wonderful of all the God-given blessings to man. I believe in the dignity of labor and in the honorable calling of the farmer. I believe that there is honor, dignity, satisfaction and inspiration in the so-called commonplace. I believe that success comes to him who recognizes opportunity and accepts it. I believe that my success depends not upon my condition in life, but upon myself; not upon luck, but upon pluck. I believe that life's rarest privilege is to work, to feel, to know; that the most successful life is the one of greatest service. I believe in giving the best I possess and demanding the best in others. I believe that whatsoever is worth doing is worth doing well. I believe in myself, and I dedicate my life to the proposition, "I will."
THE BREED TO SELECT

It is advisable that each club confine itself to one breed, if possible, and allow the club leader, or someone competent to judge, to make the selections so that the calves will be near the same age, type, and size.

RAISING CALVES

Kind of feed. The length of time the calf should run with its mother is a question upon which opinions differ, yet all agree that the young calf should have the first or colostrum milk of its mother for several days. If the calf runs with the cow for three days, then it should be fed whole milk, preferably its mother’s milk, for ten to eighteen days, depending on its strength and vigor.

Amount of feed. The best success in calf-raising is attained when the feeder imitates nature as nearly as possible. Observations will show that a calf running with the cow will take only a small amount of milk at a time and do so often. For the first week or two, after taking it from the cow, the calf should not be fed more than four to five quarts of milk daily. Calves are more often overfed than underfed the first week or two. Overfeeding is sure to cause indigestion or scours.

Temperature of the milk. A calf has no way to keep up his body temperature except from the milk it takes. The body temperature must be kept up to 102 degrees or else the organs of digestion will not function properly. The milk fed a young calf should be blood temperature or the same as it is when the calf gets it from its mother.

Cleanliness. When the calf takes the milk from its mother, it is always clean; so, in feeding from a bucket, care is necessary not to feed dirty milk or milk from an unclean bucket. One of the causes for scours in a young calf is from putrefactive organisms which enter the digestive tract through unclean methods of feeding, or from filthy surroundings.

Substitutes for whole milk. Any calf that is worth raising is worth feeding whole milk, until it is from ten days to two weeks of age. However, whole milk is too expensive to continue feeding after the calf gets well started to growing.

Skim milk. The best substitute for whole milk is skim milk, but the change should be made gradually. A good plan is to let the calf run with its mother for about three days, then feed it whole
milk for a week or ten days, after which begin to change to skim milk. If ten days are allowed to make the change, there should be no backset in the growth of the calf. A good way is to replace a pint of whole milk with the skim milk the first day, two pints the second day, three pints the third day and so on until the calf is getting skim milk altogether.

### Changing to Skim Milk

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<thead>
<tr>
<th>Age of Calf in Days</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
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<th>18</th>
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<tbody>
<tr>
<td>Lbs. Whole Milk</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>7</td>
<td>6</td>
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<td>4</td>
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<tr>
<td>Lbs. Skim Milk</td>
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<td>6</td>
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**Grain for calves.** After the calf is a few weeks old it will begin to eat a little grain. A handful of ground oats, ground barley or middlings is a good feed. Put the grain into the bottom of the bucket after the calf is done drinking its milk, or into the calf’s mouth, and it will soon learn to eat. During the first year the calf will not need more than two pounds of grain a day. A good grain mixture is one made up of 100 parts of ground oats, $17\frac{1}{2}$ pounds of oil meal and $1\frac{1}{2}$ pounds of salt.

There are a number of prepared calf meals on the market which are very good. These meals may be fed by mixing to a paste with cold water, then added to the milk. Such feeds are usually given when the change is made from whole to skim milk, after the calf is from ten days to two weeks old. Small amounts are given at first and later increased.

**Roughage for calves.** The calf begins to develop teeth after a few weeks and then will learn to eat hay. Fine hay with leaves is the best. Good, fresh prairie hay, alfalfa, clover, or blue grass are splendid. In some cases where calves are fed too much clover or alfalfa, they may develop scours, as these feeds have a laxative effect.

After six months of age the calf will usually thrive very well on pasture alone, but will do much better if fed a little grain. The calf should have access to all the water it wants.

### Care of the Calf

1. Keep the calf in a clean stall or pen where it will keep warm at night.

2. The calf needs plenty of sunshine and ventilation. Be sure it
has plenty of clean, dry straw to sleep on. Calves will not thrive if kept in dirty quarters.

3. The growing calf needs exercise, so do not confine it in a small place for too long a time, but allow it room to exercise. A calf that does not run and play usually is not well.

4. The calf will soon learn to drink water after it begins to eat hay or grass, so be sure to give it plenty of fresh, clean water.

5. After a month or so, the calf will eat a little salt. Give it a pinch of salt once a week or keep a piece of rock salt in a box where the calf can get at it.

**Diseases of the Calf**

Calves often get the common or yellow scours, which are caused by:

- a. Feeding the calf too much when it is young.
- b. Feeding dirty milk in dirty pails.
- c. Giving the calf sweet milk one time and sour milk the next.
- d. Feeding the milk warm one time and cold the next.

**Remedies for Scours**

1. To cure the yellow scours, reduce the quantity of milk fed. then mix a teaspoonful of blood meal into the milk at feeding time.
2. Put four drops of formalin to each quart of milk.
3. Break a fresh egg into the milk, when feeding.
4. Ordinary white clay mixed with water to the consistency of thick cream and given in doses of a quarter to half a pint, three times a day, has been used with excellent results.

