

Appendix C. NC-119 Holstein Data Summary

| Variable | State | | | | | | | Calf Mortality | | | | Herd Size | | | RHA Milk - Holsteins | | | | | | | |
|--|-------|-------|-------|--------|--------|-------|----|----------------|-------------|-------------|-------------|-----------|---------|-----------|----------------------|--------|------------------------|------------------------------|------------------------------|------------------------|--------|--|
| | MN | MO | PA | VA | WA | WA | WA | 5 to 9% | 10 to 14.9% | 15 to 19.9% | 20 to 24.9% | 25%+ | 1 to 50 | 51 to 100 | 101 to 150 | 150 | Quartile 1 8,188 kg | Quartile 2 8,188-8,822 kg | Quartile 3 8,823-9,505 kg | Quartile 4 9,505 kg | | |
| Holsteins | 226 | 124 | 52 | 21 | 16 | 13 | 13 | 15 | 45 | 39 | 17 | 18 | 24 | 78 | 76 | 36 | 31 | 52 | 51 | 51 | 51 | |
| Herd size (cows) | 94.5 | 65.0 | 90.7 | * | 136.2 | 318.6 | 13 | 142.2 | 177.9 | 145.8 | 158.1 | 156.0 | 135.8 | 85.0 | 116.4 | 173.5 | 236.5 | 140.4 | 153.6 | 145.9 | 170.7 | |
| Calves born in past 12 months (n) | 100.9 | 111.9 | 107.7 | * | 101.2 | 290.6 | 6 | 101.2 | 290.6 | 6 | 6 | 6 | 6 | 85.0 | 116.4 | 173.5 | 236.5 | 140.4 | 153.6 | 145.9 | 170.7 | |
| Calves born dead (%) | 7.52 | 7.39 | 8.03 | * | 6.29 | 5.89 | 8 | 6.29 | 5.89 | 8 | 8 | 8 | 8 | 8.45 | 6.81 | 5.63 | 6.71 | 7.70 | 6.79 | 7.35 | 5.77 | |
| Died <3 months of age (%) | 5.77 | 6.93 | 3.10 | * | 5.42 | 6.66 | 6 | 5.42 | 6.66 | 6 | 6 | 6 | 6 | 5.62 | 5.85 | 5.86 | 4.78 | 5.99 | 6.86 | 5.70 | 3.56 | |
| Died >3 months of age (%) | 2.05 | 2.42 | 1.34 | * | 1.81 | 2.32 | 2 | 1.81 | 2.32 | 2 | 2 | 2 | 2 | 1.44 | 1.91 | 2.17 | 2.37 | 3.49 | 2.02 | 1.36 | 1.01 | |
| Overall mortality (%) | 15.34 | 16.74 | 12.47 | * | 13.52 | 14.87 | 8 | 13.52 | 14.87 | 8 | 8 | 8 | 8 | 15.51 | 14.57 | 13.65 | 13.87 | 17.17 | 15.67 | 14.41 | 10.35 | |
| Care of the Dam | | | | | | | | | | | | | | | | | | | | | | |
| Worm the milking herd (%) | 61.71 | 61.98 | 70.59 | 61.90 | 31.25 | 61.54 | 13 | 66.67 | 67.44 | 51.28 | 70.59 | 55.56 | 54.17 | 60.53 | 61.33 | 71.43 | 54.84 | 57.69 | 66.00 | 58.82 | 69.39 | |
| Worm the milking herd (times/yr) | 1.26 | | | | | | | | | | | | | | | | | | | | | |
| Vaccinate against leptos (%) | 92.44 | 89.52 | 96.08 | 95.24 | 100.00 | 92.31 | 10 | 80.00 | 95.56 | 94.87 | 94.12 | 94.44 | 87.50 | 85.71 | 94.74 | 100.00 | 96.77 | 84.62 | 98.00 | 86.27 | 100.00 | |
| Vaccinate against leptos (times/yr) | 1.55 | | | | | | | | | | | | | | | | | | | | | |
| Vaccinate against IBR (%) | 92.89 | 89.52 | 96.08 | 100.00 | 100.00 | 92.31 | 10 | 86.67 | 97.78 | 94.87 | 100.00 | 94.44 | 83.33 | 85.71 | 97.37 | 97.22 | 96.77 | 82.69 | 98.00 | 94.12 | 98.04 | |
| Vaccinate against IBR (times/yr) | 1.36 | | | | | | | | | | | | | | | | | | | | | |
| Vaccinate against BVD (%) | 92.44 | 89.52 | 96.08 | 95.24 | 100.00 | 92.31 | 10 | 86.67 | 97.78 | 94.87 | 100.00 | 94.44 | 83.33 | 85.71 | 96.05 | 97.22 | 96.77 | 82.69 | 98.00 | 92.16 | 98.04 | |
| Vaccinate against BVD (times/yr) | 1.43 | | | | | | | | | | | | | | | | | | | | | |
| Body condition score dry cows (%) | 40.51 | 47.01 | 35.42 | 0.00 | 12.50 | 38.46 | 10 | 40.00 | 34.88 | 36.84 | 58.82 | 47.06 | 39.13 | 35.62 | 44.07 | 41.38 | 43.33 | 30.95 | 45.83 | 30.23 | 52.27 | |
| Calving Facilities | | | | | | | | | | | | | | | | | | | | | | |
| Pasture | 38.50 | 29.84 | 53.85 | 28.57 | 93.75 | 7.69 | 10 | 33.33 | 22.22 | 41.03 | 23.53 | 44.44 | 45.83 | 43.59 | 44.74 | 30.56 | 22.58 | 50.00 | 50.98 | 41.18 | 21.57 | |
| Dry lot | 10.18 | 9.68 | 13.46 | 14.29 | 0.00 | 7.69 | 10 | 20.00 | 11.11 | 10.26 | 5.88 | 16.67 | 8.33 | 10.26 | 9.21 | 13.89 | 6.45 | 7.69 | 9.80 | 13.73 | 7.84 | |
| Maternity pens - housed with milking herd | 23.45 | 28.23 | 15.38 | 42.86 | 0.00 | 7.69 | 10 | 13.33 | 20.00 | 33.33 | 17.65 | 27.78 | 20.83 | 30.77 | 21.05 | 27.78 | 9.68 | 17.31 | 17.65 | 29.41 | 27.45 | |
| Maternity pens - housed separately | 26.99 | 29.03 | 26.92 | 4.76 | 6.25 | 69.23 | 10 | 46.67 | 40.00 | 28.21 | 23.53 | 22.22 | 8.33 | 26.92 | 18.42 | 27.78 | 48.39 | 13.46 | 29.41 | 19.61 | 45.10 | |
