

Dairy Consultancy Services

Autumn Newsletter - Maize Edition

www.dairyconsultancyservices.com

Maize Update

September 2011

This year has seen fantastic growth in our acreage of maize seed working closely with Thomas Bros Nash and with the support of our Maize seed suppliers Horizon Seeds and their parent company Grainseed.

Our clients maize crops are looking very well despite the variable summer weather we have seen and thoughts now turn towards harvest. ES Ballade, Dominator, Picker and Coastguard have all grown well with bumper crops expected. Good reports are coming back on our starter fertiliser Maxi Maize which has ensured crops got off to a good start.

The key to quality as ever will be to allow crops to mature fully to allow starch yields to be optimised and thus ensuring feed value is maximised. This could mean a wider than normal harvest window this autumn due to the extended period between the earliest and latest maize plantings in the spring.

To ensure maize silage has a fast and efficient fermentation reducing dry matter losses and preventing heating at feed out, we recommend treating with a well proven additive such as **Double Action Ecocorn**

Our clients have had great success with the new clear plastic "cling film" silage sheets along with secure covers, which have ensured there is little or no surface waste. (Contact us for prices.)



Ask us about our range of maize additives, silage sheets and secure covers to ensure you get the best possible value from your maize silage this autumn.



We will once again be hosting an open day on Monday 10th October at Thomas Bros maize trial site near Cardiff where visitors can enjoy hot coffee and bacon rolls whilst reviewing new and current maize varieties.

Neil Groom of Grainseed will once again be on hand to offer advice on maize variety choice and agronomy. (Invites will be sent out shortly)

HIGH OUTPUT
Milking Power

Choose any one of our 'high output' maize varieties, and you'll see the results where it really matters - in your bulk tank and in your pocket.

With an exclusive range of the very best performing maize varieties you can get - especially bred for the UK climate - Grainseed can make the best of your land, your resources and your cows.

To find out more call Neil Moorhen
Dairy Consultancy Services
07795 373433
www.dairyconsultancyservices.com

Grainseed

Tel 07795 373433 or email dairyconsultancy@aol.com

Maize Harvesting - Additive Selection

With the high cost of growing maize silage and the even higher cost of bought in feeds it makes sense to use a maize silage additive that will ensure a fast efficient fermentation leading to improved animal performance and also reduce aerobic spoilage.

Double Action Ecocorn combines the fermentation and animal performance benefits of MTD/1 inoculant with reduced aerobic spoilage from potassium sorbate, a safe, non-corrosive food and feed approved acid salt preservative - all in one easy to use pack.

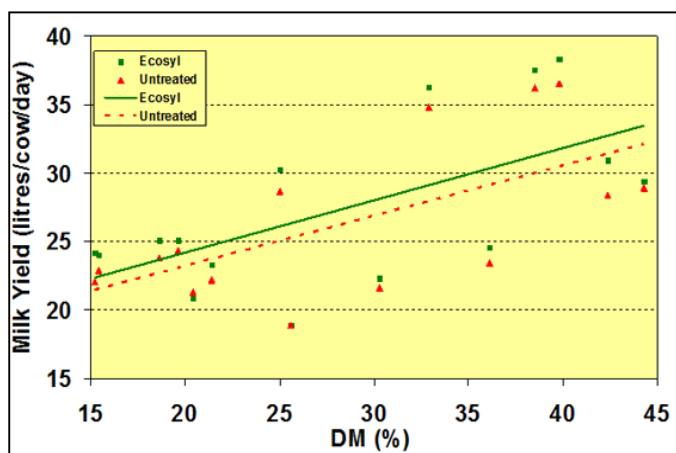
MTD/1 Inoculant - is the unique high performance strain of *Lactobacillus plantarum* proven over a wide range of crops and ensiling conditions to improve fermentation and animal performance. This is achieved by increasing the speed and efficiency of fermentation, reducing fermentation losses and improving palatability.

At Dairy Consultancy Services we believe that any product that we recommend or supply should be proven both on farm and with good published trial results.

With 15 independent dairy trials, MTD/1 is supported by more animal performance evidence than any other inoculant. Trials with maize and whole crop cereals have shown increases in milk yield of between 1.8 and 2.2 litres/cow/day respectively.

Potassium Sorbate - Trials by the Maize Growers Association and Kingshay have shown repeatedly that chemicals are more robust than inoculants for preventing aerobic spoilage.

