



Dahlman Seed Company LLP

Simplified horizontal design and flat screen sizing replace 40-year old tower



Dahlman Seed Company Dassel, MN

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www.dahlmanseed.com

Company Personnel

- Robert and Darlene Dahlman, CEOs
- Daryl Dahlman, President
- Brian Dahlman, First Vice President
- Dawn Dahlman, Second Vice President

Company Highlights

- Family-owned seed company established 1922.
- Third generation family management.
- Corn and soybean seed production, processing and marketing.
- Dealer network in Minnesota, western Wisconsin and eastern North and South Dakota.

Dahlman Seed Company LLP is a family-owned, operated and managed seed company in South Central Minnesota. For more than 80 years, the company headquarters has been conveniently located in the family farmhouse. It was a short walk to the conditioning building located on the east side of the Dahlman farmstead.

In March, 2004, the Dahlmans doubled the length of their walk to work. A new corn and soybean seed conditioning tower, office and warehouse facility was completed on the south edge of the farmstead.

Designed by Popp Engineering, the new facility includes a horizontal profile conditioning line featuring flat screen sizing, a Satake Scan Master II color sorter and an 18,000 sq. ft. warehouse. It is one giant step forward for the family seed business.

"The equipment used to handle seed and apply seed treatments has changed to the extent that our old facility had become outdated," says Daryl Dahlman, "We needed more capacity, a more efficient way to handle totes and a more efficient warehouse. It was time to build."

In planning their new facility, the

Dahlmans made some critical decisions about conditioning capacity, conditioning equipment, amount of warehouse space and future needs. Starting with recent sales figures, the Dahlmans made five-year sales projections.

The projected five-year sales volume was then doubled to determine the design capacity of their new corn and soybean conditioning facility.

"You are never quite certain that you have made the right decision," says Brian Dahlman. "It is very easy to begin

Suppliers List

Project DesignerPopp Engineering
Ames, IA

Project Builder R&G General
Construction, Indianola, IA

Airscreen cleaner Westrup, Inc.

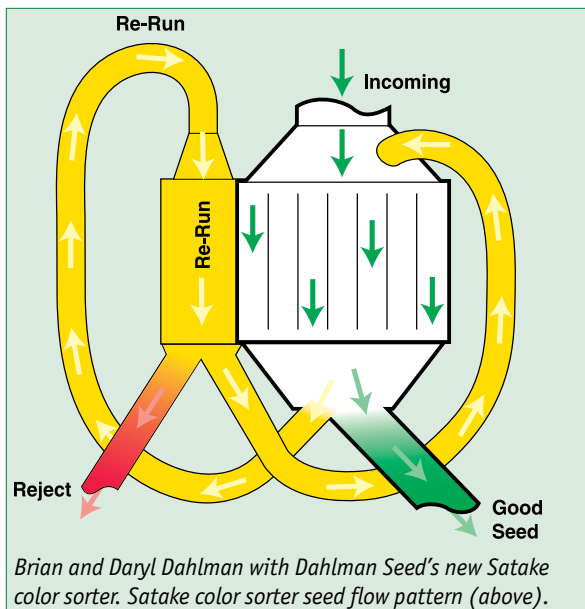
Bagging scalesTaylor Products
Bags Greif, Inc.

Bucket elevators... Universal Industries

Color sorter Satake Scan Master
Density separators..... Oliver Mfg. Co.

Dust controlTorit Donaldson
Seed Treaters..... Gustafson LLC

Sizing equipment Westrup, Inc.
Vibratory conveyor Forsberg, Inc.



second guessing.”

The Dahlmans also looked at their customer profile before finalizing the new facility’s design. Their farming operations are somewhat smaller and more diversified than in other regions.

“Years ago, selling seed to these farmers was a lot more fun because they needed a little of everything,” recalls Robert Dahlman. “They ordered seed corn, soybeans, alfalfa, clover, oats and

perhaps some wheat. Now it is mainly corn and soybeans. Selling seed has become so much more technical. It is more of a science today.”

Dahlman’s typical customer farming operation is 400 to 500 acres.

The Dahlmans seed customers still tend to prefer unit packaging. Very few orders for bulk seed are received. Most customers lack the equipment to handle mini-bulk containers.

The Dahlmans also realized that most seed corn was being ordered in only a few sizes: large and small rounds and flat. Seed treatment and trait options have become more important than a wide variety of seed sizes.

Prepared with an analysis of future plans and expectations, Dahlmans contracted with Popp Engineering, Inc. (PEI) to design a new corn and soybean conditioning facility.

Flat Screen Sizing

Seed flows from the gravity separator (right) to the color sorter. (Joe Funk photos)

“Dahlman Seed Company contacted us to incorporate our SoftSize (patent pending) flat screen sizing system into their corn and soybean conditioning facility at Dassel,” says Jonathan Popp, PEI president, “We designed a plant that allows them to choose how to size each lot of seed corn. They can select which conditioning machines are used depending on the needs of each lot.

“The unique design of the SoftSize system provides Dahlman with one of the most efficient conditioning systems in the industry because each piece of equipment fits the exact needs of the seed.”

Popp arranged the equipment on a slightly elevated mezzanine across one end of the warehouse. Seed flows from right to left through Westrup airscreens, across an Oliver gravity separator, through a Satake color sorter and on to the Gustafson treater and the Taylor bagger.

Vertical seed movement is provided by Universal Industries bucket elevators. A DAKOSA™ split-bucket elevator is used to lift both cleaned and treated seed to overhead bulk storage.

Lateral movement of clean seed from the gravity separator, color sorter and seed treater to the DAKOSA is via a Forsberg split trough vibratory conveyor.

“This split system allows us to move two separate lots at once,” says Daryl. “Theoretically, we could be moving two hybrids or both corn and soybeans





A Universal Industries DAKOSA™ split-bucket receives seed from a Forsberg split trough vibratory conveyor.

at the same time. To maintain seed purity and avoid potential for errors, all we ever move at once is treated and

untreated seed from the same lot."

The conditioning units, the material handling systems, and the dust con-

trol systems are all linked through a centralized PLC based control system. This allows Dahlmans to control the system and monitor the entire operation regardless of the flow combination selected for that seed lot.

The Sizing Process

Cleaning and flat screen sizing are performed by two Westrup air screen cleaners: a model FP 1500 and a model FAU 1500.

The FAU has two sieveboats, each contains two layers of screens and each screen layer has its own separate ball frame. Corn is pre-cleaned while soybeans are cleaned and sized with the FAU 1500.

The FP provides precision cleaning and sizing for corn. PEI's SoftSize system (see p. 97 for more details) is used to produce the desired seed corn size separations.

Both corn and soybeans can be directed to the Oliver gravity separator. The final stage for all seed is to pass through the Satake color sorter.

"There was some discussion about where to place the sorter, but we wanted to be able to use it for everything," says Brian Dahlman. "Both the Satake and the Oliver do something the other cannot. They are both tools that we use as necessary to provide our customers the best physical quality seed possible."

The Gustafson CBT 50 seed treater and Taylor bagger are located in a separate, heated work area between the office and the warehouse-conditioning area.

The new treater enables Dahlmans to offer both low and high rates of Poncho and other seed corn treatments. There is no customer demand for treated soybean seed.

"This new building is a few more steps from the house, but it is a world apart from what we had two years ago," Dahlmans say. "We believe we now have the technology to last for another 40 years."

For more information:

Popp Engineering, Ames, IA (515-232-6118/jpopp@poppengineeringinc.com)

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