| Stanchions or tie stalls | 15.04 | 18.55 | 0.00 | 52.38 | 0.00 | 0.00 | 10 | 13.33 | 13.33 | 7.69 | 5.88 | 11.11 | 25.00 | 21.79 | 19.74 | 5.56 | 0.00 | 28.85 | 3.92 | 11.76 | 7.84 | |
| Free stall area - housed with milking herd | 2.65 | 3.23 | 0.00 | 9.52 | 0.00 | 0.00 | 10 | 0.00 | 0.00 | 0.00 | 0.00 | 5.56 | 8.33 | 3.85 | 2.63 | 2.78 | 0.00 | 5.77 | 3.92 | 1.96 | 0.00 | |
| Free stall area - not housed with milking herd | 0.88 | 0.81 | 1.92 | 0.00 | 0.00 | 0.00 | 10 | 13.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.28 | 0.00 | 2.78 | 0.00 | 1.92 | 1.96 | 0.00 | 0.00 | |
| Loose housing area | 14.16 | 16.13 | 17.31 | 0.00 | 0.00 | 23.08 | 10 | 20.00 | 11.11 | 17.95 | 29.41 | 16.67 | 20.83 | 7.69 | 13.16 | 16.67 | 22.58 | 13.46 | 11.76 | 11.76 | 17.65 | |
| Straw (%) | 64.60 | 78.23 | 69.23 | 14.29 | 12.50 | 61.54 | 10 | 93.33 | 68.89 | 61.54 | 70.59 | 88.89 | 75.00 | 84.62 | 52.63 | 66.67 | 38.71 | 59.62 | 74.51 | 64.71 | 64.71 | |
| Hay (%) | 7.96 | 3.23 | 7.69 | 47.62 | 0.00 | 0.00 | 10 | 0.00 | 2.22 | 5.13 | 5.88 | 5.56 | 4.17 | 6.41 | 14.47 | 5.56 | 0.00 | 11.54 | 3.92 | 5.88 | 7.84 | |
| Sawdust-wet (%) | 5.75 | 0.81 | 0.00 | 47.62 | 0.00 | 15.38 | 10 | 0.00 | 4.44 | 0.00 | 11.76 | 0.00 | 0.00 | 0.00 | 6.58 | 13.89 | 9.68 | 7.69 | 0.00 | 7.84 | 3.92 | |
| Sawdust - kiln dried (%) | 14.60 | 16.13 | 7.69 | 0.00 | 0.00 | 69.23 | 10 | 0.00 | 24.44 | 15.38 | 11.76 | 11.11 | 16.67 | 11.54 | 9.21 | 13.89 | 38.71 | 7.69 | 5.88 | 9.80 | 33.33 | |
| None (%) | 13.27 | 2.42 | 25.00 | 0.00 | 87.50 | 0.00 | 10 | 6.67 | 8.89 | 17.95 | 5.88 | 5.56 | 12.50 | 5.13 | 18.42 | 11.11 | 22.58 | 13.46 | 19.61 | 19.61 | 5.88 | |
| Dry manure (%) | 0.44 | 0.00 | 0.00 | 0.00 | 0.00 | 7.69 | 10 | 0.00 | 2.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.23 | 0.00 | 0.00 | 0.00 | 1.96 | |
| Paper (%) | 2.65 | 4.84 | 0.00 | 0.00 | 0.00 | 0.00 | 10 | 0.00 | 2.22 | 5.13 | 5.88 | 5.56 | 0.00 | 1.28 | 3.95 | 2.78 | 3.23 | 1.92 | 3.92 | 0.00 | 1.96 | |
| Corn stalks (%) | 5.31 | 8.87 | 1.92 | 0.00 | 0.00 | 0.00 | 10 | 0.00 | 11.11 | 5.13 | 11.76 | 5.56 | 0.00 | 3.85 | 5.26 | 8.33 | 6.45 | 3.85 | 1.96 | 3.92 | 7.84 | |
| Colostrum Feeding | | | | | | | | | | | | | | | | | | | | | | |
| Nurse (%) | 28.89 | 13.71 | 50.00 | 35.00 | 68.75 | 30.77 | 10 | 20.00 | 11.11 | 46.15 | 35.29 | 22.22 | 12.50 | 21.79 | 34.67 | 33.33 | 32.26 | 42.31 | 39.22 | 27.45 | 16.00 | |
| Assist feeding from dam (%) | 5.33 | 4.03 | 11.54 | 0.00 | 0.00 | 7.69 | 10 | 0.00 | 4.44 | 7.69 | 5.88 | 11.11 | 0.00 | 6.41 | 8.00 | 0.00 | 3.23 | 7.69 | 7.84 | 3.92 | 4.00 | |
| Bucket/bottle (%) | 72.00 | 83.06 | 53.85 | 85.00 | 31.25 | 69.23 | 10 | 33.33 | 73.33 | 66.67 | 70.59 | 88.89 | 87.50 | 75.64 | 72.00 | 61.11 | 70.97 | 63.46 | 64.71 | 72.55 | 80.00 | |
| Esophageal feeder (%) | 16.00 | 17.74 | 15.38 | 0.00 | 0.00 | 46.15 | 10 | 33.33 | 24.44 | 15.38 | 11.76 | 16.67 | 20.83 | 16.67 | 6.67 | 22.22 | 29.03 | 7.69 | 21.57 | 11.76 | 24.00 | |
| Udder washed (%) | 51.34 | 64.75 | 44.23 | 28.57 | 31.25 | 15.38 | 10 | 46.67 | 55.81 | 46.15 | 64.71 | 61.11 | 54.17 | 68.42 | 50.00 | 41.67 | 22.58 | 46.15 | 46.00 | 54.90 | 50.98 | |
| First colostrum received (hr) | 3.46 | 3.84 | 2.59 | * | 4.03 | 4.06 | 10 | 3.47 | 2.75 | 4.33 | 3.65 | 3.50 | 4.08 | 3.88 | 3.01 | 3.18 | 4.45 | 3.53 | 2.96 | 5.21 | 2.82 | |
| First feeding colostrum (qt) | 2.43 | 2.58 | 1.86 | * | * | 3.44 | 10 | 2.53 | 2.83 | 2.72 | 2.62 | 2.52 | 2.53 | 2.43 | 2.50 | 3.18 | 2.39 | 2.79 | 2.68 | 2.48 | 2.55 | |
| First day of life colostrum (qt) | 4.42 | 4.99 | 3.48 | * | 3.47 | 5.17 | 10 | 3.79 | 3.85 | 4.14 | 5.87 | 4.01 | 4.01 | 4.05 | 4.23 | 4.73 | 4.09 | 4.00 | 4.75 | 3.69 | 4.67 | |

| Variable | State | | | | | | | | | | Calf Mortality | | | | Herd Size | | | | RHA Milk - Holsteins | | | |
|--|-------|-------|-------|--------|-------|--------|-----------|-------------|-------------|-------------|----------------|---------|-----------|------------|-----------|-------------------------|------------------------------|------------------------------|-------------------------|-------|--|--|
