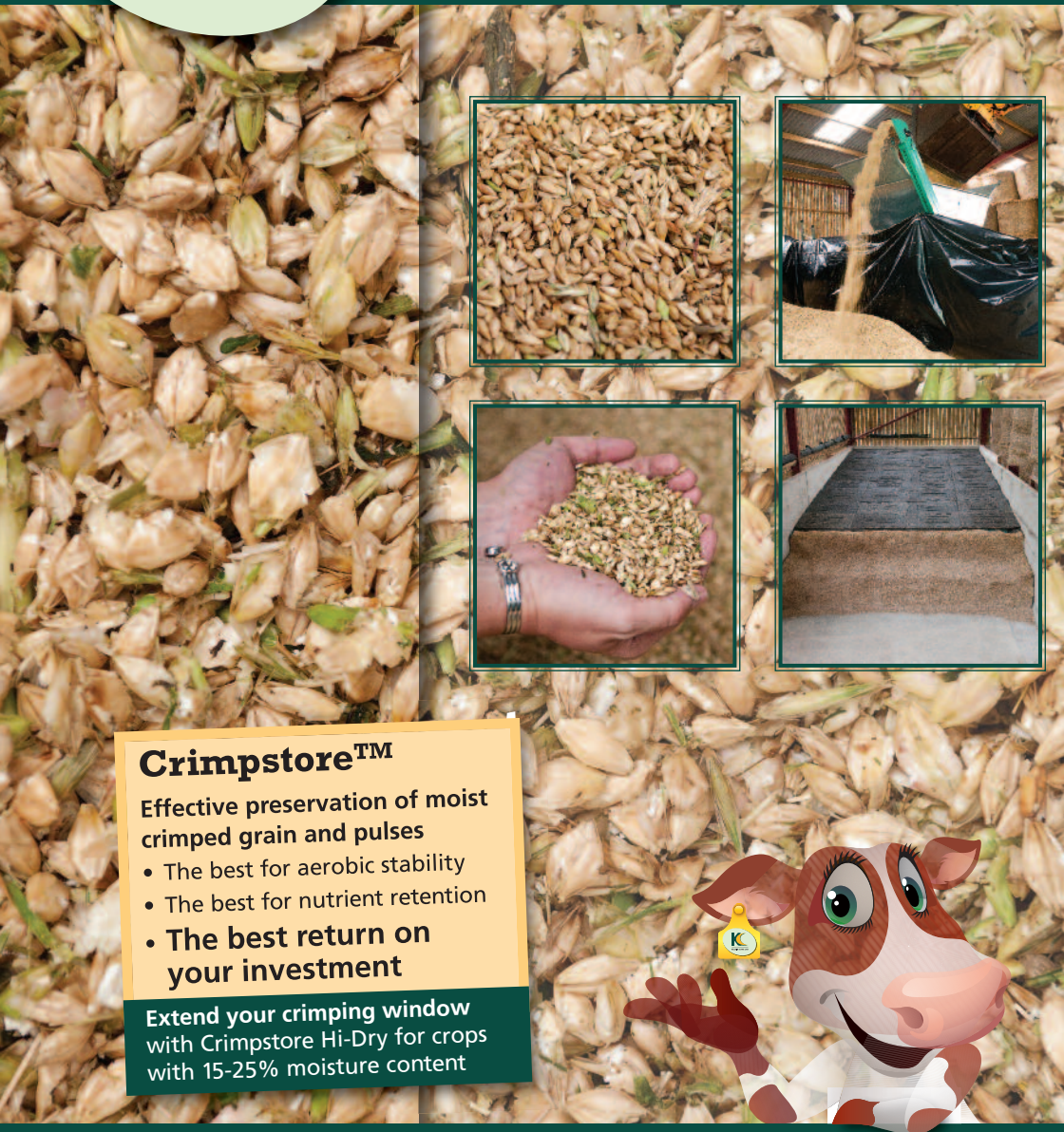




Summer 2013 Newsletter

# We are here to help this season



## **Crimpstore™**

Effective preservation of moist crimped grain and pulses

- The best for aerobic stability
- The best for nutrient retention
- **The best return on your investment**

Extend your crimping window with Crimpstore Hi-Dry for crops with 15-25% moisture content



*Products you can trust*

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## Andy Strzelecki

Technical Director



The wet autumn, long, cold winter, and sometimes even colder spring have caused real disruption to cereal plantings for the 2013 harvest. In some areas winter cereal sowings were impossible because of wet ground conditions. In others considerable acreages of winter crops have failed, in full or in part, resulting in efforts to 'patch-up' with spring cereals. All this is likely to put pressure on the price of feed grain for the next twelve months, and also increase the need to harvest as early as possible to re-establish normal rotations. This month I address some of the questions we at Kelvin Cave Ltd have been asked by farmers recently.

