



Graeme Martin

## Beating the weather

Autumn 2006 will go down as one of the worst Super Air and its customers have had to face. Sheep and beef farmers had to battle with falling incomes, and the weather played havoc with aerial top-dressing, meaning some had to delay putting on the fertiliser necessary to maintain production levels.

'I would personally like to thank all our customers for their understanding during this tough time,' says Graeme Martin, Super Air's commercial manager. 'Wet airstrips and adverse weather conditions cause enormous problems for top-dressing pilots. Our crew did everything they could to service as many customers as possible, but even they have their limitations.

'I am aware that some of our customers would have been frustrated by delays to their top-dressing job, but I'm also sure that none of them would have put their pilot at risk to get that job completed.'

To help minimise the impact of poor weather on aerial top-dressing, Super Air is working with farmers to establish a number of all-weather airstrips around the country. These strips have a high-quality surface that enables planes to take off and land safely, even when the weather is wet. In addition, the approach tracks to the fertiliser storage bin are metalled, so that deliveries can be made in most weather conditions.

One of the unique features of the Super Air all-weather strips are the large, specially built fertiliser bins. These bins can store around 260 tonne of product.

'The new bins have a roll-on, roll-off roof to protect the product, and the roof can be operated by one person, so it's suitable for use whether you're delivering fert or spreading it,' says Mike Keen, Super Air's operations manager. 'The bins keep the product in tip-top condition, so as long as quality product was delivered, there should be no problems when it's time to spread it.'

The first of these strips is located just outside Te Kuiti, and services up to 30,000 hectares. Further strips are in development, and the shared cost structure makes them an attractive alternative to maintaining individual bins and strips.



Weatherproof fertiliser bins are essential under new guidelines

## Farmer responsibilities

A top-dressing accident in 2001 resulted in the death of a pilot, primarily because the load of lime he was carrying (which contained damp material) 'hung' in the hopper and could not be discharged. After that accident, the Coroner called for more stringent safety standards around storage bins on airstrips, so that product quality did not result in further deaths.

As a result, a taskforce has produced a set of guidelines that clearly spell out the safety responsibilities of fertiliser manufacturers, transport operators, farmers and pilots. Sometimes these accountabilities overlap, but that does not mean anyone can abdicate responsibility.

Super Air pilots must abide by these new guidelines, which means they are not allowed to fly if conditions are unsafe to do so. Poor fertiliser quality and dangerous strips will mean that top-dressing is not carried out.

Super Air pilots will be conducting risk checks at all airstrips they fly from this year. To ensure that your job does progress as quickly and smoothly as possible, here is a checklist of on-farm top-dressing areas that farmers need to take care of before any top-dressing job is booked.

- **Access tracks.** Is the track to your fertiliser bin adequate for the size of truck that will deliver fertiliser? Ask your transport operator to assess it for you. Today's larger trucks can deliver greater loads, but they need a firmer surface. If the track isn't up to scratch, transport operators may not deliver.
- **Turning area.** At the bin, is there enough room for the truck to turn and off-load, *without driving onto the area where the plane will be loaded*. When heavy trucks drive over the plane's loading area, they can rip up the surface. For a fully laden top-dressing plane, taxiing across a rough surface puts enormous stress on the undercarriage legs, and there have been many instances of accidents caused by this.
- **Storage bin.** Under the new guidelines, storage bins must be weatherproof, so that fertiliser is kept free from moisture and other contaminants.

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## Did you know...

An ag pilot cannot take off from an airstrip till half an hour after sunrise and must have landed again half an hour before sunset.



Sheep can be used to graze down an airstrip prior to top-dressing

They also have to be large enough, otherwise product quality is clearly going to be affected. Today, a 50-tonne bin will be emptied in 2 hours; relying on transport operators to keep it topped up can cause problems that put the pilot at risk.

- **Airstrip.** This needs to be long enough for safe take-off and landing, and free from pot-holes, lumps and debris. The area around the strip must be clear of fences, trees and other obstacles so the pilot has room for emergency manoeuvres.

For more information, check out the safety guidelines on the HSE Unit page at [www.caa.govt.nz](http://www.caa.govt.nz) or talk to your Super Air rep, pilot or transport operator.

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## Stock control essential

Sheep, cattle and top-dressing planes are not the best combination in the world, but in farming, there's no getting away from the situation.

Many farmers use stock to graze the airstrip, so that the grass is short enough for the planes to operate safely. This works well if sheep are used, since their relatively light body weight means little damage is done to the surface.

However, cattle are a different story. Ideally, cattle should be kept off the strip at all times. In the wet months they can cause significant pugging damage, roughing up the strip and putting both planes and pilots at risk. Even in the drier months, using cattle to graze the strip can cause damage.

When there is no option but to use cattle on the strip, they must be removed at least two weeks before the top-dressing job is scheduled, to give the strip time to recover.

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## Fence alert

One requirement of airstrips is that they have clear approach and take-off zones for planes, so that pilots have room to manoeuvre in the event of an emergency or sudden change in conditions.

On some strips, this is achieved by lowering fences when the top-dressing is being done, and putting them back up again when it's completed.

However, if the pilot doesn't know the fence has been lowered, it's nearly as great a hazard as if it was still raised. If the pilot doesn't know the fence is lying on the ground, and runs over it on take-off, the wheels can snag in the wires, bringing the plane crashing down.

Clearly this is a significant and unacceptable hazard – but an easy one for farmers to overlook. If you lower a fence to make the strip safe to use, please remember to tell the pilot.



A windsock must be in place when a top-dressing plane is operating

## Late summer still OK

If you don't get fertiliser on in spring, then applying phosphate in late summer is a viable alternative. That's the message from Warwick Catto, head of agro-sciences at Ballance Agri-Nutrients.

'Some farmers are under the mistaken impression that applying fertiliser in late summer will not deliver the same benefits as an autumn application. The truth is quite the reverse. If the phosphate is on the ground in late summer, it means the nutrients are there when plants start to use them. Not only that, the risk of run-off losses is low.'

If farmers miss the spring application window, then leave autumn fertiliser applications too late, there is a danger that conditions will deteriorate, meaning that there are fewer spreading days, and it becomes difficult to get your job scheduled.

'Come April and May, the weather starts to change for the worst, and a number of farmers find themselves wishing they had got their aerial top-dressing done earlier. We know from past experience that suddenly every farmer in the district wants his or her farm dressed, and there aren't the aircraft or pilots to do the job. Getting the job done in late summer ensures there is no stress later in the season,' says Graeme Martin, Super Air's commercial manager.

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## Pilot training update

Recently, all Super Air pilots underwent an annual competency test, something that is mandatory under Civil Aviation regulations. Run under the supervision of senior pilots Kevin Young, Joe Cave and Shaun Burton, the programme covered a wide range of safety and operational factors.

At this time of the year there is a tendency for pilots to become very busy, but as pointed out in the training update, there are set allowable limits for each pilot, with a maximum of 10 productive flying hours and a total of 15 duty hours allowed per day.

Pilots were also briefed on the emergency procedures that loader drivers must follow in the event of a plane not returning from a sortie within the specified time.

Much of the session focused on ensuring pilot safety through correct operating procedures, particularly with respect to maximum operating speeds under different load conditions, and the visibility requirements for operating a top-dressing plane.

The course also gave pilots a refresher on the importance of weights and balances in top-dressing, demonstrating the effect of increasing fertiliser loads and decreasing fuel loads on the forces acting on a plane's wings.