| | MN | MO | PA | VA | WA | WA | 5 to 9.9% | 10 to 14.9% | 15 to 19.9% | 20 to 24.9% | 25%+ | 1 to 50 | 51 to 100 | 101 to 150 | > 150 | Quartile 1 <8,188 kg | Quartile 2 8,188-8,822 kg | Quartile 3 8,823-9,505 kg | Quartile 4 >9,505 kg | | | |
| Frozen colostrum (%) | 48.23 | 43.55 | 73.08 | 14.29 | 50.00 | 46.15 | 53.33 | 55.56 | 46.15 | 47.06 | 55.56 | 37.50 | 57.69 | 38.16 | 50.00 | 51.61 | 32.69 | 66.67 | 39.22 | 54.90 | | |
| Problem cases (%) | 78.10 | 78.43 | 83.78 | 100.00 | 87.50 | 16.67 | 83.33 | 62.50 | 66.67 | 87.50 | 90.00 | 100.00 | 70.73 | 96.55 | 88.89 | 50.00 | 81.25 | 84.38 | 90.00 | 66.67 | | |
| Offspring of first calf heifers (%) | 18.10 | 21.57 | 10.81 | 0.00 | 12.50 | 50.00 | 33.33 | 33.33 | 11.11 | 12.50 | 20.00 | 0.00 | 29.27 | 0.00 | 16.67 | 25.00 | 18.75 | 12.50 | 10.00 | 22.22 | | |
| All calves (%) | 8.57 | 5.88 | 8.11 | 0.00 | 12.50 | 33.33 | 0.00 | 8.33 | 22.22 | 0.00 | 0.00 | 0.00 | 4.88 | 3.45 | 5.56 | 31.25 | 6.25 | 9.38 | 0.00 | 14.81 | | |
| Separated calf from dam (d) | 0.42 | 0.20 | 0.53 | * | 1.07 | 0.74 | 0.47 | 0.58 | 0.94 | 0.64 | 0.52 | 0.64 | 0.65 | 0.80 | 0.75 | 0.34 | 0.87 | 0.57 | 0.57 | 0.53 | | |
| Started feeding grain (d) | 7.64 | 6.94 | 8.79 | * | 7.83 | 6.35 | 9.07 | 5.87 | 5.51 | 7.02 | 8.62 | 8.78 | 8.31 | 7.36 | 7.21 | 7.03 | 7.22 | 7.05 | 8.14 | 7.50 | | |
| Forage pre-weaning (%) | 51.56 | 48.78 | 40.38 | 85.71 | 62.50 | 53.85 | 33.33 | 44.44 | 58.97 | 35.29 | 38.89 | 43.48 | 65.38 | 49.33 | 41.67 | 38.71 | 73.08 | 37.25 | 42.00 | 54.90 | | |
| Age offered forage pre-weaning (d) | 17.13 | 18.01 | 18.07 | * | 12.13 | 27.08 | 16.68 | 15.35 | 21.62 | 22.83 | 18.22 | 18.23 | 18.86 | 16.90 | 30.94 | 8.58 | 17.56 | 11.53 | 25.06 | 21.14 | | |
| Water pre-weaning (%) | 70.80 | 68.55 | 86.54 | 33.33 | 62.50 | 100.00 | 86.67 | 71.11 | 79.49 | 64.71 | 72.22 | 66.67 | 65.38 | 72.37 | 58.33 | 93.55 | 67.31 | 72.55 | 72.55 | 76.47 | | |
| Age offered water pre-weaning (d) | 14.18 | 14.67 | 18.08 | * | 7.90 | 10.43 | 13.58 | 13.75 | 7.29 | 13.91 | 14.02 | 14.06 | 10.69 | 11.97 | 13.62 | 14.80 | 15.31 | 13.68 | 13.69 | 8.40 | | |
| Winter Housing | | | | | | | | | | | | | | | | | | | | | | |
| Hutches (%) | 48.89 | 50.81 | 58.82 | 19.05 | 37.50 | 53.85 | 57.14 | 57.78 | 53.85 | 52.94 | 55.56 | 41.67 | 41.03 | 50.67 | 55.56 | 51.61 | 28.85 | 49.02 | 52.00 | 60.78 | | |
| Group pens - outdoors (%) | 3.56 | 3.23 | 5.88 | 0.00 | 0.00 | 7.69 | 0.00 | 2.22 | 5.13 | 0.00 | 5.56 | 8.33 | 5.13 | 2.67 | 2.78 | 3.23 | 5.77 | 3.92 | 2.00 | 1.96 | | |
| Group pens - indoors, dairy barn (%) | 13.33 | 19.35 | 7.84 | 4.76 | 0.00 | 7.69 | 21.43 | 4.44 | 20.51 | 5.88 | 5.56 | 25.00 | 23.08 | 8.00 | 8.33 | 9.68 | 17.31 | 15.69 | 18.00 | 5.88 | | |
| Group pens - indoors, separate barn (%) | 16.89 | 22.58 | 17.65 | 0.00 | 0.00 | 7.69 | 21.43 | 11.11 | 12.82 | 11.76 | 22.22 | 37.50 | 16.67 | 17.33 | 16.67 | 16.13 | 7.69 | 25.49 | 16.00 | 17.65 | | |
| Elevated stalls - wood, dairy barn (%) | 8.89 | 0.81 | 0.00 | 4.76 | 0.00 | 0.00 | 0.00 | 0.00 | 2.56 | 0.00 | 0.00 | 0.00 | 0.00 | 1.33 | 2.78 | 0.00 | 1.92 | 0.00 | 0.00 | 1.96 | | |
| Elevated stalls - wood, separate barn (%) | 1.78 | 0.81 | 3.92 | 0.00 | 0.00 | 7.69 | 7.14 | 2.22 | 2.56 | 5.88 | 0.00 | 0.00 | 1.28 | 0.00 | 2.78 | 6.45 | 1.92 | 3.92 | 0.00 | 1.96 | | |
| Elevated stalls - metal, dairy barn (%) | 0.44 | 0.81 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.22 | 0.00 | 0.00 | 0.00 | 0.00 | 1.28 | 0.00 | 0.00 | 0.00 | 1.92 | 0.00 | 0.00 | 0.00 | | |
| Elevated stalls - metal, separate barn (%) | 2.22 | 3.23 | 1.96 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.88 | 22.22 | 0.00 | 2.56 | 2.67 | 2.78 | 0.00 | 5.77 | 3.92 | 0.00 | 0.00 | | |
| Individual pens, dairy barn (%) | 9.33 | 9.68 | 11.76 | 9.52 | 62.50 | 15.38 | 35.71 | 8.89 | 12.82 | 17.65 | 0.00 | 0.00 | 11.54 | 4.00 | 13.89 | 12.90 | 5.77 | 13.73 | 6.00 | 11.76 | | |
| Individual pens, separate barn (%) | 28.89 | 22.58 | 39.22 | 4.76 | 62.50 | 38.46 | 28.57 | 33.33 | 30.77 | 17.65 | 38.89 | 25.00 | 23.08 | 25.33 | 44.44 | 35.48 | 28.85 | 33.33 | 36.00 | 23.53 | | |
