

TO: Corn and Grain Sorghum Board
FROM: Dennis R. Gardisser, Professor & Assoc. Dept. Head & Lynn Baxter,
Engineering Technician
DATE: November 21, 2008
SUBJECT: **Practicality Evaluation of Grain Storage Techniques**

1. Summarized 2007 findings and developed an on-line Educator course for county agent education and use on general grain drying principles.
2. Presented latest information on corn storage, drying, and management to approximately 500 attendees at 10 county meetings in early 2008.
3. Worked with Omega Engineering to produce 1/8' diameter x 48" long thermocouple fast response probes that could be used to take grain bag temperature readings up to 4' depths. These are currently being used at each of the grain bag evaluation site.
4. Utilizing a very durable waterproof tape from MASCO Sales Inc. to reseal holes at grain bag measurement locations.
5. Cooperative Extension Agents have helped us find cooperators in their area that are growing corn or grain sorghum. These agents are working with cooperators to gather data including: grain moisture in and out, energy consumption for drying and maintenance, market prices at harvest and date of sale, and any tidbits of information that might help with future management recommendations.
6. Fill in the blank data sheets have been developed for each site to gather the information desired. These will be utilized by county staff – making weekly visits during the storage season to record data. All data will be sent to an engineering technician for compilation and reporting. Efforts are being made to capture as much grain handling, drying management, and economic data as possible.
7. Tool kits have been put together for each cooperating county agent to use for data collection: 48" thermocouple probe and meter, sealing tape, scissors, markers, sling psychrometer, 60 ml distilled water for psychrometer, wipes, cleaning towels, an ice pick and carry bag.
8. Several farm visits have been made to evaluate the equipment and develop ideas of what data might be useful to record on this project.
9. The attached map has been developed to show the locations of cooperator collection points. A summary of the equipment is listed just below the map.
10. Seven cooperators have been identified – of these 5 locations have bags and 2 have bins. One of the bag locations has both corn & grain sorghum. One bin location is utilizing diesel powered aeration fans.



1. **Threlkeld Farms (Greene Co.)** – 9 – 32’ Brock bins with eve venting. 40 HP inlet fans powered by diesel power units
2. **Penter Farms (Poinsett Co.)** – Bags only.
3. **Young Farms (Jackson Co.)** – 2 GSI bins with 10 – 15 HP centrifugal fans. Passing everything through a drying bin with a 60 HP centrifugal fan.
4. **T. Young Farms (Phillips Co.)** – Bags only. Corn and Grain Sorghum
5. **M. Young Farms (Phillips Co.)** – Bags only
6. **Gills Farms (Desha Co.)** – Grain Bag System Bags
7. **Blagg Farms (Desha Co.)** – Bags only

To date, these are the locations and preliminary data for the cooperators that will be working with us on this project.

Data collection is ongoing but there aren’t really any conclusions at this writing. A good portion of the data should be in and formatted for presentation at the board meeting in early 2009.