

Outwintering Livestock



Technical Note - MI Livestock & Grazing - 2

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Subject: Precautions Needed for Wintering Livestock Outside

Many farms in Michigan are adopting grazing management systems to raise their livestock. Some farm situations have no housing for their animals in winter. This is especially true when animals have their breeding season timed by the livestock manager to have their newborn livestock born when forage plants begin to grow in the spring. These animals are then giving their peak milk production to their young, or the milk is sold as a commodity, when forage plants are at the height of production. In these situations no newborn livestock are on the farm heading into the most severe winter months.

Mature Livestock can do quite well in Michigan outside in the winter with their heavy winter coat and a proper windbreak except in extreme weather conditions. We know that livestock, especially cattle, are the most comfortable between 40° and 75° F. These are the temperature ranges where livestock produce the most weight gain; produce the most milk, etc. When temperatures drop below 40° F then wind speed and humidity can play an important factor into the health and safety of the livestock.

Protection from the wind or windbreaks are essential to protecting livestock in the winter from health damage and their need to greatly increase feed

intake to keep their bodies warm. There are several important pieces of information that are needed to plan, design, and install windbreaks for livestock. The following are excellent references for this: Woodland Technical Note 18 – “Benefits Associated with Feedlot and Livestock Windbreaks” from Michigan NRCS, “Windbreaks for Livestock Operations” a collaborative publication of North Dakota State University, NRCS and University of Nebraska (contact the Michigan NRCS State Forester) and the National Agroforestry Center (NAC) website at <http://www.unl.edu/nac/> for publications on this subject.

Some species of livestock do not tolerate cold weather. Swine are poorly adapted to cope with extreme heat or cold. Since they have very little hair, there is not much to protect them from extreme cold. Swine should be housed and out of the wind if possible during extreme cold weather.

Sheep with their wool coat can tolerate cold weather very well. But when extreme cold weather occurs, they need windbreaks also to protect them. Most of the information about this has come from farmer and rancher observation. Much more research is needed on the effect of extreme cold on sheep. Farmers and ranchers have documented the greatly reduced volume of winter feed needed for sheep when they are protected in the winter season.

There have been several scientific research studies done on beef and dairy cattle on both reducing feed costs and maintaining good health in the winter by providing windbreak protection for overwintering cattle. Confinement in buildings can actually reduce their health in normal Michigan winter weather. Taking the Michigan NRCS Windbreak and Shelterbelt course module will give specific details about this. The critical temperature for mature cattle has been determined to be 18° F. This varies slightly with breed. When the combination of wind and temperature drops below this, the cattle are affected negatively in some way. Two Iowa State University studies showed a 3 and an 11 percent increase in dairy cattle milk production (typical decline lessened) in cold weather with windbreaks alone. Two separate studies on beef cattle have shown that the extra feed needed for cattle to keep themselves warm can be greatly reduced by properly planned and installed windbreaks. For beef cows to maintain their healthy body condition score, a Purdue University study showed 13% more feed was needed with a 10 degree drop in wind chill temperature below the critical level. A University of Nebraska study showed that 1.1% more feed was

