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Off-site heifers on U.S. dairy operations, 2007

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In 2007, the U.S. Department of Agriculture's National Animal Health Monitoring System (NAHMS) conducted the Dairy 2007 study. Seventeen of the nation's major dairy states, representing 79.5 percent of U.S. dairy operations and 82.5 percent of U.S. dairy cows, participated in the study. The five Western states participating were California, Idaho, New Mexico, Texas and Washington. During January 2007, producers were asked about their use of off-site calf ranches.

Heifer rearing represents about 20 percent of the total operating expenses on dairy operations, making it the second largest expense behind feeding costs. To raise heifers, dairies invest money and resources in feed, labor, and housing without receiving a return on their investments until the heifers calve, usually around 24 months of age.

As dairy farms become larger, use of off-site calf ranches is becoming increasingly common. Calf ranches that raise a large number of heifers likely realize economies of scale that allow them to produce heifers at a cost lower than a single dairy farm.

Calves are transported to the calf ranches at a predetermined age, such as prior to or after weaning, and are raised there. Typically, producers and calf ranches enter into

a contract that specifies expectations of care and growing performance, along with payment responsibilities. Various types of contracts are used, e.g., contracts in which producers pay calf ranches by the day or by pound of gain and contracts in which the producer sells heifers to the ranch upon delivery and retains the option to buy them back prior to freshening.

On operations with limited facilities, labor, or other components of a dairy operation, contracting with an off-site calf ranch has many potential advantages. Calf-ranch personnel are usually dedicated to working only with calves, which can result in increased attention to the feeding and health of calves and also decreased exposure to

adult cow disease. In addition, if calves are not commingled with older animals or animals from other operations, their exposure to disease agents such as *Mycobacterium avium* subspecies *paratuberculosis* – the causative agent of Johne's disease – is reduced.

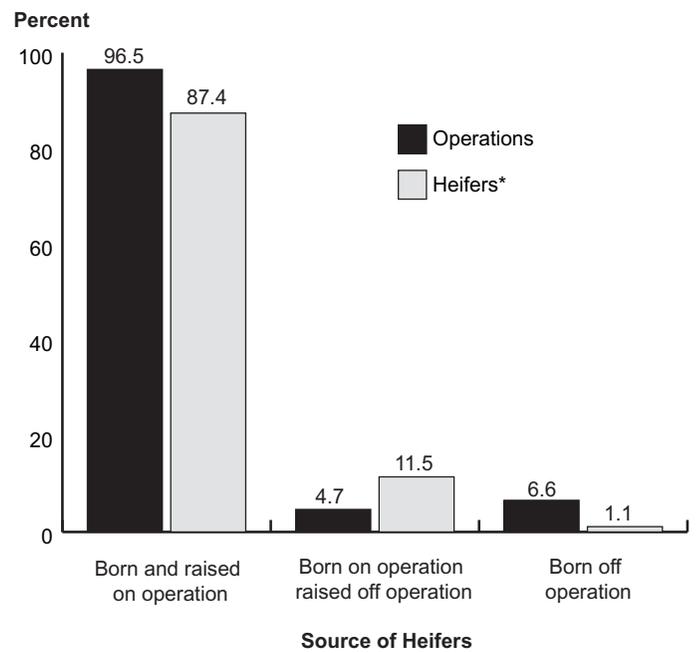
Moving heifers off-site frees up both labor and space previously dedicated to heifer housing and feed storage facilities that can be used for the milking herd. Raising heifers off-site also reduces the amount of manure produced at single sites and/or may allow producers to maintain larger milking herds on the same acreage. Using off-site calf ranches may enable producers to reduce expenses, especially if the heifer-raising aspect of the operation is costly or

inefficient, which might be indicated by consistent, higher-than-normal calf illness or death loss, or by heifers that calve later than 24 months of age and/or at sub-optimal weights.