**ADVANCED PROJECT**

**Care of the Heifer**

The heifer should be given good care before calving. She should be well fed so that she will be strong and in good condition. This will help her to give birth to a strong calf and will also enable her to produce a good flow of milk after calving.

Just previous to calving, she should be kept in a box stall, if possible, and fed a laxative ration, such as alfalfa hay, silage, and bran mashes. The stall should be kept clean. Do not feed the heifer very much for the first two or three days after the calf is dropped. If the heifer's udder is swollen and badly distended, the calf should be left with her for two or three days. If, on the other hand, the udder is not swollen, it will be better if the calf is taken
away after the first day. In this case, less trouble will be encountered in teaching the calf to drink and in getting the heifer to give down her milk. During the first three or four days after calving part, but not all, of the milk should be taken from the heifer three times a day. The calf should be fed the mother’s milk for the first four or five days. For further directions for feeding and caring for the calf, follow the directions given in front part of the pamphlet.

Keeping the Record

If most of the swelling has disappeared from the udder, the milk will be good after the fifth day. From this time a complete record should be kept. The milk from every milking should be weighed. A sample for testing should be saved from milkings of one day each month. If the heifer gives one-fourth more milk at night than in the morning, a fourth more milk should be taken from the sample from the night milking than from the morning milking. Put the milk together from the different milkings for the sample. If you are located near a creamery, your creamery man would probably be glad to test the sample for you. Your county agent might probably arrange to get a group together during the month to test the samples, or your school may have a tester. If your heifer is a good milker, she will give more milk if she is milked three times a day.

Feeding the Heifer

When the heifer is on good pasture she will not need much other feed, but it is well to feed a little grain. When not on pasture, she should be given the best feed available.

The following are some suggested grain rations to be fed with the roughage. Silage and alfalfa hay, or silage and clover hay make the best roughage.

<table>
<thead>
<tr>
<th>I</th>
<th>Oil meal .................................. 2 parts</th>
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<tbody>
<tr>
<td>Corn chop</td>
<td>4 parts</td>
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<tr>
<td>Bran</td>
<td>2 parts</td>
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<tr>
<td>Oil meal</td>
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<tbody>
<tr>
<td>Ground barley</td>
<td>4 parts</td>
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<tr>
<td>Bran</td>
<td>2 parts</td>
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<tr>
<td>Oil meal</td>
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<th>III</th>
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<tbody>
<tr>
<td>Ground oats</td>
<td>5 parts</td>
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<tr>
<td>Corn chop</td>
<td>3 parts</td>
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<tr>
<td>Bran</td>
<td>1 part</td>
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<tr>
<td>Ground oats</td>
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Cotton seed meal may be substituted for the oil meal. All the hay and silage that the animal will eat should usually be fed. Feed one pound of a grain mixture to each 3 or 4 pounds of milk produced daily.

The common Montana silage crops are corn, sunflowers, and peas and oats mixed, and either one makes a good silage.

Boys and girls who are Dairy Calf Club members are encouraged to enter dairy cattle judging contests.

**JUDGING DAIRY COWS**

Location of points on the dairy cow: 1, muzzle; 2, face; 3, forehead; 4, neck; 5, throat; 6, brisket; 7, shoulder; 8, withers; 9, chest; 10, side of barrel; 11, back; 12, loin; 13, hip; 14, pin bones; 15, tail; 16, thigh; 17, udder; 18, teat; 19, milk vein; 20, milk well.

**IMPORTANT POINTS TO CONSIDER IN JUDGING DAIRY COWS**

**Dairy type**—A dairy cow that is producing milk is angular or wedge-shaped in appearance as compared with the square, blocky form of the beef animal. There are three wedges which gives the dairy cow her angular form or wedge-shaped appearance. One wedge is formed by the withers being sharp at the top and the
distance being wide between the shoulder points. This is called
the front wedge. Another wedge, the side wedge, is noticed by
viewing the animal from the side, the distance from the hip bone
to the bottom of the udder forming the base of the wedge and the
neck forming the apex. The other wedge is the top wedge, which
is formed by the width between the hip bones which tapers to the
withers.

Quality—A dairy cow should have quality. Good quality is an
indication of high production of milk and butter fat. Quality is
indicated by a fine silky hair, a soft, loose, mellow, skin of medium
thickness, a clean, fine bone, and a yellow secretion in the ear and
on the end of the tail.

Dairy temperament—This is sometimes spoken of as nervous
temperament. It is indicated by a cow being lean in appearance
when she is giving milk, which shows that she is using her feed to
produce milk.

Constitution—A dairy cow that has a good constitution has a
good wide muzzle and is wide through the chest with lots of depth
in the fore flank.

Barrel capacity—This is the cow's stomach and in order to pro-
duce a large amount of milk a dairy cow must eat lots of suitable
feed. A good barrel capacity is indicated by the ribs being wide
and well sprung. In viewing the animal from the rear, she should
appear wide, and when looking at the cow from the side, she should
show lots of depth.

Mammary system—The mammary system includes the udder,
teats, milk veins, and milk wells. The udder should be large,
attached high and full in the rear, and extend well forward in front.
The udder should be soft and flexible when empty. The teats
should be of medium size and evenly placed on the udder. The
milk veins are the veins running forward in front of the udder.
They should be large. The milk veins carry blood from the udder
to the heart. The milk wells are the openings at the end of the
milk veins, where the veins enter the body of the cow. There may
be more than one milk well on each side.