

Phosphine Folklore!

In a previous article in this magazine in January – I suggested you avoid losing your phosphine to the winds by the chimney effect and apply the product correctly into a sealed silo to ensure an effective control of the insects present.

Recently I spent a few days in the northern wheat belt looking at properties with a higher than usual resistance to phosphine in the resident weevils. Many of these silos were losing phosphine too rapidly due to poor seals – in fact it was 'blowing on the wind'! Inspections confirmed earlier findings that 'folklore' plays a part in the application of phosphine! Those with a higher level of resistant insects were doing something that increased the degree of selection.

A great deal of the 'folklore' surrounding the mishandling of phosphine can be sheeted back to the very first label instruction on the product container when it was first released in Australia in the late '40's. This suggested the best way to get phosphine into the silo was via a grain stream (up the auger) and if the silo was unsealed well just use a lot more! This probably worked on the logic that grain insects would not develop a resistance to a fumigant.

However we are now in crisis management in many countries of the world as resistance factors escalate, in an attempt to retain phosphine for use as a grain fumigant. In the eastern states the resistance levels are turning serious with strong resistance becoming common and now the first 'Super Strong Resistance' has been detected.

The situation in WA is slightly better with weak resistance common at around 45% and we have yet to detect our first case of strong resistance but this will not last if some of these poor practices I have observed continue.

As pointed out in the earlier story, the label has now changed and admixture to grain is now illegal as is use in an unsealed silo. Replacing silo seals when they are worn out or damaged, use phosphine in a tray in the headspace, always use the full dose for the size of silo no matter how much grain it contains, keep the silo sealed after fumigation – all these will work towards preventing resistance developing.

If you have to keep using your unsealed silos, consider Dryacide or aeration, both techniques are very useful for grain to be kept on farm for livestock. Use aeration for seed storage to keep the grain cool and retain viability.

Let's keep phosphine working for farm and export!

Call Chris Newman DAFWA on 9366 2309 or 0428 934 509 – to discuss grain storage solutions.

Caption for pics.

Pic of punched tin: 'Practices such as this or placing the tablets in a small tin reduce phosphine gas production from the tablets to a trickle over a very long time. This means that only the weak strains of weevils are killed – selecting the stronger. Do this over many years and you develop a population of weevils that are getting close to strong resistance'

Pic of tray 'Always place the tablets on a tray one layer deep'