In the 2002 MGA trial **Double Action Ecocorn (MTD/1 + Potassium Sorbate)** was the only product tested that reduced the daily loss in income £ due to heating and spoilage.



15 Independent dairy trials (see graph above)

Trials have shown significantly longer silage stability. See table below showing days stable. This also prevents heating in the feed trough.

Crop	Untreated	DA Ecocorn
Wheat	2.4	8
Barley	2.1	5.3
Maize	1.3	1.3



COB RIPENESS TRUE MATURITY

Cob ripeness is the field indicator farmers use to see if maize crops are ready to harvest. It is a measurement of the speed of starch lay down and grain maturity of the cobs in different maturity groups. NIAB maturity groups are determined through whole plant dry matter and do not take into account the true grain maturity. Many varieties appear to have good NIAB maturity ratings but gain that through rapid plant death and not true cob maturity.

To maximise the digestibility and feed value of your maize silage you should aim to harvest when the cob is firm with only the slightest drop of moisture able to be squeezed out of the grain with the plant itself still having some green leaf growth.

When a variety with poor cob ripeness is grown in an area with lower available heat units, there can be a noticeable delay in grain maturity, reducing crop dry matter, starch content and feeding value of the silage. Always grow a variety with proven cob ripeness.

Cob Ripeness	Clear Grain	Plenty Ripe	Soft Dough	Firm Dough	Hard and Moisture
Grain Description	No Starch	Starch Kernel can be flexed	Slackest drop of moisture can be squeezed from grain	Harvest for Forage now	Harvest for Forage
Approx. Time until Harvest	1 month	2-3 weeks	7-10 days		
Appearance of Grain/Cob					
Approx. Whole Plant DM (%)	Less than 18%	18-25%	25-28%	Approx. 30%	More than 35%

* This is only a guide as whole plant DM (%) will vary depending on how green or how senesced the stem and leaves are.

Grainseed Ltd.

Ask for your free copy of our maize harvesting guide to ensure you allow your maize crop to reach optimum dry matter %.

Harvesting at the correct maturity allows cobs to maximise starch yield and quality resulting in improved feed value and the opportunity to reduce bought in feed costs.



Maize Harvesting Tips

Clamping

- ✓ Chop to 1 cm for easier compaction, if targeting high BF % then consider chopping at 2 cm
- ✓ Apply **Double Action Ecocorn** to ensure fast efficient fermentation with reduced spoilage
- ✓ Ensure clamp is filled rapidly, ideally same day if not then sheet overnight.
- ✓ Fill evenly in thin layers
- ✓ Roll continuously especially on shoulders
- ✓ If sheeting overnight roll for around max 30 mins before sheeting.
- ✓ Use clear "clingfilm" sheet covered with 500 gauge black plastic and weighted with **secure cover** and gravel bags.



Feed Out

- ✓ Wait 3 weeks before opening to allow fermentation to stabilise and grains to soften.
- ✓ Use a block cutter or shear grab to keep the face tight. If using a bucket scrape down not up.
- ✓ Move face back quickly, at least 6 inches a day in winter and 12 inches in summer.
- ✓ Cut or roll sheet back as you go weighting the front edge with gravel bags. Never let it hang down over face as this will increase heating.
- ✓ Tidy up fallen silage to prevent it heating .

Secure Covers

Secure Covers are made from high quality, finely knitted, UV stable polyethylene mesh.

The Secure Cover is placed over the normal silage sheet and weighted with gravel bags only at the edges and joins.

Once fitted, Secure Covers' unique construction disperses wind gusts making sure that the silage sheet remains in place on the silage pit.

Secure Covers effectively reduce surface waste by keeping the silage sheet in close contact with silage surface (contact us for prices).

What is Silostop® Clear 2-step film?

The Silostop® effect

Silage sheets

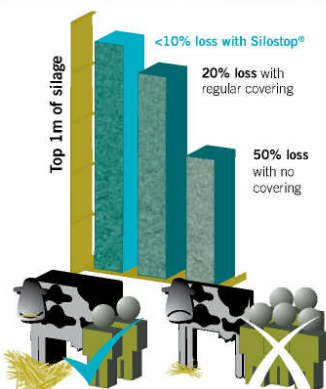
Silostop® Clear 2-step Oxygen Barrier film is a thin (45 micron) impermeable film which prevents the entry of oxygen into the silage. It is lightweight, strong, easy to use and cost effective. Use of Silostop® results in minimal silage loss, improved animal intake and animal health.

