Heat Stress Creates Many Challenges for Milk Producers

- There are a variety of factors that can influence a cow’s milk production. In Texas, two of these factors are heat stress and reproduction.
- External heat accumulates from solar radiation, high ambient air temperature, and high relative humidity, causing a cow’s body temperature to increase, which has an adverse effect on both reproduction and milk production.

Extension’s Response

- Texas A&M AgriLife Research and Extension specialists in Texas and their counterparts across the South have conducted research, and developed effective heat-abatement (cooling) management options, which are a part of the broader cow-comfort management area.
- The most common heat-abatement methods include the use of fans, soakers, shade and cooling ponds.
- Cooling systems result in reduced body heat, increased feed intake, improved reproduction, and improved milk production.
- Over the past decade, AgriLife Extension has partnered with Monsanto, Pfizer, local veterinarians, artificial insemination (AI) organizations, cooling-equipment manufacturers, and other dairy industry consultants to develop and conduct educational programs for dairy producers across the state.
- These programs focused both on improving reproduction through heat abatement and on breeding programs designed to control when the cow ovulates – referred to as synchronization.
- Extension specialists and agents conducted field demonstration projects on different cooling methods and breeding programs, and conducted field days for producers to learn more about these technological advances.
- Reproduction workshops for farm employees and annual nutrition conferences for industry consultants targeted management techniques to mitigate the impacts of heat stress.

Economic Impact

- More than 90 percent of the dairies (375,000 dairy cows) in Texas have adopted some form of heat-abatement method in their dairy operation. The change in net returns for heat-abatement programs was estimated at $37 per cow, or $13.9 million annually statewide.
- Adoption of breeding programs and heat abatement have resulted in higher pregnancy rates and an additional $12.9 million in annual benefits to milk producers, bringing the total estimated benefit to $26.8 million.

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