| Tied (%) | 12.89 | 6.45 | 7.84 | 71.43 | 12.50 | 0.00 | 14.29 | 6.67 | 5.13 | 5.88 | 0.00 | 12.50 | 10.26 | 21.33 | 11.11 | 3.23 | 26.92 | 5.88 | 6.00 | 9.80 | | |
| Other (%) | 0.44 | 0.81 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.28 | 0.00 | 0.00 | 0.00 | 0.00 | 1.96 | 0.00 | 0.00 | | |
| Summer Housing | | | | | | | | | | | | | | | | | | | | | | |
| Hutches (%) | 51.15 | 54.70 | 60.00 | 19.05 | 37.50 | 53.85 | 61.54 | 54.55 | 55.56 | 52.94 | 72.22 | 40.91 | 47.30 | 49.33 | 57.58 | 53.33 | 27.45 | 56.00 | 56.25 | 60.42 | | |
| Group pens - outdoors (%) | 7.37 | 8.55 | 10.00 | 0.00 | 0.00 | 7.69 | 0.00 | 2.27 | 8.33 | 5.88 | 11.11 | 13.64 | 9.46 | 8.00 | 3.03 | 3.33 | 9.80 | 6.00 | 10.42 | 4.17 | | |
| Group pens - indoors, dairy barn (%) | 11.06 | 17.09 | 4.00 | 4.76 | 0.00 | 7.69 | 15.38 | 4.55 | 22.22 | 5.88 | 5.56 | 18.18 | 17.57 | 6.67 | 9.09 | 10.00 | 15.69 | 12.00 | 12.50 | 6.25 | | |
| Group pens - indoors, separate barn (%) | 14.29 | 20.51 | 12.00 | 0.00 | 0.00 | 7.69 | 15.38 | 11.36 | 13.89 | 11.76 | 22.22 | 27.27 | 13.51 | 13.33 | 15.15 | 16.67 | 7.84 | 20.00 | 10.42 | 16.67 | | |
| Elevated stalls - wood, dairy barn (%) | 0.92 | 0.85 | 0.00 | 4.76 | 0.00 | 0.00 | 0.00 | 0.00 | 2.78 | 0.00 | 0.00 | 0.00 | 0.00 | 1.33 | 3.03 | 0.00 | 1.96 | 0.00 | 0.00 | 2.08 | | |
| Elevated stalls - wood, separate barn (%) | 1.84 | 0.85 | 4.00 | 0.00 | 0.00 | 7.69 | 7.69 | 2.27 | 2.78 | 5.88 | 0.00 | 0.00 | 1.35 | 0.00 | 3.03 | 6.67 | 1.96 | 4.00 | 0.00 | 2.08 | | |
| Elevated stalls - metal, dairy barn (%) | 0.46 | 0.85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.27 | 0.00 | 0.00 | 0.00 | 0.00 | 1.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Elevated stalls - metal, separate barn (%) | 2.30 | 3.42 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.88 | 22.22 | 0.00 | 2.70 | 2.67 | 3.03 | 0.00 | 5.88 | 4.00 | 0.00 | 0.00 | | |
| Individual pens, dairy barn (%) | 7.83 | 7.69 | 10.00 | 4.76 | 0.00 | 15.38 | 23.08 | 6.82 | 13.89 | 11.76 | 0.00 | 0.00 | 8.11 | 4.00 | 12.12 | 13.33 | 3.92 | 10.00 | 6.25 | 10.42 | | |
| Individual pens, separate barn (%) | 24.88 | 17.95 | 32.00 | 9.52 | 62.50 | 38.46 | 23.08 | 29.55 | 33.33 | 17.65 | 27.78 | 18.18 | 20.27 | 18.67 | 39.39 | 36.67 | 25.49 | 26.00 | 29.17 | 22.92 | | |
| Tied (%) | 12.44 | 4.27 | 10.00 | 71.43 | 12.50 | 0.00 | 15.38 | 6.82 | 5.56 | 5.88 | 0.00 | 4.55 | 6.76 | 21.33 | 15.15 | 3.33 | 27.45 | 8.00 | 4.17 | 8.33 | | |
| Other (%) | 0.46 | 0.85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.35 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | | |
| Straw (%) | 75.24 | 76.61 | 92.31 | 42.86 | * | 46.15 | 93.33 | 80.95 | 71.43 | 70.59 | 82.35 | 78.26 | 85.90 | 78.57 | 67.74 | 42.31 | 73.33 | 89.58 | 80.43 | 64.00 | | |
| Sand (%) | 0.95 | 0.81 | 1.92 | 0.00 | * | 0.00 | 0.00 | 2.38 | 0.00 | 0.00 | 0.00 | 0.00 | 1.28 | 1.43 | 0.00 | 0.00 | 0.00 | 0.00 | 2.17 | 2.00 | | |
| Sawdust/wood shavings (%) | 21.43 | 12.90 | 15.38 | 57.14 | * | 69.23 | 0.00 | 21.43 | 17.14 | 11.76 | 11.76 | 17.39 | 11.54 | 22.86 | 22.58 | 50.00 | 22.22 | 6.25 | 19.57 | 36.00 | | |
| Newspaper (%) | 4.76 | 8.06 | 0.00 | 0.00 | * | 0.00 | 6.67 | 4.76 | 5.71 | 17.65 | 5.88 | 0.00 | 2.56 | 7.14 | 3.23 | 3.85 | 4.44 | 4.44 | 4.35 | 2.00 | | |
| Corn cobs/stalks (%) | 6.67 | 11.29 | 0.00 | 0.00 | * | 0.00 | 0.00 | 7.14 | 11.43 | 5.88 | 0.00 | 8.70 | 6.41 | 5.71 | 6.45 | 11.54 | 2.22 | 10.42 | 2.17 | 10.00 | | |
| Other (%) | 0.48 | 0.00 | 1.92 | 0.00 | * | 0.00 | 6.67 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.23 | 0.00 | 0.00 | 2.08 | 0.00 | 0.00 | | |
| Weaning age (wk) | 7.63 | 6.63 | 7.12 | * | 7.79 | 9.40 | 7.40 | 8.35 | 7.87 | 7.35 | 7.48 | 7.96 | 8.21 | 7.68 | 7.85 | 7.19 | 7.83 | 7.73 | 7.35 | 8.02 | | |

| Variable | Holsteins | State | | | | | Calf Mortality | | | | | Herd Size | | | | RHA Milk - Holsteins | | | |
|-------------------------------------|-----------|-------|-------|--------|-------|--------|----------------|-------------|-------------|-------------|-------|-----------|-----------|------------|-------|-------------------------|------------------------------|------------------------------|-------------------------|
