



QUALITY SILAGE SYSTEMS

# PREVENT AEROBIC SPOILAGE *and cut costs*



**There's no need to tolerate dry matter losses; reduced animal productivity or feeding inefficiencies any longer... because we have the solution.**

After purchasing livestock, the single greatest direct cost you'll incur is feeding them, so it stands to reason that an efficient feeding system is paramount to your bottom line.

Aerobic spoilage is responsible for making silage unpalatable, but it is also a primary cause of metabolic disorders in ruminants due to increased mycotoxins and pathogenic species, reducing Dry Matter Intake, Feed Conversion Ratio and as a consequence limiting their potential Average Daily Gain.

Put simply, feeding aerobically spoiled silage is just not on.

The good news is that it is preventable.

## The Cause

Aerobic spoilage occurs to some degree in most sealed horizontal silage storage facilities as a result of oxygen contact.

Yet, according to researchers, discarding spoiled silage is "an uncommon practice when harvesting stored silage from a pit" (Berger and Bolsen, 2006).

In short, if this is your situation, you're needlessly settling for less quality and greater expense.

Depending on dry matter density, in a 1,000 tonne capacity horizontal silage pit 15% to 25% of the initial cut tonnes of silage is found within the top 90cm, and this is where it is most vulnerable to aerobic spoilage.

When you reduce the level of oxygen in contact with the silage surface, you'll achieve better quality feed, less waste and significantly reduced cost follows.

Presenting as a 'slimy' black organic matter, spoilage often has a pungent and unpleasant odour.

The visible aerobically spoiled area will also affect the surrounding silage beneath due to the leaching of mycotoxins.

These adverse aerobic conditions can occur during feedout on an exposed silage face or during storage, and usually when the silage cover fails to properly 'seal' oxygen out.

## The Solutions

To date, weighted polyethylene sheeting has been the most common method used for protecting silage. However, due to ongoing porosity issues, it is now considered outdated technology.

A new product called Silostop, which has been designed and tested in Europe, offers an innovative and proven oxygen barrier (OB) film which provides an excellent alternative to conventional polyethylene.

It's worth noting that findings indicate that Polyethylene allows up to 20 times more oxygen to pass through the seal.

## Managing Moisture

Low moisture levels of the crop and water penetration are also causes of spoilage. If silage density is maximised, then air inclusion in the silage is minimised. Density is therefore managed by reducing the particle size as the moisture levels of the crop drops.

Koster Crop Tester helps manage moisture content to avoid excessively dry silage and achieve the best results of 30-35% dry matter for chopped silage and 40-50% dry matter for baled silage.

A Particle Separator Box such as Penn State Box provides an effective management tool which ensures consistency of the chopped length, and has the added advantage of a capability for monitoring the kernel processor settings. Consistent length translates to greater pack-down density and ultimately less opportunity for moisture and air penetration.

