

Resources for Manure Management on Small Dairy Farms with Outside Pens and Lots

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Manure management on small dairies is just as important as manure management on large dairies. For the purpose of this newsletter article we will focus on dairies where animals will have access to yards, lots or pens outside (or are not completely housed under a roof at all times). A small dairy will be defined as any dairy operation with less than 1,000 animal units which is equivalent to less than 1,000 head of immature dairy or less than 700 head of mature dairy cattle. A mature dairy animal is loosely defined as one that has had its first calf and includes both milked and dry cows. And while it is not possible to cover all of the regulations that affect dairies of any size in a short newsletter article, the goal here is to help you access resources to be better informed and provide solutions for manure management issues.

Some small dairies may be considered “medium-sized concentrated animal feeding operations (CAFOs) if they are between 300-999 immature dairy animals or 200-699 mature dairy animals, and if they meet certain discharge criteria. If your operation fits this size and animals have access to outside lots and pens, please read the fact sheet [Medium CAFO Summary](#), to learn about what requirements and regulations may affect your dairy operation. It is important to know the size of the operation and if your dairy is discharging any manure to waters of the state. If discharges occur, this may require you to have a federal operating permit, or National Pollutant Discharge Elimination System (NPDES permit) and a nutrient management plan. The Iowa DNR offers [Design Criteria for Livestock Waste Control Systems at Open Feedlot Medium CAFOs](#) as a resource for these size dairy operations.

If your small dairy is less than 300 immature dairy animals or less than 200 mature dairy animals, it is also important to know if manure or runoff is leaving the farm site and impacting water sources. The list of resources offers practical solutions for smaller dairies.

PM 3019, [Small Open Lot Dairies in Iowa- a producer guide](#), provides a comprehensive look at how runoff from dairies can impact water quality; how state and federal regulations apply to small dairies; how producers can assess environmental impacts of their dairies; and provided control and containment solutions as well as ideas for management practices and sources for technical assistance.

PM 3058, [Clean Water Diversions for Open Feedlots](#), demonstrates how to keep clean upstream water from coming in contact with outside sources of manure on lots and yards, thereby reducing the amount of manure-laden water to handle later.

PM 3060, [Small Feedlot Runoff Management Using Low-Pressure Flood Irrigation](#), provides some inexpensive methods to divert runoff from open lots and basins to cropland.

Additional resources, including a video on how to assess water quality below your dairy, are available on the [Water Quality Initiatives for Small Iowa Beef and Dairy Feedlot Operations](#) web page.

Producers who have questions or concerns about their small dairy and potential environmental impacts may contact any of the following Extension personnel who can help with on-farm assessments, manure storage and treatment systems, and resources for technical and financial assistance.

Jenn Bentley, ISU Dairy Specialist, 563-382-2949
Kevin Lager, ISU Dairy Specialist, 712-737-4230
Larry Tranel, ISU Dairy Specialist, 563-583-6496
Kapil Arora, ISU Ag Engineer, 515-382-6551
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