| | | MN | MO | PA | VA | WA | 5 to 9.9% | 10 to 14.9% | 15 to 19.9% | 20 to 24.9% | 25%+ | 1 to 50 | 51 to 100 | 101 to 150 | >150 | Quartile 1 <8,188 kg | Quartile 2 8,188-8,822 kg | Quartile 3 8,823-9,505 kg | Quartile 4 >9,505 kg |
| Weaning decisions | | | | | | | | | | | | | | | | | | | |
| Size (%) | 31.34 | 30.08 | 19.61 | 80.00 | 26.67 | 38.46 | 13.33 | 31.82 | 33.33 | 33.33 | 45.83 | 21.79 | 41.67 | 36.36 | 27.59 | 40.00 | 25.00 | 20.41 | 38.00 |
| Age (%) | 54.84 | 56.91 | 60.78 | 53.33 | 20.00 | 53.85 | 33.33 | 56.82 | 56.41 | 64.71 | 38.89 | 57.69 | 55.56 | 42.42 | 58.62 | 48.00 | 45.83 | 55.10 | 62.00 |
| Grain intake (%) | 57.60 | 60.16 | 64.71 | 13.33 | 66.67 | 46.15 | 73.33 | 54.55 | 56.41 | 82.35 | 58.33 | 61.54 | 52.78 | 57.58 | 55.17 | 56.00 | 62.50 | 59.18 | 54.00 |
| Other (%) | 3.69 | 3.25 | 5.88 | 0.00 | 0.00 | 7.69 | 6.67 | 4.55 | 7.69 | 5.88 | 5.56 | 2.56 | 4.17 | 6.06 | 3.45 | 0.00 | 4.17 | 4.08 | 8.00 |
| Calf disease - digestive (%) | 67.74 | 68.85 | 63.27 | 100.00 | * | 69.23 | 57.14 | 63.41 | 80.00 | 64.71 | 78.26 | 67.53 | 65.45 | 66.67 | 72.00 | 58.33 | 64.44 | 67.50 | 73.91 |
| Calf disease - respiratory (%) | 29.57 | 27.87 | 32.65 | 0.00 | * | 38.46 | 35.71 | 29.27 | 25.71 | 29.41 | 31.25 | 23.38 | 36.36 | 33.33 | 28.00 | 38.89 | 33.33 | 27.50 | 28.26 |
| Calf disease - other (%) | 1.08 | 0.00 | 4.08 | 0.00 | * | 0.00 | 0.00 | 0.00 | 0.00 | 5.88 | 0.00 | 2.60 | 0.00 | 0.00 | 0.00 | 0.00 | 2.22 | 0.00 | 2.17 |
| Heifer vaccinations | | | | | | | | | | | | | | | | | | | |
| Brucellosis | 73.76 | 66.67 | 82.35 | 61.90 | 93.75 | 100.00 | 71.43 | 75.00 | 84.62 | 76.47 | 72.22 | 64.00 | 74.32 | 80.56 | 90.32 | 58.82 | 75.51 | 71.43 | 86.27 |
| IBR | 80.45 | 74.79 | 80.39 | 100.00 | 93.75 | 84.62 | 57.14 | 79.55 | 87.18 | 94.12 | 83.33 | 66.22 | 85.14 | 97.22 | 83.87 | 68.00 | 79.59 | 83.67 | 90.20 |
| BVD | 80.00 | 74.79 | 78.43 | 100.00 | 93.75 | 84.62 | 57.14 | 81.82 | 84.62 | 94.12 | 77.78 | 63.51 | 87.84 | 97.22 | 80.65 | 68.00 | 79.59 | 83.67 | 90.20 |
| PI3 | 71.36 | 61.34 | 76.47 | 90.48 | 93.75 | 84.62 | 50.00 | 65.91 | 76.92 | 88.24 | 88.89 | 47.30 | 82.43 | 91.67 | 80.65 | 62.00 | 69.39 | 75.51 | 82.35 |
| BRSV | 55.88 | 60.50 | 56.86 | 19.05 | * | 69.23 | 42.86 | 63.41 | 62.86 | 70.59 | 52.17 | 45.95 | 57.35 | 70.97 | 65.38 | 41.86 | 47.83 | 59.09 | 72.00 |
| Leptospirosis | 76.36 | 71.43 | 76.47 | 90.48 | 93.75 | 76.92 | 57.14 | 77.27 | 87.18 | 82.35 | 61.11 | 60.81 | 82.43 | 88.89 | 83.87 | 72.00 | 67.35 | 79.59 | 86.27 |
| Virus calf scours | 28.64 | 31.93 | 29.41 | 14.29 | 25.00 | 23.08 | 50.00 | 34.09 | 23.08 | 23.53 | 33.33 | 12.00 | 35.14 | 33.33 | 29.03 | 12.00 | 28.57 | 26.53 | 41.18 |
| Other | 16.89 | 7.56 | 37.25 | 15.00 | 25.00 | 15.38 | 21.43 | 11.36 | 20.51 | 11.76 | 11.11 | 12.16 | 15.07 | 22.22 | 25.81 | 12.24 | 24.49 | 12.24 | 21.57 |
| Worm (%) | 68.16 | 60.66 | 88.24 | 57.14 | 87.50 | 53.85 | 71.43 | 71.11 | 66.67 | 76.47 | 72.22 | 62.34 | 72.97 | 75.00 | 67.74 | 63.46 | 71.43 | 68.00 | 74.51 |
| Coccidiostats/Coccidiocides | | | | | | | | | | | | | | | | | | | |
| Usage (%) | 77.23 | 77.87 | 75.00 | 57.14 | 93.75 | 92.31 | 69.23 | 82.22 | 92.31 | 88.24 | 88.89 | 73.68 | 71.05 | 68.11 | 90.32 | 64.71 | 86.00 | 72.55 | 88.24 |
| Bovatec (%) | 47.73 | 42.86 | 58.82 | 38.10 | 43.75 | 69.23 | 33.33 | 47.73 | 57.89 | 70.59 | 44.44 | 35.62 | 45.67 | 66.67 | 54.84 | 34.00 | 66.67 | 40.00 | 54.90 |
| Corrid (%) | 14.55 | 15.97 | 13.73 | 0.00 | 37.50 | 0.00 | 16.67 | 13.64 | 23.68 | 5.88 | 22.22 | 17.81 | 13.33 | 13.89 | 12.90 | 18.00 | 10.42 | 10.00 | 19.61 |
| Deccox (%) | 38.18 | 46.22 | 19.61 | 19.05 | 62.50 | 38.46 | 33.33 | 45.45 | 52.63 | 35.29 | 50.00 | 38.36 | 33.33 | 41.67 | 41.94 | 30.00 | 35.42 | 38.00 | 49.02 |
| Other (%) | 0.45 | 0.84 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.96 |
| Age at first calving goal (months) | 24.24 | 23.84 | 24.44 | * | * | 24.40 | 24.08 | 24.19 | 24.20 | 24.39 | 24.12 | 24.26 | 24.38 | 24.38 | 23.90 | 24.02 | 24.29 | 24.21 | 24.41 |
| Breeding decision | | | | | | | | | | | | | | | | | | | |