**Q. My forage stocks are at an all-time low, so I'm planning to wholecrop the cereals this year. When I've made wholecrop before it's always heated-up quicker than I can feed it, how can I prevent this?**

Wholecrop silage is one of the most difficult forages to consolidate really effectively because of its straw content and DM of 35%+. As a result the challenge from aerobic microorganisms, yeasts and moulds can be

even greater than in grass silage of similar DM. Treating the crop with a truly effective preservative like Safesil will guarantee minimal ensiling losses and unbeatable long-term aerobic stability because it eliminates the harmful bugs that cause heating and costly DM losses.

Rolling the clamp with a SilaPactor can increase compaction density by up to 40% compared to conventional tractor rolling, and sealing the clamp with O2 Barrier 2 in 1 will ensure that as much air as possible is excluded from the silage.

**Q. How can crimping reduce my concentrate bills?**

By combining, crimping and ensiling your cereal crop when the grain moisture content is between 25-45% you will have a starchy, highly digestible, concentrate in a ready-to-feed form. Harvesting at this stage (up to 4 weeks earlier than conventional harvesting) results in up to 30% higher grain DM yield per acre, eliminates the need for drying and expensive grain storage facilities and produces a dust-free and very palatable

end product that is far less likely to cause the digestive upsets associated with feeding dry rolled cereals.

Treating your crimped grain with Crimpstore 2000S will ensure maximum preservation of the valuable energy that is so important for good animal performance.

**Q. What can I do if I miss the ideal crimping 'window'? I don't have storage facilities for dry grain.**

You can still crimp and ensile your grain but you will need to treat it with Crimpstore Hi-Dry. When grain is ensiled below 25% moisture eliminating all the air from the clamp is impossible, so the risk of heating and spoilage is increased. Crimpstore Hi-Dry is powerful enough to deal with this, giving long-term protection against waste.

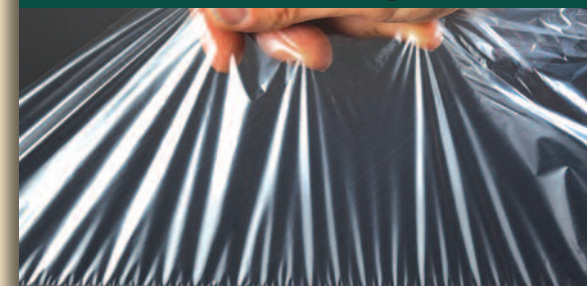
**Q. I've got a grain store, but drying costs are getting higher every year. Is there a safe alternative?**

Treating either whole or rolled grain with moisture content below 25% with propionic acid is a well-known and proven method for keeping it fresh. However, straight propionic acid is highly corrosive to grain processing equipment and contact with skin can cause severe damage. It also produces a lot of fumes that can be damaging to eyes and lungs, so many farmers prefer to swallow the cost of drying rather than risk damage to health and machinery. Propcorn NC is a non-corrosive but equally effective alternative to propionic acid. Producing 70% less fumes and classified as a mild irritant, many farmers have found it to be a cost-effective way to store their grain over the last ten years.

## Ollie's best 2in1 silage film - O2 Barrier 2in1



**AS STRONG AS AN OX**



### O2 Barrier 2in1

Combines an innovative combination of polyethylene silage film and polyamide vacuum film in a single sheet.

This unique product is only 100µm thick but offers up to ten times less oxygen-permeability, and at least as much strength, as conventional sheeting systems - ensuring the rapid formation and sustainability of anaerobic conditions in the clamp.

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# SilaPactor™ Kemble Farms Ltd - David Ball



David Ball is farm manager and director of Kemble Farms Ltd, Cirencester, who farm 1500 hectares. The family-owned business farms in association with the Royal Agricultural College Cirencester, and a substantial hectareage is farmed under arable crop contracts.

Other enterprises include the 750-cow dairy herd which is milked through a 36 point rapid exit parlour, the dairy followers, a livery yard and one of the UK's first Bio-gas plants.

The dairy herd is housed for the majority of the year in a purpose-built dairy complex, where grass and maize silage form the base of the cows' rations. 7000 tonnes of maize and a total of 3500 tonnes of grass and lucerne were ensiled during the 2012 season.

