

New publication helps farmers increase drying efficiency with dryeration

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A new ISU Extension publication addresses techniques for dryeration and combination drying to increase the drying rate for high-temperature corn dryers.

When harvest conditions require high-temperature grain drying, the dryer system may be the bottleneck that limits harvest rate. A new publication from Iowa State University Extension addresses techniques for dryeration and combination drying to increase the drying rate for high-temperature corn dryers.

“Dryeration and Combination Drying for Increased Capacity and Efficiency” (PM 2089K) is available to download from the Extension Online Store, www.extension.iastate.edu/store/.

This publication illustrates dryeration techniques and management considerations to increase both drying capacity and overall energy efficiency. Topics include delayed cooling, moisture testing, system design and combination drying using both high-temperature and low-temperature systems to achieve optimal results.

“In high-temperature systems, moisture is removed from the corn kernels faster than the moisture can equalize within the kernels,” said Shawn Shouse, ISU Extension agricultural engineer. “The dryeration process allows this moisture to move towards the surface of the kernel where it can be removed more efficiently.”

Implementing dryeration or combination drying requires additional planning, but the energy savings are considerable.

The publication is part of a series of farm energy conservation and efficiency educational materials being developed through the ISU Farm Energy Conservation and Efficiency educational initiative. The purpose is to increase farmers’ awareness of opportunities for improving efficient use of farm energy. The initiative also will help farmers explore alternatives to reduce

farm energy demand and to improve their farms’ overall profitability in a rapidly changing energy environment.

Publications available include:

Energy Consumption

- How Much Energy is Being Used on Your Farm?
- Electric Savings: Understanding Demand and 3-phase Motor Use
- Tracking the Energy Use on Your Farm

Field Crops

- Limiting Field Operations
- Energy Conservation in Corn Nitrogen Fertilization

Grain Drying

- Dyeration and Combination Drying for Increased Capacity and Efficiency
- Managing High Temperature Grain Dryers for Energy Efficiency

Swine

- Energy Efficient Fans for Swine Production
- Sizing Minimum Ventilation to Save Heating Energy in Swine Housing

Farm Equipment

- Ballasting Tractors for Fuel Efficiency

Poultry

- Energy Efficient Fans for Poultry Production

For more information, go to <http://farmenergy.exnet.iastate.edu>.

Updates, continued from page 1

Internet Updates

The following updates have been added on www.extension.iastate.edu/agdm.

Should I Invest in Agricultural Start-up Business Ventures-- C5-225 (3 pages)

Decision Tools and Current Profitability

The following tools have been added or updated on www.extension.iastate.edu/agdm.

Corn Profitability -- A1-85

Soybean Profitability -- A1-86

Ethanol Profitability -- D1-10

Biodiesel Profitability -- D1-15

Returns for Farrow-to-Finish -- B1-30

Returns for Weaned Pigs -- B1-33

Returns for Steer Calves -- B1-35

Returns for Yearling Steers -- B1-35

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