| Age (%) | 88.24 | 90.24 | 92.31 | 68.75 | * | 76.92 | 96.10 | 89.55 | 79.31 | 69.23 | | 83.12 | 88.06 | 93.10 | 92.31 | 88.37 | 95.74 | 93.33 | 77.55 |
| Weight (%) | 87.75 | 86.18 | 94.23 | 81.25 | * | 84.62 | 83.12 | 88.06 | 10.34 | 0.00 | | 0.00 | 0.00 | 10.34 | 0.00 | 0.00 | 2.13 | 0.00 | 2.04 |
| Height (%) | 1.47 | 1.63 | 1.92 | 0.00 | * | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 2.60 | 5.97 | 6.90 | 7.69 | 2.33 | 2.13 | 4.44 | 6.12 |
| Seasonal calving (%) | 4.90 | 0.81 | 5.77 | 37.50 | * | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.13 | 4.44 | 6.12 |
| Body condition score (%) | 0.49 | 0.00 | 1.92 | 0.00 | * | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.13 | 4.44 | 6.12 |
| Method of breeding heifers | | | | | | | | | | | | | | | | | | | |
| AI only | 58.04 | 73.98 | 39.22 | 23.81 | 56.25 | 38.46 | 85.71 | 44.00 | 38.89 | 45.16 | | 96.00 | 84.21 | 83.33 | 93.55 | 80.77 | 90.20 | 94.12 | 95.92 |
| AI first time, then bull | 10.27 | 4.88 | 23.53 | 4.76 | 6.25 | 23.08 | 3.90 | 14.67 | 8.33 | 16.13 | | 3.90 | 14.67 | 8.33 | 16.13 | 7.69 | 12.00 | 12.00 | 11.76 |
| AI first and second time, then bull | 12.95 | 8.94 | 17.65 | 4.76 | 18.45 | 38.46 | 3.90 | 13.33 | 22.22 | 25.81 | | 3.90 | 13.33 | 22.22 | 25.81 | 5.77 | 22.00 | 18.00 | 9.80 |
| Bull only | 12.95 | 10.57 | 13.73 | 28.57 | 18.75 | 0.00 | 3.90 | 17.33 | 25.00 | 9.68 | | 3.90 | 17.33 | 25.00 | 9.68 | 21.15 | 16.00 | 8.00 | 1.96 |
| ET & AI | 0.89 | 0.00 | 0.00 | 4.76 | 0.00 | 7.69 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 2.78 | 3.23 | 0.00 | 2.00 | 0.00 | 1.96 |
| AI & bull | 4.91 | 1.63 | 3.92 | 33.33 | 0.00 | 0.00 | 1.30 | 10.67 | 2.78 | 3.23 | | 1.30 | 10.67 | 2.78 | 3.23 | 11.54 | 2.00 | 6.00 | 1.96 |
| AI, ET, & bull | 0.45 | 0.00 | 1.96 | 0.00 | 0.00 | 0.00 | 1.30 | 0.00 | 0.00 | 0.00 | | 1.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.96 |
| Dairy - same breed | 89.69 | 93.50 | 98.00 | 47.62 | 81.25 | 100.00 | 96.00 | 84.21 | 83.33 | 93.55 | | 96.00 | 84.21 | 83.33 | 93.55 | 80.77 | 90.20 | 94.12 | 95.92 |
| Dairy - different breed | 3.59 | 1.63 | 2.00 | 23.81 | 0.00 | 0.00 | 0.00 | 7.89 | 5.56 | 0.00 | | 0.00 | 7.89 | 5.56 | 0.00 | 5.77 | 1.96 | 3.92 | 0.00 |
| Beef | 10.76 | 7.32 | 6.00 | 33.33 | 25.00 | 7.69 | 8.00 | 13.16 | 13.89 | 9.68 | | 8.00 | 13.16 | 13.89 | 9.68 | 19.23 | 11.76 | 3.92 | 8.16 |

| Variable | Holsteins | State | | | | | | | Calf Mortality | | | | Herd Size | | | | RHA Milk - Holsteins | | | |
|--|-----------|-------|--------|-------|-------|-------|-------|-----------|----------------|-------------|-------------|-------|-----------|-----------|------------|--------|------------------------|------------------------|------------------------|-------------------------|
| | | MN | MO | PA | VA | WA | 5% | 5 to 9.9% | 10 to 14.9% | 15 to 19.9% | 20 to 24.9% | 25%+ | 1 to 50 | 51 to 100 | 101 to 150 | >150 | Quartile 1 8,188 kg | Quartile 2 8,822 kg | Quartile 3 9,505 kg | Quartile 4 >9,505 kg |
| Estrous synchronization (%) | 37.05 | 31.71 | 41.81 | 28.57 | 56.25 | 61.54 | | | | | | 22.08 | 41.33 | 36.11 | 58.06 | 28.85 | 38.00 | 46.00 | 45.10 | |
| Prostaglandin (%) | 33.18 | 24.79 | 41.18 | 28.57 | 56.25 | 58.33 | | | | | | 18.67 | 36.99 | 34.29 | 56.67 | 25.49 | 35.42 | 37.50 | 42.86 | |
| Synchro-mate B (%) | 4.61 | 5.98 | 1.96 | 4.76 | 6.25 | 0.00 | | | | | | 4.00 | 5.48 | 2.86 | 0.00 | 3.92 | 4.17 | 8.33 | 2.04 | |
| Pre-breeding exam (%) | 5.38 | 4.96 | 7.69 | * | * | 0.00 | | | | | | 3.95 | 7.14 | 8.33 | 4.00 | 0.00 | 6.52 | 9.52 | 6.67 | |
| Pre-breeding exam (months) | 14.36 | 13.33 | 17.33 | * | * | * | | | | | | 16.50 | 16.50 | 13.00 | * | * | 14.83 | 14.83 | 16.33 | |
| Heifer Calving Facilities | | | | | | | | | | | | | | | | | | | | |
| Pasture | 50.45 | 46.77 | 58.00 | 38.10 | 93.75 | 23.08 | 50.00 | 31.11 | 56.41 | 35.29 | 50.00 | 60.87 | 57.14 | 56.00 | 47.22 | 29.03 | 69.23 | 54.90 | 53.06 | 35.29 |
| Dry lot | 16.96 | 22.58 | 12.00 | 14.29 | 0.00 | 7.69 | 28.57 | 22.22 | 10.26 | 17.65 | 22.22 | 17.39 | 15.58 | 22.67 | 22.22 | 3.23 | 19.23 | 17.65 | 20.41 | 5.88 |
