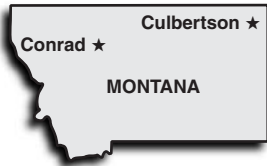


One Elevator, Three Locations

UNITED GRAIN BUILDS TWO IDENTICAL ELEVATORS IN MONTANA, ONE IN NORTH DAKOTA



United Grain Corp.

Vancouver, WA • 360-693-1521

Founded: 1969

Storage capacity: 17 million bushels at nine locations

Annual volume: 160 million bushels

Annual sales: \$1.3 billion

Number of employees: 56

Crops handled: Hard red spring, hard red winter, white, and durum wheat; corn; soybeans

Services: Grain handling and merchandising

Key personnel:

- Brian Wixom, manager-Culbertson
- Travis Northington, assistant manager
- Monte Faque, manager-Conrad
- Anthony Benefiet, assistant manager
- Leif Anderson, manager-Bucyrus
- Travis Finck, assistant manager

Supplier List

Bearing sensorsRolfes@Boone

Bucket elevators ..Union Iron Works

Bulk weigh controls..... Cultura Technologies

Bulk weigh scale Intersystems

Contractor/millwright..... Younglove Construction LLC

Control system.. WEM Automation

Conveyors (belt).....Hi Roller Conveyors

Conveyors (drag)Schlagel Inc.

Dust collection system Imperial Systems Inc.

Elevator bucketsTapco Inc.

Engineering..Larson Engineering Inc.

Level indicators..... BinMaster Level Controls

LinerLewis-Goetz

Manlift.....Schumacher Elevator Co.

Motion sensors....4B Components Ltd.



Roof system .Diathon Roof Coating
Sampler..... Intersystems
Truck probe Intersystems
Truck scale.. Cardinal Scale Mfg. Co.

New 1-million-bushel rail terminal at Conrad, MT, one of three completed in 2013 by United Grain Corp. The other two, at Culbertson, MT and Bucyrus, ND, are identical to the Conrad facility. All photos are of the elevator at Conrad. Photos by Bruce Selyem.



Conrad, MT Manager Monte Fauque

United Grain Corp. opened three new 1-million-bushel rail terminals across the Northern Plains in 2013, two in Montana and one in North Dakota. That would be unusual in itself for any U.S. grain company.

What makes it especially unusual in this

case is that the three grain elevators – in Conrad, MT (406-278-9183); Culbertson, MT (406-787-5867); and Bucyrus, ND (701-567-6751) – are identical.

“It’s not rocket science,” says Anthony Flagg, director of business development at United’s Vancouver, WA headquarters. “We needed to be able to store two or three different kinds of wheat and load trains in under 10 hours. Once we had the initial design on one elevator, it was easier and less expensive to take a cookie-cutter approach with the other two.”

Together, the three elevators cost approximately \$54 million to build, according to Flagg. The only difference between the three, all of which have 120-car loop tracks for loading trains on the Burlington Northern Santa Fe, is that the loop track at Culbertson also has a pair of ladder tracks to allow the mining firm Fairmount Minerals to load fracking sand for shipment to the nearby Bakken oil fields.

Overall, the location of the three new elevators was ideal for boosting grain originations in the countryside. Larger grain originations were needed



Overhead view of a 50,000-bph Intersystems bulk weigh loadout scale and an 11,500-foot, 120-railcar loop track running off a Burlington Northern Santa Fe main line.

to take advantage of the recent major expansion of United’s export terminal on the Columbia River in Vancouver, WA (reported in the January/February 2013 issue of Grain Journal).

According to Brian Wixom, regional grain manager for Montana and North



Help Prevent Explosions!





Walinga’s Central Vacs are perfectly suited for regular bulk reclamation or spill clean up. Proprietary inline cyclone units separate dust from bulk reducing dangerous MEC levels, while minimizing exhaust particulate.