A significant disadvantage of using an off-site calf ranch is the increased risk of disease introduction into the herd stemming from commingling heifers from different operations. Other drawbacks include less control over management practices used in raising heifers, transportation costs of moving heifers to the off-site facility, and issues related to entering into and meeting contract obligations.

Although 4.7 percent of U.S. dairy opera-

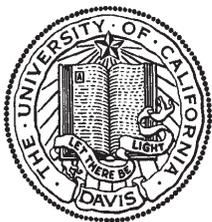
Figure 1. Percentage of Operations and Percentage of Heifers, by Source of Heifers



*As a percentage of January 1, 2007, inventory

Nearly two-thirds of operations that sent heifers off the operation for rearing (63.8 percent) sent them to facilities where they did have contact with cattle from other operations.

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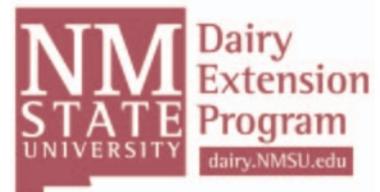
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tions had heifers that were born on the operation but raised elsewhere, these operations accounted for 11.5 percent of all dairy heifers. Of the remaining heifers, 87.4 percent were born and raised on the operation, and nearly all operations (96.5 percent) had at least some dairy heifers that were born and raised on the operation (figure 1).

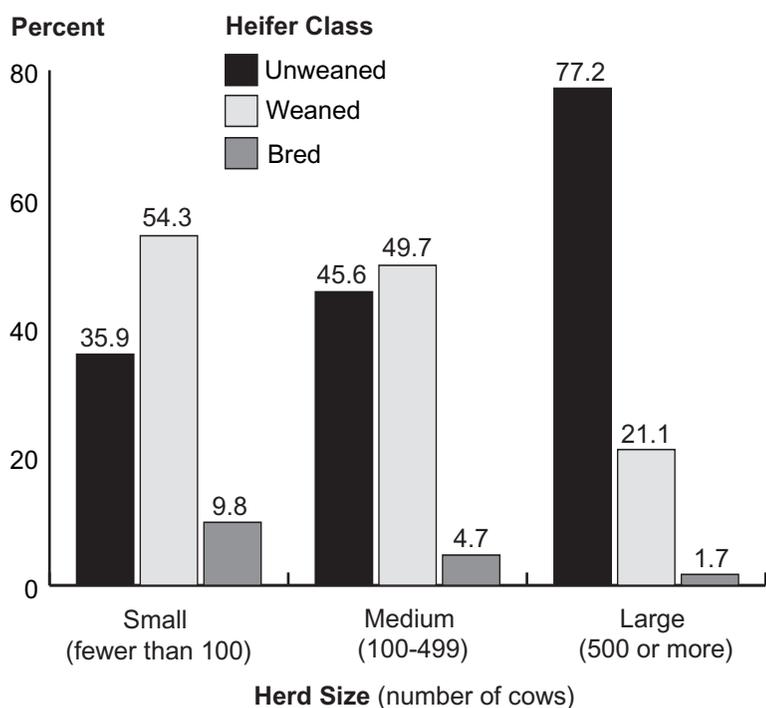
Raising dairy heifers off-site

About 1 in 10 operations (9.3 percent) raised some dairy heifers off-site. The percentage of operations that raised heifers off-site increased as herd size increased for all heifer classes. Less than 5 percent of small operations raised any dairy heifers off-site, compared to 15.5 percent of medium operations and 46.0 percent of large operations (500 or more cows). Approximately one-third of large operations (35.3 percent) raised unweaned calves off-site, compared to 7.1 percent of medium operations and 1.7 percent of small operations. Similar herd-size differences in the percentages of

189.8 days. Only 5.8 percent of operations primarily sent bred heifers off-site to be raised; the average age at which these heifers were sent off-site was 413.8 days.

