

A COMBINATION of modern grain-drying equipment has enabled Stephen Harris to cope with damp harvests while helping lower his drying and cooling costs.

While he hopes not to have to dry all his grain, beans and oilseeds in a repeat of 2008, Mr Harris is fully expecting to use his 20t Opico mobile batch dryer again at some point during this year's harvest on his farm near Bedford.

His Magna dryer has stood idle just once in the past 10 years. It ran at full capacity during the very wet harvest of 2008, when it dried more than 1,100t of grain plus oilseeds and beans, which were then loaded into a range of on-floor and bulk-bin stores. Last year about 300t required moisture removal.

"Having experienced pretty much everything in terms of harvest weather I know I've got a drying and cooling system able to cope with the extremes of grain moisture," Mr Harris said. "As the Magna dryer is easy to operate and maintain, I am able to cope with all the drying myself."

"To help cut drying costs and overall grain weight loss, I try to be patient and not combine wheat when it is more than 17% moisture content in the field. However, this is sacrificed during long periods of catchy weather."

Figures suggest that about 23kg is lost for each tonne of cereal grain dried from 17% to 15%. At 20% field moisture, losses amount to almost 60kg.

While having to dry and cool grain is an unwelcome extra cost because of increasing energy prices, Mr Harris said the efficiency of the Magna diesel-powered dryer meant he could remove 2-3% of grain moisture in about two hours for a fuel and labour cost of less than £5/t.

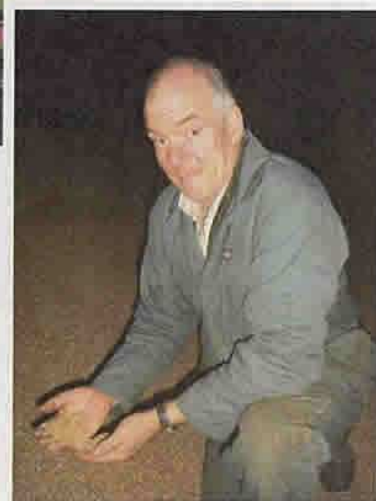
He pointed out that the heat-retaining bricks inside the burner chamber helped heat the air as well as the burner. And once the dryer is up to operating temperature, a multi-tiled heat-exchanger retains and builds up



Bedfordshire farmer Stephen Harris uses his 20t Opico drier to dry and cool the farm's grain. He also dries grain, beans and oilseeds for neighbouring farms.

Grain-drying

single-handedly with modern equipment



heat to improve drying efficiency.

In addition, Mr Harris has simplified his drying operation by using a Volvo F7 engine salvaged from a lorry to power the Magna dryer's PTO. This is positioned permanently next to the dryer and has freed up a tractor for other jobs.

Significant drying and cooling cost savings have been made in his bulk stores using a pile-dry pedestal cooling system coupled with differential thermostats. This system makes the most use of cold ambient air and is powered using off-peak electricity. Studies suggest cooling uses just 5%

of the power compared to drying cereals using pile-dryers.

Farming 220ha of heavy clay ground almost single-handedly, Mr Harris believes in keeping things simple. Two-thirds of the farm is sown with feed wheat in rotation with winter oilseed rape and winter beans, while about 20ha is left fallow each winter to help tackle herbicide resistant grass weeds.

The farm operates a plough-based system to bury grass weeds for establishing winter wheat and beans. Fields receive a single pass with a power harrow after the plough

followed by a drill. Everything is then rolled. Winter oilseed rape is established in a single pass using a subsoiler and Opico Variocast seeder.

Mr Harris also dries grain, beans and oilseeds for neighbouring farmers.

"We aim to get grain down to about 15% moisture content," he said. "It's important to cool the grain immediately afterwards and get the temperature down to 10 Celsius within a month to prevent breeding of weevils and beetles. Ideally rapeseed should be stored at 7.5% moisture content to prevent spoilage by fungi and mites."