| Maternity pens - housed with milking herd | 27.68 | 35.48 | 16.00 | 38.10 | 0.00 | 15.38 | 21.43 | 22.22 | 38.46 | 29.41 | 38.89 | 26.09 | 40.26 | 20.00 | 30.56 | 16.13 | 25.00 | 21.57 | 26.53 | 35.29 |
| Maternity pens - housed separately | 29.46 | 31.45 | 34.00 | 0.00 | 6.25 | 69.23 | 35.71 | 48.89 | 28.21 | 29.41 | 27.78 | 13.04 | 23.38 | 26.67 | 30.56 | 48.39 | 11.54 | 39.22 | 26.53 | 41.18 |
| Stanchions or tie stalls | 16.07 | 18.55 | 2.00 | 57.14 | 0.00 | 0.00 | 14.29 | 8.89 | 10.26 | 11.76 | 11.11 | 34.78 | 24.68 | 20.00 | 5.56 | 0.00 | 36.54 | 5.88 | 10.20 | 5.88 |
| Free stall area - housed with milking herd | 0.89 | 1.61 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.35 | 2.60 | 0.00 | 0.00 | 0.00 | 1.92 | 1.96 | 0.00 | 0.00 |
| Free stall area - not housed with milking herd | 2.23 | 0.81 | 6.00 | 4.76 | 0.00 | 0.00 | 7.14 | 2.22 | 0.00 | 5.88 | 0.00 | 0.00 | 1.30 | 4.00 | 2.78 | 0.00 | 3.85 | 1.96 | 4.08 | 0.00 |
| Loose housing area | 22.32 | 25.81 | 32.00 | 0.00 | 0.00 | 15.38 | 28.57 | 17.78 | 25.64 | 29.41 | 27.78 | 39.13 | 18.18 | 21.33 | 30.56 | 19.35 | 17.31 | 31.37 | 18.37 | 19.61 |
| Pre-calving group (%) | 58.06 | 58.20 | 68.00 | 18.75 | 43.75 | 84.62 | | | | | | | 45.45 | 52.78 | 75.76 | 80.00 | 38.00 | 59.18 | 61.22 | 76.00 |
| Pre-calving group (d) | 25.89 | 28.74 | 24.79 | 24.56 | 21.59 | 29.21 | | | | | | | 22.95 | 26.57 | 33.52 | 20.07 | 30.44 | 23.73 | 26.79 | 22.16 |
| Group for first calf heifers (%) | 6.34 | 4.84 | 3.85 | 0.00 | * | 38.46 | | | | | | | 2.56 | 0.00 | 10.34 | 30.77 | 0.00 | 2.08 | 4.44 | 18.37 |
| Longer days to first breeding (%) | 17.16 | 19.35 | 13.73 | 12.50 | * | 15.38 | | | | | | | 14.29 | 16.42 | 24.14 | 23.08 | 11.63 | 12.50 | 11.11 | 30.61 |
| Longer days to first breeding (d) | 22.48 | 24.76 | 12.05 | 24.30 | * | 17.35 | | | | | | | 22.21 | 22.69 | 14.87 | 18.70 | 27.99 | 25.18 | 12.12 | 13.18 |
| Calves suckle (%) | 8.29 | 11.29 | 3.85 | * | 6.25 | 0.00 | | | | | | | 12.82 | 9.52 | 0.00 | 3.33 | 23.26 | 4.00 | 8.51 | 2.13 |
| Pond or lagoon (%) | 32.28 | 19.35 | 53.85 | 68.75 | 50.00 | 7.69 | | | | | | | 21.79 | 32.88 | 55.88 | 35.48 | 38.00 | 43.14 | 28.00 | 24.00 |
| Pre-partum milking (%) | 19.46 | 17.74 | 26.92 | 18.75 | 25.00 | 0.00 | | | | | | | 20.51 | 12.33 | 35.29 | 12.90 | 10.00 | 25.49 | 24.00 | 26.00 |
| Pre-partum milking (% of heifers) | 10.97 | 15.76 | 4.23 | 4.95 | 9.03 | * | | | | | | | 12.61 | 12.67 | 1.44 | 7.24 | 3.43 | 12.54 | 13.92 | 4.08 |
| Antibiotic treatment (%) | 2.45 | 1.61 | 3.92 | 6.25 | * | 0.00 | | | | | | | 0.00 | 2.99 | 10.34 | 0.00 | 0.00 | 4.17 | 4.55 | 2.04 |
| Antibiotic treatment - lactating product (%) | 0.98 | 0.81 | 1.96 | 0.00 | * | 0.00 | | | | | | | 0.00 | 1.49 | 3.45 | 0.00 | 0.00 | 2.08 | 2.27 | 0.00 |
| Antibiotic treatment - dry cow product (%) | 1.47 | 0.81 | 1.96 | 6.25 | * | 0.00 | | | | | | | 0.00 | 1.49 | 6.90 | 0.00 | 0.00 | 2.08 | 2.27 | 2.04 |
| Antibiotic treatment (wk) | 10.30 | | | | | | | | | | | | | | | | | | | |
| Sold - extra income (%) | 4.73 | 2.10 | 8.75 | 5.83 | 2.73 | 5.99 | | | | | | | 8.70 | 5.78 | 4.31 | 1.53 | 6.13 | 3.29 | 2.96 | 7.94 |
| Sold - beef (%) | 2.38 | 2.31 | 2.56 | 1.89 | 0.55 | 1.95 | | | | | | | 2.15 | 3.20 | 1.48 | 0.59 | 1.44 | 2.60 | 1.05 | 2.32 |
| No culling | 70.32 | 72.58 | 72.55 | 53.33 | 75.00 | 53.85 | | | | | | | 66.67 | 69.44 | 75.76 | 74.19 | 64.00 | 82.00 | 69.39 | 60.00 |
| Sold as baby calves | 5.02 | 5.65 | 0.00 | 0.00 | 6.25 | 23.08 | | | | | | | 5.13 | 4.17 | 0.00 | 9.68 | 10.00 | 0.00 | 4.08 | 8.00 |
| Sold as open heifers | 4.11 | 3.23 | 5.88 | 0.00 | 6.25 | 7.69 | | | | | | | 6.41 | 1.39 | 6.06 | 3.23 | 8.00 | 2.00 | 0.00 | 8.00 |
| Sold as bred heifers | 5.50 | 4.84 | 5.88 | 13.33 | 0.00 | 7.69 | | | | | | | 6.41 | 2.78 | 9.09 | 3.23 | 8.00 | 2.00 | 6.12 | 6.00 |
| Sold as springing heifers | 21.46 | 19.35 | 21.57 | 33.33 | 12.50 | 38.46 | | | | | | | 24.36 | 23.61 | 12.12 | 22.58 | 16.00 | 16.00 | 22.45 | 36.00 |
| Increased herd size by more than 5% (%) | 28.92 | 30.65 | 29.41 | 18.75 | * | 23.08 | | | | | | | 24.68 | 31.34 | 34.48 | 26.92 | 23.26 | 33.33 | 25.00 | 30.61 |
