



## Case history



The new feed mill was built by Wagester and Lease in 2003. Designed to be efficient and economical to run, it has the latest **AutoPilot4Feed** control system from DSL Systems. DSL's partner company in North America is Comco Controls ([www.comco-controls.com](http://www.comco-controls.com)) and **AutoPilot4Feed** was installed and commissioned by Comco with commissioning help from DSL's own engineers.

To start, an operational specification was written and this was agreed by the customer, Wagester and Lease and Comco. This was useful to eliminate any misunderstandings early on and to identify any possible problems.

Comco designed and built the PLC panels and these contain an Allen Bradley SLC 505 PLC and remote inputs/outputs. Five PCs running Windows 2000 are used as workstations for batching, receiving, pellet mill, loadout and one for the manager. All data is held in a Microsoft Access database.

The mill is fully automatic with one truck receiving pit feeding 24 grain and ingredient bins. A hammer mill can grind into 3 ground grain bins. The main ingredient bins feed a major scale and a minor scale with the salt bin feeding both for better accuracy. There is a separate scale which can be fitted with up to 4 tote bags. Two micro systems each have 12 bins for small additions. A soya flush facility cleans out the micro scales transfer conveyor. Hand adds feed directly into the 5 ton mixer. Up to 5 metered liquids are controlled into the main mixer and after mixing, batches are transferred to one of 2 pellet bins or 2 bulk mash bins.

The pellet mill is a normal arrangement of feeder, conditioner, Sprout pellet mill, cooler and crumbler. The control system is fully integrated and fully automatic. The operator only has to click on the start button on the graphics and if it is a product which has been made before, click on confirm start. All control of pelleting is fully automatic with all parameters checked 10 times per second to monitor for plugs, temperature, amps etc.

The downstream fat coater is also fully automatic as the fat level is taken from the formula. Pellets are then routed to one of 16 finished feed bins with automatic swap from bin to bin on high level.

Loadout orders are automatically sent from the office commercial computer. Although there is a loadout operator, loadout is controlled as automatically as possible. A moveable 4 ton weigher is moved to one of 3 positions, automatically filled and then moved to the truck hopper for discharge. Filling and discharging the moveable weigher is repeated for larger loads. On completion, **AutoPilot4Feed** sends the weight information back to the commercial computer which prints out the loading tickets and declaration.

Four of the loadout bins have variable speed dischargers and this gives the facility of blending two base products together into the weigher. For this, **AutoPilot4Feed** has a product type called 'blended' which is defined as X% of product A and Y% of product B.

As **AutoPilot4Feed** controls the whole mill, quality is ensured by **AutoPilot4Feed's** accurate weighing, optimised pellet mill control and by minimising any operator mistakes.

The **AutoPilot4Feed** control system has built-in redundancy should a PC fail and a modem allows 24 hour support should it be needed. The modem may also be used to install modifications thus minimising the cost of any changes.

Sietsema are very pleased with **AutoPilot4Feed** and it has proved to be both easy to use and very reliable.