The Kemble Farms dairy team won the Gloucestershire National Milk Records Herd Competition Challenge Cup for the highest herd yield average in 2011 and have now won the highest-yielding individual cow and highest-yielding individual heifer cups in 2012.

David was generally happy with the 2012 silage harvest, taking opportunities, when the weather allowed, to cut and ensile as and when they could. The maize harvest was delayed due

to bad weather and yields were reduced compared to previous years due to the poor growing season. A target DM of 30% for both maize and grass and 40% for lucerne was achieved.

Having seen the Kelvin Cave SilaPactor at its launch and in Press coverage, David thought that it was the right approach to improving silage compaction in a clamp. Tractor tyres are naturally designed to reduce compaction rather than increase it, and it was this that he wanted to overcome with the SilaPactor.

Following a discussion with Kelvin Cave, who provided additional information on the expected increase of tonnage stored in clamps due to the better compaction, David agreed that the thinking and practical application was sound, but was a little sceptical about Kelvin's promised returns. However, he decided to buy a SilaPactor in time for the 2012 forage season.

## SilaPactor Proved its Worth

The 4-tonne SilaPactor was operated on a Fendt 160h.p. tractor, and all promises made by Kelvin Cave regarding the SilaPactor's performance were achieved. The 11 roller

wheels are designed to compact and compress the crop in the clamp and can increase compaction density by up to 40% compared to conventional methods. The 3-metre rear-mounted roller can boost typical silage density up to 320kg/DM/m<sup>3</sup> (depending on DM) compared to the average UK farm silage density of 180-220/kg/DM/m<sup>3</sup>. The effect of improved compaction was obvious at the clamp face, with minimal waste even on the shoulders of the clamp.

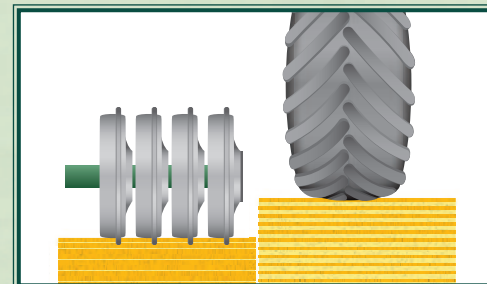
For the team at Kemble Farms the reduced need to move silage around the farm from outlying clamps is a real plus. More silage in the main clamps means less fuel and time transporting silage, and lower maintenance costs required for the clamps that are further away.

David measures silage density to calculate as accurately as possible the volumes of feed available for the herd. All the forage is fed through a computerised diet feeder, so all inputs, and outputs are accurately measured and recorded. Previously silage density averaged 0.7tonnes/m<sup>3</sup>, but this has increased to an average 0.92tonnes/m<sup>3</sup> with the SilaPactor, a 30% increase!

**IMPRESSIVE  
COMPACTION WITH  
SilaPactor**

- Increase silage compaction by up to 40%
- Make fewer passes: less fuel, less time
- Compact right to the edges of the clamp
- Reduce DM losses
- Improve silage quality

Improved compaction makes better use of available clamp space and reduces DM loss



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# AerWorx Good silage and good grazing starts at the grass roots!

## - Give your fields an earth-shattering experience!

At Kelvin Cave Ltd we have always sought ways to help you to produce better quality home-grown feeds; from more effective preservation of silage and cereals, to more efficient clamp compacting and sealing. So helping you to produce more from the same acreage by improving soil structure and health and getting better utilisation of fertiliser and slurry is the next logical step.

### Introducing the AerWorx Aerator – true innovation in soil conditioning

In time nearly all soils become compacted, restricting grass root growth, inhibiting drainage and reducing the soil's ability to breathe. This in turn reduces nitrogen mineralisation and reduces plant nutrient uptake. The population of soil organisms, from worms to vital bacteria and fungi, gradually declines as soil oxygen levels drop, resulting in sour, increasingly unproductive land.

The AerWorx Aerator has patented armour-hardened blades that aerate the topsoil to a depth of 200mm (8in), and their percussive effect has an even deeper impact, fracturing the subsoil down to depths of 450mm (18in).

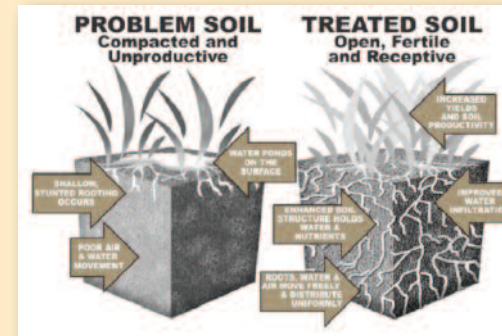
These deep fissures allow grass roots to grow to a proper depth, maximizing drainage, drought resistance and nutrient availability, and ultimately improving yield. Lightweight aerators do not have this effect; they simply spike holes in the upper layers of the topsoil!