The average age at which all calves – regardless of class – were moved to the off-site facility was 110.3 days. For operations that raised any heifers off the operation, small operations most commonly sent weaned heifers off-site (54.3 percent); medium operations sent similar percentages of unweaned and weaned calves off-site (45.6 and 49.7 percent, respectively); and large operations most frequently sent unweaned heifers off-site (77.2 percent) [figure 2].

Figure 2. For Operations that Raised Any Heifers Off-Site, Percentage of Operations by Primary Heifer Class Sent Off-Site and by Herd Size



operations that raised heifers off-site were observed among all heifer classes – unweaned, weaned, and bred.

Primary class and age of heifers sent to calf ranches

Producers who sent any heifers off-site to be raised were asked to identify the primary class of dairy heifers sent off-site. Half of these operations (50.1 percent) primarily sent unweaned calves, and the operations typically sent these calves off-site at an average* age of 4.9 days. Weaned calves were the primary class of dairy heifers sent off-site for 44.1 percent of operations, and these calves were sent at an average age of

* The average value for all operations; a single value for each operation is summed over all operations reporting divided by the number of operations reporting.

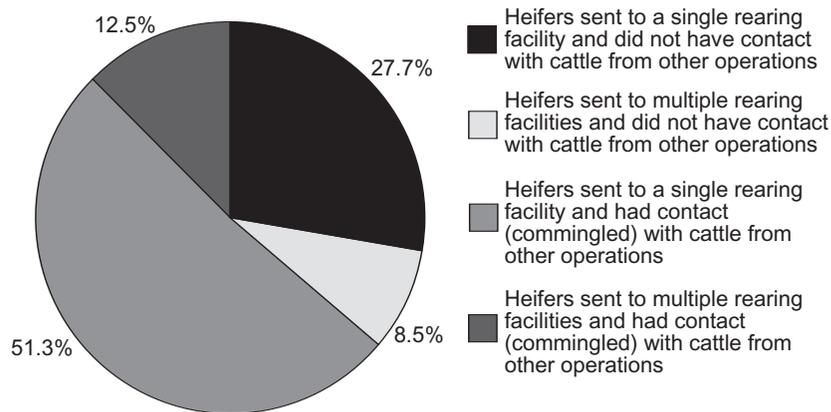
large operations (53.4 percent) brought back weaned heifers compared with medium and small operations (27.3 and 15.1 percent, respectively). A higher percentage of small and medium operations (79.1 and 72.2 percent, respectively) brought back bred heifers compared with large operations (46.6 percent).

Distance to off-site rearing

For operations that sent heifers off-site to be raised, the majority of small and medium operations transported heifers fewer than 20 miles to the off-site rearing facility, while the majority of large operations transported heifers between 5 and 50 miles. About 1 in 10 of all operations (10.6 percent) transported heifers 50 miles or more. Very few operations (4.1 percent) ever transported heifers out of state for rearing.

Producers were asked to choose the de-

Figure 3. For Operations that Sent Heifers Off-Site to be Raised, Percentage of Operations by Primary Off-Site Rearing Facility



scription that best described their primary off-site rearing facility. Ideally, from the standpoint of disease transmission, heifer-rearing facilities would house animals from only a single operation. About one-third of operations (36.2 percent) sent their cattle to rearing facilities where they did not have contact with cattle from other operations; 27.7 of these operations sent their heifers to a single facility, and 8.5 sent their heifers to multiple facilities.

However, nearly two-thirds of operations that sent heifers off the operation for rearing (63.8 percent) sent them to facilities where they did have contact with cattle from other operations. Of these operations, 51.3 percent used single facilities, and 12.5 percent sent their heifers to multiple rearing facilities (figure 3).

Ownership arrangements

Approximately 8 of 10 operations that sent dairy heifers off-site to be raised (81.1 percent) retained ownership of the heifers sent. A total of 9.4 percent of operations sold the heifers sent off-site and later repurchased the same animals, and 9.5 percent of operations sold the animals sent and replaced them with different animals.

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