A single Central Vac system can maintain vacuum capacity over hundreds of feet, to multiple connect points, on multiple levels and even adjacent buildings.

Book an on-site demo!
E-mail Jonathan at jtm@walinga.com





Limitless Piping & Connection Point Possibilities!

www.walinga.com

Corporate Head Office: Guelph, Ontario
Tel: (888) 925-4642

USA Head Office: Wayland, Michigan
Tel: (800) 466-1197

Agri-Vac Manufacturing & Sales
Fergus, Ontario
Tel: (519) 787-8227

Iowa: Sioux Center, Iowa
Tel: (800) 845-5589

Manitoba: Carman, Manitoba
Tel: (204) 745-2951

Saskatchewan: Davidson, Saskatchewan
Tel: (306) 567-3031



Inbound truck is weighed on a Cardinal pitless scale and sampled with an Intersystems truck probe, all under the control of a WEM automation system.

Dakota and location manager at Culbertson, the Conrad location is in the heart of Montana's Golden Triangle region, the state's richest area for the production of winter wheat. The locations at Culbertson and Bucyrus have access to ample supplies of spring wheat and durum.

United hired Younglove Construction LLC, Sioux City, IA (712-277-3906), as general contractor and millwright. Flagg comments that Younglove's bid was competitive, the firm has plenty of design-build experience, and it had been the contractor on the recent successful expansion at Vancouver.

Construction began at Conrad in

March 2012, the first project to start, and all three elevators were operational in time for the 2013 wheat harvest.

Concrete Storage

Each of the three slipform concrete elevators hold approximately 1 million bushels each. They consist of an "eight-pack" of concrete tanks standing 35 feet in diameter and 165 feet tall holding 115,000 bushels each. Three interstice bins each hold 30,000 bushels.

The big tanks are equipped with 45-degree above-ground steel hoppers, eliminating the need for sweep augers or bin entry, and BinMaster PROCCAP capacitance probes and diaphragm switches as level indicators. However, none of the tanks have aeration or grain temperature monitoring. Wixom notes that the design is geared toward loading trains as quickly as possible and sending the grain on to the Pacific Northwest.

Grain Handling

All grain handling functions are under the control of a WEM automation system.

Incoming trucks are weighed on a Car-

dinal 110-foot pitless scale used for both inbound and outbound traffic. An adjacent Intersystems truck probe takes samples during weighing. The WEM system manages the scales using an RF tag reader.

Trucks proceed to a single enclosed 1,000-bushel mechanical receiving pit, which feeds a 25,000-bph Union Iron leg outfitted with two rows of Tapco 16x8 buckets mounted on a 34-inch belt. The leg empties directly onto a single 25,000-bph Schlagel drag conveyor running out to 11 gates.

Tanks empty onto a 50,000-bph above-ground Hi Roller enclosed belt conveyor. The runs to a 50,000-bph Union Iron jump leg outfitted with three rows of Tapco 20x8 buckets on a 64-inch belt.

The loadout leg feeds a 50,000-bph Intersystems bulk weigh scale under the control of one Weigh software from Cultura Technologies. The system includes an RF tag reader for railcars that provides data on individual railcar capacities.

Wixom notes that, on average, the three facilities can load a 110-car train in nine hours. "It's worked out very well," he says.

Ed Zdrojewski, editor

A LEADER IN MICHIGAN GRAIN EQUIPMENT SALES HELPING YOU MEET ALL YOUR STORAGE NEEDS!



We are the premier dealer for commercial tower dryer sales & service in the state of Michigan!

Contact Zook Farm Equipment today for grain dryers, bucket elevator legs, spouting, augers, conveyors, and grain storage bins. We also carry the full GSI service line, giving you control over your grain and your profit.



Zook Farm Equipment is proud to distribute GSI service line products

zfe
Zook Farm Equipment

7980 Pratt Lake Ave. SE, Alto, MI 49302
(616) 868-6195 • www.zookfarmequipment.com