Ranging in weight from 1.5 to 5.4 tonnes, AerWorx aerators offer by far the greatest weight per meter of any machine on the market. By water-ballasting the main drum, there is no need to add extra weight, and maximum blade penetration is guaranteed in all conditions, from hard-baked clays to the stoniest of soils. This means aeration can be carried out at the optimum time, when the soil is dry, to ensure a deep shattering effect, not just when the soil is soft enough, which can often result in smearing.

Arranged in a spiral pattern around the drum, the blades' angle of entry and exit has been carefully calculated to avoid surface disturbance. The heavy drum ensures any stones are pressed below the surface, avoiding the need for a further pass from a flat-roller. The patented graduating spiral design means an even pull behind the tractor – no jerking the equipment or the tractor driver.

Running at speeds of between 10-16kph (6-10mph), a 3m version will cover over 3ha/hour (8acres/hour), a far higher work-rate than lighter-weight implements which have to travel slowly to achieve any appreciable degree of penetration. It is this high work-rate, together with the weight of the water-ballasted roller that enables the AerWorx to penetrate dry soil and create the subsoil-shattering effect, which is the key to its success. Although surface cuts are the first step in the improvement process, deep shattering is the very important second step. Having the subsoil fractured, the roots can make the most of moisture and nutrients at depth. Only a heavy-duty, heavyweight

AerWorx machine is capable of doing the whole job in one pass.



The common factor in determining whether a soil is healthy or sick is AIR. All the consequences of poor soil fertility, including low biological activity, poor grass growth rates and feeding value and an increased fertiliser requirement to meet expected yields, start and finish with AIR. The good life forms in the soil (aerobic bacteria, earthworms and nematodes to name but a few) all require AIR to breathe and survive. A lack of AIR results in the death of the positive life forms needed to maintain

a healthy soil. Nature abhors a vacuum, so as the good life forms decline, the bad, or anaerobic microbes, fill their place. These microbes are not engineered to break down nutrient reserves, so the plant's food supply dries up. There are other undesirable side-effects including the production of Nitrous Oxide and Methane which are x300 and x24 respectively more polluting as greenhouse gases than Carbon Dioxide. Nature has evolved in a way to ensure the organisms which support soil fertility are AIR-dependent. Consequently, any actions which exclude AIR (and Oxygen) are detrimental to the natural processes that have developed to provide nutrients to growing plants and maintain them in a healthy condition.

The AerWorx Aerator is **the** tool that will help you break the vicious circle of ever-decreasing productivity. An uncompacted soil can produce up to two tonnes more grass DM per hectare (worth at least £200 per year), without an increase in fertiliser input.



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# Crimpstore™ Win win - Martin Lowcock

**Arable farmers could boost incomes and spread their harvest workload this year by selling grain to livestock producers for crimping.**

Following a number of difficult harvests, the benefits of cutting grain three to four weeks early are not to be underestimated, says feed processing specialist Kelvin Cave. "Maximum nutrient yields are achieved from crops that have not lignified and dried out – so

harvesting grain at 35-40% moisture (about 3 weeks earlier than normal) actually increases grain dry matter yields per hectare by 15% or more. It also spreads the workload, freeing up time to cut mature crops within a weather window, and releasing land early to prepare for following crops."

Cereals, pulses and maize can all be crimped – a process whereby crops are crushed and treated with Crimpstore preservative before

being ensiled. Crimpstore ensures a controlled, restricted fermentation, producing a livestock feed with optimum nutrient levels and digestibility.

"Cereals for crimping should be harvested with moisture content between 25 and 45%," says Mr Cave, "around 35-40% being the ideal. Growers can then sell to livestock producers using a simple pricing mechanism based on the dry matter content. For example, if conventional grain at 14% moisture is trading at £200/t, grain at 40% moisture would sell at £139/t," explains Mr Cave. "The cereal grower doesn't incur any drying costs, leading to considerable savings, and by combining early they get better weed control post-harvest," he adds. "However, grain levies will still be payable."

The benefit for livestock producers is that crimped grain has higher nutrient value and digestibility than dry grain, leading to better animal health and productivity. "Crimped grain typically has lower mycotoxin levels, less dust, and can be clamped or bagged outside, reducing the requirement for indoor grain storage," says Mr Cave.

