



The Yearling Dairy Heifer

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It is well to remember that feeding and management play a big role in expressing the inherited ability of a dairy animal, whether it is an animal's type or productive characteristic.

Four Months

After four months, group the heifer with other heifers of comparable size. The amount of grain to feed will depend on the kind and amount of roughage. Allow heifer to eat all of the legume hay that she wants. Do not depend on pasture for all of her roughage unless it is of exceptional quality. Two to four pounds of an economical grain ration should be fed, depending on the kind and amount of roughage. The herd ration is usually satisfactory. Feeding silage before six months is not recommended, and then it should not make up the entire roughage.

One Year

Judgment is always an important factor in any project and even more so with the yearling heifer. While pasture or hay is ample to provide feed nutrients to maintain growth of the yearling, it must be of good quality and available in good supply. Whenever the quality or quantity of the roughage is reduced, feed supplemental grain. Use judgment to determine how much grain to feed, based on the type and kind of roughage and the condition of the heifer.

Overfeeding grain can be just as harmful as underfeeding, since an overly fat heifer tends to deposit extra fat in the udder, which reduces her productive potential. An underfed heifer was retarded in her growth and may not develop sufficient size and capacity to produce at her full-inherited ability.

Breeding the Heifer – Age and Size

The well-grown heifer should be bred to calve near 24 months of age. However, the size of the heifer should also be considered. Holsteins, Brown Swiss, and Milking

Shorthorns should weigh at least 750 pounds at breeding time: Guernsey, 550; Ayrshire, 600; Jerseys, 500. Table 1 will serve as a guide for you to check your heifer occasionally to see that she is growing properly. You should obtain a dairy cattle tape measure to estimate her weight. The tape is placed snugly around the heart girth.

Several months before the anticipated breeding time you should watch the heifer for signs of heat. If the heifer is confined away from other heifers, you will need to watch closely for signs of heat such as restlessness, bawling, and vaginal mucous discharge. Record each heat period. You will then be able to anticipate the next heat period. On the average, the heifer will be

Table 1. Estimated Weights for Different Heart Girths.

Heart girth	Weight	Heart girth	Weight
inches	pounds	inches	pounds
26	60	55	501
27	68	56	526
28	75	57	552
29	85	58	579
30	95	59	607
31	108	60	637
32	118	61	668
33	128	62	700
34	138	63	732
35	148	64	766
36	158	65	800
37	168	66	835
38	180	67	871
39	192	68	908
40	208	69	947
41	224	70	987
42	240	71	1,027
43	257	72	1,069
44	275	73	1,111
45	294	74	1,153
46	314	75	1,197
47	334	76	1,241
48	354	77	1,285
49	374	78	1,331
50	394	79	1,377
51	414	80	1,423
52	434	81	1,469
53	456	82	1,515
54	478		

in heat about every 21 days. Most all heifers will show some vaginal bleeding two or three days after the heat period. This is normal, and only indicates that she has been in heat.

Selecting the Sire

Your heifer represents a combination of inherited characteristics from her sire and dam. In selecting her service sire, judgment once again must play an important part in your decision. Consult your county educator, a breeder, or artificial breeding technician as to which bulls are available for your use.

In general, dairy sires are classified into three categories:

A.I. SUMMARIZED SIRE – This term designates a bull that has been used in an artificial insemination stud and has daughters with completed D.H.I.A. records that are compared with production records of their herd mates. This type of production information gives the most reliable estimate of a bull's transmitting ability, since the daughters are usually tested in many different herds.

NATURALLY SUMMARIZED SIRE – This term designates a bull whose naturally sired daughters have completed D.H.I.A. records that are compared with production records of their herd mates.

YOUNG SIRE – This designation indicates that the bull has been selected on the basis of the performance of his ancestors.

Sixty Days to Go

About 60 days before calving, gradually increase the grain so that at calving time the heifer is receiving 1 to 1½ pounds of grain per one hundred pounds of body weight. Provide all the good roughage that the heifer can eat.

A month or so before calving, get the heifer acquainted with the barn so that she will be adjusted to the milking time routine after calving.

Provide a roomy, clean area for calving. Keep a close watch on the heifer at the time of calving. If calving trouble develops, obtain qualified assistance. Do not take the chance of losing her or her calf.

After calving, disinfect the calf's navel with tincture of iodine. Allow the calf to nurse thoroughly, and then separate the heifer from her calf.

Feeding the New Calf

The calf must get its mother's milk, colostrum, for at least the first three days of life. Beginning with the fourth day, feed whole milk or milk replacement at the daily rate of one pound for each ten pounds of body weight (Table 2). Carefully limit the amount of milk fed. Weigh or measure – do not guess!

If you use a good commercial milk replacer from a reputable company, follow the manufacturer's directions.

Place a calf starter and good quality hay or complete pellet before the calf during the first week. Encourage the calf to eat starter early by allowing some of the dry feed to flow from your hand into its mouth while it nurses your fingers following milk feeding.

At about four months of age, replace the calf starter with a more economical type of calf grower ration or regular milk cow ration. Milk is the most expensive source of nutrients fed to calves. To be able to discontinue milk feeding early, it is of great importance to encourage the calves to consume starter and hay at an early age.

Housing the New Calf

Place the calf in a clean, well-bedded, and draft-free individual pen. Individual pen size should be 24 square feet (6'x4'). If individual pens are not provided, tie the calves at feeding time to prevent sucking one another. After calves are weaned from milk, group them according to age in large pens.

Sanitation

Clean pails and pens for calves are a first essential. After each feeding, wash and sanitize the calf pails, and put them where they will drain. Keep pens dry at all times. Remove all filth from calf pens regularly. Calves are very sensitive to and frequently contract diseases from dirty pails and pens.

Keep flies under control at all times in calf barns. Use approved insecticides according to directions.

Table 2. Normal Growth Chart for Various Breeds.

Age months	Ayrshire	Guernsey (pounds)	Holstein*	Jersey
Birth	71	65	93	50
1	86	79	115	70
2	114	105	115	96
4	190	177	260	176
6	281	267	379	268
8	371	350	491	357
10	451	427	589	432
12	518	490	685	495
14	576	556	752	549
16	635	605	820	597
18	690	663	890	644
20	743	712	961	694
22	790	763	1,038	742
24	845	818	1,104	785

*Milking Shorthorn and Brown Swiss will follow Holstein chart quite closely.

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