| Decreased herd size by more than 5% (%) | 7.84 | 8.06 | 11.76 | 0.00 | * | 0.00 | | | | | | | 10.39 | 8.96 | 3.45 | 3.85 | 13.95 | 6.25 | 4.55 | 6.12 |
| Stayed the same size (%) | 63.24 | 61.29 | 58.82 | 81.25 | * | 76.92 | | | | | | | 69.94 | 59.70 | 62.07 | 69.23 | 62.79 | 60.42 | 70.45 | 63.27 |
| Heifer ETA's (%) | 9.09 | 8.87 | 13.73 | 6.26 | 6.25 | 0.00 | | | | | | | 15.38 | 5.56 | 11.76 | 0.00 | 6.00 | 7.84 | 10.20 | 12.00 |
| Heifer's type (%) | 15.00 | 10.48 | 17.65 | 62.50 | 0.00 | 7.69 | | | | | | | 15.38 | 16.67 | 20.59 | 6.45 | 10.00 | 15.69 | 10.20 | 20.00 |
| Dam's performance in herd (%) | 15.91 | 14.52 | 17.65 | 25.00 | 6.25 | 23.08 | | | | | | | 17.95 | 13.89 | 20.59 | 9.68 | 18.00 | 11.76 | 18.37 | 18.00 |
| Sire's PTA (%) | 4.55 | 4.84 | 1.96 | 0.00 | 0.00 | 23.08 | | | | | | | 3.85 | 4.17 | 0.00 | 9.68 | 0.00 | 1.96 | 8.16 | 10.00 |
| Other (%) | 13.64 | 15.32 | 5.88 | 12.50 | 12.50 | 30.77 | | | | | | | 14.10 | 11.11 | 8.82 | 25.81 | 10.00 | 15.69 | 10.20 | 20.00 |
| No culling done (%) | 60.91 | 63.71 | 62.75 | 31.25 | 75.00 | 46.15 | | | | | | | 58.97 | 59.72 | 64.71 | 61.29 | 66.00 | 62.75 | 65.31 | 46.00 |
| DHI Heifer Management Option (%) | 31.02 | 27.05 | 44.90 | 0.00 | 56.25 | 23.08 | | | | | | | 29.33 | 26.39 | 45.45 | 25.81 | 16.33 | 31.25 | 36.73 | 40.00 |
| DHI Heifer Management Option (months) | 70.07 | 71.84 | 104.70 | * | 43.21 | 58.31 | | | | | | | 45.28 | 72.44 | 54.20 | 106.14 | 85.74 | 59.24 | 62.49 | 70.58 |

Not enough information for analysis (n=5).

| Variable | State | | | | | | | | | | Calf Mortality | | | | Herd Size | | | | RHA Milk - Holsteins | | | |
|-----------------------|-------|-------|-------|-------|-------|-----------|-------------|-------------|-------------|-------|----------------|-----------|------------|-------|-------------------------|------------------------------|------------------------------|-------------------------|----------------------|-------|--|--|
| | MN | MO | PA | VA | WA | 5 to 9.9% | 10 to 14.9% | 15 to 19.9% | 20 to 24.9% | 25%+ | 1 to 50 | 51 to 100 | 101 to 150 | > 150 | Quartile 1 <8,188 kg | Quartile 2 8,188-8,822 kg | Quartile 3 8,823-9,505 kg | Quartile 4 >9,505 kg | | | | |
| 0% registered (%) | 47.06 | 57.26 | 26.92 | 18.75 | 62.50 | 46.15 | 53.33 | 40.00 | 46.15 | 58.82 | 66.67 | 58.33 | 50.00 | 49.32 | 38.24 | 38.71 | 68.00 | 39.22 | 48.00 | 26.00 | | |
| 1-49% registered (%) | 28.05 | 27.42 | 30.77 | 25.00 | 30.77 | 31.11 | 26.67 | 31.11 | 35.90 | 17.65 | 16.67 | 33.33 | 25.64 | 24.66 | 35.29 | 35.48 | 16.00 | 37.25 | 34.00 | 26.00 | | |
| 50-99% registered (%) | 15.38 | 8.06 | 28.85 | 37.50 | 0.00 | 23.08 | 6.67 | 15.56 | 15.38 | 17.65 | 16.67 | 4.17 | 12.82 | 17.81 | 14.71 | 19.35 | 8.00 | 19.61 | 6.00 | 32.00 | | |
| 100% registered (%) | 9.50 | 7.26 | 13.46 | 18.75 | 12.50 | 0.00 | 13.33 | 13.33 | 2.56 | 5.88 | 0.00 | 4.17 | 11.54 | 8.22 | 11.76 | 6.45 | 8.00 | 3.92 | 12.00 | 16.00 | | |
| Owner (%) | 46.39 | 50.00 | 40.38 | * | 55.56 | 30.77 | 60.00 | 57.50 | 39.47 | 23.53 | 41.18 | 58.33 | 53.25 | 37.93 | 48.15 | 44.44 | 48.78 | 35.42 | 52.38 | 45.65 | | |
| Spouse (%) | 36.60 | 41.67 | 40.38 | * | 0.00 | 0.00 | 40.00 | 27.50 | 44.74 | 47.06 | 35.29 | 33.33 | 37.66 | 43.10 | 40.74 | 11.11 | 31.71 | 52.08 | 30.95 | 30.43 | | |
| Child (%) | 13.92 | 16.67 | 13.46 | * | 0.00 | 0.00 | 33.33 | 10.00 | 5.26 | 5.88 | 0.00 | 33.33 | 15.58 | 13.79 | 7.41 | 11.11 | 14.63 | 10.42 | 26.19 | 4.35 | | |
| Herdman (%) | 3.61 | 1.67 | 3.85 | * | 0.00 | 23.08 | 0.00 | 2.50 | 5.26 | 11.76 | 0.00 | 0.00 | 2.60 | 0.00 | 3.70 | 14.81 | 2.44 | 2.08 | 4.76 | 6.52 | | |
| Hired help (%) | 15.98 | 7.50 | 15.38 | * | 55.56 | 69.23 | 0.00 | 20.00 | 26.32 | 17.65 | 23.53 | 8.33 | 7.79 | 13.79 | 11.11 | 51.85 | 7.32 | 8.33 | 19.05 | 28.26 | | |
| Other (%) | 5.67 | 7.50 | 3.85 | * | 0.00 | 0.00 | 6.67 | 0.00 | 2.63 | 11.76 | 11.76 | 12.50 | 2.60 | 12.07 | 3.70 | 3.70 | 9.76 | 6.25 | 2.38 | 6.52 | | |
| RHA - Milk (lb) | 19485 | 19723 | 19716 | * | 18311 | 21456 | 20337 | 21194 | 19905 | 18681 | 18887 | 19805 | 18833 | 19706 | 19929 | 20738 | | | | | | |