## Case study

Middlesbrough farmer Martin Lowcock has been crimping all his winter wheat at Maltby Grange Farm for the past 10 years. He keeps 130 suckler cows on 220 acres of

## Wile 55 Special Moisture Meter

Exclusive to Kelvin Cave Ltd. this version of the well proven Wile 55 moisture meter has been improved and modified by the manufacturer to give accurate grain moisture readings up to 50% moisture. This makes it a vital tool for farmers and contractors who want to ensure that the correct amounts of Crimpstore and Propcorn NC are applied for effective preservation across the full moisture range.

The robust construction and rugged carrying case are designed to make this essential tool safe in the farm work environment.

Supplied with full, easy-to-follow instructions, the Wile 55 Special couldn't be more straightforward to use.

No messy grinding of samples is required, so multiple samples from the combine tank or grain heap can be tested quickly and cleanly, giving a good representation of the predominant moisture content of a bulk load of grain.



Continued...





**Meet the team at the following shows.  
We'll be pleased to see you!**

**Royal Highland Show**

20<sup>th</sup> - 23<sup>rd</sup> June  
Royal Highland Centre, Ingliston,  
Edinburgh, EH28 8NF

**Livestock Event 2013**

3<sup>rd</sup> - 4<sup>th</sup> July  
The NEC, Birmingham, B40 1NT

**Driffield**

17<sup>th</sup> July  
The Showground, Kelleythorpe,  
Driffield, YO25 9DN

**Royal Welsh Show**

22<sup>nd</sup> - 25<sup>th</sup> July  
Llanelwedd, Builth Wells,  
Powys, LD2 3SY

**Denbigh and Flint County**

15<sup>th</sup> August

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**Continued...**

permanent pasture, and has a rotation of 100 acres of winter wheat, 40 acres of spring beans, 20 acres of red clover silage and 50 acres of temporary grass leys.

Mr Lowcock feeds a simple diet of crimped wheat, red clover silage, and strawlage – his own invention of baled and wrapped green straw. He sells the cattle as stores, and markets 75% of his crimped wheat to livestock farmers in Cumbria, Lancashire, Northumberland and the Borders.

"I firmly believe that farm to farm trading is the way forward for the industry," he says. "Making crimped grain means I don't have to invest in grain storage and drying facilities, and there is a definite yield and gross margin benefit. The early harvest also means I can establish new grass leys earlier, and sell the resulting grass keep for early grazing by a flock of hill sheep, which almost covers my entire grass seed costs."

The wheat is harvested by local contractors Gloag & Sons, who were initially concerned about putting such high moisture crops

through the combine. However, those fears proved groundless, and they now start combining at 8am before moving onto mature barley on another customer's farm later in the day. Scots Gap farmer Simon Bainbridge processes the grain using a Korte1400 crimper and Crimpstore 2000S preservative, and Mr Lowcock then stores it in two silage clamps to enable delivery to customers throughout the winter.

"It's very important to ensile the crimped grain carefully, so this year I'll be using an O2 barrier and side sheets on both my crimp and forage clamps," he says. "Kelvin Cave Ltd have always provided me with a great deal of help and advice, so anyone considering crimping for the first time can rest assured that they will be well supported through the process."

"Given the large area of spring crops sown this year, cutting early for crimping will free up valuable time and enable farmers to get their rotation back on track, while also boosting yields and gross margins," he adds. "It's a win-win for all involved."

Proven equipment for  
the **best** crimped feeds



**Murska and  
Korte Crimpers**

- The best for crimping, dry rolling and bagging
- The best at processing cereals and pulses at all moistures
- The best range for processing 5 tonnes/hour to 40 tonnes/hour
- The best return on your investment

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# ClampTiles

## Securing your silage investment

### *No more mucky tyres!*

- Effective weight where it's needed
- Ergonomically designed for ease of handling
- Protects silage sheet from bird damage
- Stackable for tidy storage



Ensuring effective, weighty coverage of silage sheeting is part of the answer to making quality, waste-free silage.

ClampTiles have been designed to meet this need, and eliminate the unpleasant work involved when working with tyres.

Suitable for partial coverage weighting sides and sheet joints, or total coverage if minimising the risk of bird damage is necessary.

ClampTiles are easy to handle and do not trap water which provides a breeding ground for insects. They can be stacked tidily on a pallet and stored away when not in use.

ClampTiles are made from 90% recycled material, and have a useful life expectancy of at least 15 years.

## Safesil™ guarantees prolonged storage stability\*

silage preservative

### Preserving silage with Safesil™

- NO Heating
- MORE Energy
- NO Waste
- MORE DM

\*Journal of Dairy Science 94:824-831



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