

## MACHINERY

Lime spreading has become increasingly high-tech to give the accuracy required for an efficient contracting operation. Jane Carley catches up with a Bredal bulk spreader user to see how a precision approach is helping him deliver for his farming customers.

# Precision key to applications service

**A**dopting the latest technology for proven equipment and taking control of supply and delivery of materials is the secret of success for applications contracts, reckons David Hall of Shire Farm Services.

Operating in a 35-mile radius of his base at Worksop, Nottinghamshire, Mr Hall spreads 20,000 tonnes of lime and 5,000t of gypsum each year as well as applying bulk fertiliser to 1,500 hectares (3,700 acres), working in partnership with Sherwood Lime and Fertiliser.

Mr Hall says: "The window for applications, especially post-harvest, is now so tight you need to be organised and have contingency plans in place."

A Bredal K105 bulk spreader, supplied by KRM, holds 12t of fertiliser or 14-16t of lime and can cover up to a 100ha (247



acres) per day spreading fertiliser or apply as much as 700t of lime.

It is the fourth Bredal which Mr Hall has owned and he says it is a major progression from the original land-driven machine in his fleet.

"We operate Trimble autosteering from the terminal of the towing



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Case Puma 230, using an RTK signal to avoid the need for a base station.

"GPS control avoids misses and overlaps, guiding from the last tramline, usually set at 12 metres for lime. At this spread width it gives about 20mm accuracy," he says, adding the Bredal is robust, simple to operate and offers the capability of handling a wide variety of materials.

### Machine operation

Calibration is straightforward – a spreader-mounted calibration kit is used to measure the material's specific gravity with data entered into the electronic control box to set application rate.

The in-cab control box allows the operator to manually adjust application rate and monitor disc speed, material flow rate, area worked, time worked, and theoretical tonnage spread.



With a loader and driver for each job, Shire Farm Services claims to offer a quick, efficient spread.

Materials are also measured using a Weighlog weighing system on the telescopic handler used for loading.

"We can double check for accuracy; on lime it is within about 3 per cent – 1 per cent on fertiliser.

"The man-made nature of fertiliser means it is a little more

consistent, but the ability of the spreader to compensate for variations in materials is crucial, as changes in humidity can quickly affect flow rate," he says.

### Condition

A hydraulic belt drive to the spinner discs also gives an instant change of application

rate if required, without the lag associated with door systems.

Halfway through its third season, the spreader is still in excellent condition and Mr Hall says it will offer a high resale value when he comes to trade it in at the end of the year.

"They are so well built and little can go wrong which cannot

### Bredal K105 specifications

- **Capacity:** 9-11.3cu.m (with extension)
- **Control:** LH500 spreading computer option offers variable rates, GPS control, calibration and monitoring
- **Brakes:** Hydraulic as standard, pneumatic option
- **Tyres:** 750/60 R35 or 800/65 R32
- **Options:** Weigh cells, headland spreading kits, reverse drive for heavy materials
- **Price:** Starting from £49,250





A 12-metre spread width is the norm when spreading lime.

be easily fixed. The stainless steel hopper improves product flow and resists corrosion from the materials, helping retain residual value."

The high capacity spreader is complemented by the CVT transmission on the Case IH Puma 230 tractor and can comfortably work at forward speeds of 14kph, says Mr Hall.

### Economical

"It is possible to set the optimum engine speed for spreading at just 1,500rpm for a 540rpm pto speed. This saves a lot of fuel over the course of the day, although we find the latest AdBlue engines a lot more economical than the previous generation."

Field maps and as-applied records can be downloaded via USB stick from the tractor terminal and these can integrate with the customer's own farm management software if required.

This level of efficiency is essential to cope with the ever

tighter working windows, says Mr Hall.

"Drilling dates have come forward so we have a month less than in the past for post-harvest applications."

"The increased oilseed rape acreage also adds pressure with its early drilling date, but there seems to be more winter barley in the area this year and its early harvest should at least give us a little more breathing space."

Shire Farm Services operates an eight-wheel Scania tipper lorry for deliveries, giving a complete supply, deliver and application service, so it can control where, when and how the material is tipped, although extra haulage is hired as required.

### Logistics

"We also arrange to tip ahead of the spreader if the weather forecast is good, so we are never held up waiting for a delivery."

Traffic in the busy corridor between the A1 and M1 is an issue for many farmers and contractors, but Mr Hall says forward planning is key.

"We try to work outside busy periods - we do not want to get held up any more than we want to hold anyone else up. However, single carriageway roads, such as the route from one of our main quarries at Sleaford, are a nightmare and we will often put extra lorries on to compensate for delays."

A telehandler and driver is stationed at the heap for the duration of each spreading job, allowing the heap to be tidied as it reduces in size, speeding up clean up and making loading more efficient.

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Using an RTK signal, the tractor's terminal is used for guidance.