Oxygen Transmission Rate (OTR) comparison

Sample	Thickness micron	OTR ASTM D3985 100% O ₂ cm ³ /m ² /24h	OTR DIN 53380-3 21% O ₂ cm ³ /m ² /24h
Regular silage cover	125	2000	400
Silostop® Clear 2-step	45	30	3

The table shows that standard independent lab tests prove that Silostop® is at least 100 times more of a barrier to oxygen than conventional 125 micron silage covers.

Silostop® Clear film must be protected from sunlight with a second layer. This second layer can be either a regular silage cover, or heavyweight woven nets such as the Silostop® Anti-UV net.



Using Silostop® results in a reduction of labour requirements and improved feed intake.

"Silostop® is easy to use, labour saving and creates a very effective seal."

Ian Macalpine,
Dairy Farmer,
Lancashire

"Since using Silostop® there has been no top layer spoilage, and an improvement in the quality of our silage."

Mr Rowland,
Dairy Farmer,
Anglesey

"Using Silostop® on brewers grains has eliminated waste; we no longer have to remove spoiled grains."

Mick Hulse,
Dairy Farmer,
Staffordshire

"This was the best sealed section of a large bunker I have ever seen in my life!"

Dr Keith Bolsen,
Professor Emeritus
Kansas State University,
USA

We can supply a complete range of silage sheets from black plastic and clear "cling film" sheets to secure covers and gravel bags for cost effectively sealing and protecting your silage clamp.

Contact us for our range of sizes and latest pricing info on 07795 373433

For ultimate forage quality, we recommend combining Silostop® Clear 2-step Oxygen Barrier film with Silostop® gravelbags.

Ask about other Silostop® products to protect your forage from birds and help eliminate tyres.



Feed Update

Feeding Maize Silage

Maize silage provides an excellent forage source for dairy cows supplying high levels of both energy and starch. However ensuring maize is effectively included in your ration needs care to ensure that the cows energy, protein and mineral requirements are correctly balanced.

The recommended level of maize silage inclusion will depend on your milk contract requirements and the quality and quantity of grass silage being fed.

The aim should be to balance energy, protein starch and fibre levels to ensure yield and milk quality is optimised. If aiming for high BF% limit maize silage inclusion to no more than 50% and ensure plenty of long fibre is included. Supplement with a high digestible fibre compound, blend or straights and balance protein requirements particularly rumen degradable protein.

If higher milk protein % is a priority, for example on cheese contracts then higher levels of maize silage inclusion may be required > 50%. It is advisable to feed a high digestible fibre cake in parlour and supplement any additional starch required in the TMR using rolled wheat or crimped maize.

If grass or maize silage is low in dry matter and acidic then it is advisable to include additional long fibre as straw or haylage to promote cudging and the cows natural buffering. In more extreme cases it may be necessary to include rumen buffers such as acid buff or yeast.

Care should also be taken to ensure correct mineral supplementation as maize silage is very low in all essential minerals. **Dairy Consultancy Services** can provide a forage mineral analysis and complete diet check and then supply a custom mineral to balance your ration.

We can also supply a full range of custom made fixed formulation, open declaration compounds and blends, along with a range of straights, moist feeds and feed supplements, which we group source at best cost.

Feeding Maize Silage

- ✓ Identify your milk contract quality requirements
- ✓ If high BF % required limit maize to < 50% of diet
- ✓ Limit feeding of starch sources such as wheat
- ✓ Feed high fibre feeds such as sugar beet pulp, soya hulls, wheatfeed, (ideally as a blend)
- ✓ Use a parlour cake high in digestible fibre
- ✓ Ensure adequate long fibre is fed ie 0.5kg straw.
- ✓ If high milk protein % required feed > 50% maize
- ✓ Use feeds high in rumen protein such as rape-seed ext, high protein molasses or Optigen.
- ✓ Consider the use of rumen buffers or yeast.



Dairy Consultancy Services **Independent Nutrition Consultancy**

Group Sourced Feed Options
Fixed Formula Compounds & Blends
Moist Feeds
Straights
Molasses
Custom Minerals & mineral Buckets
Calf Milk - Bonanza Shine Once A Day

Call us to arrange a free herd performance and ration check using Interherd and advanced ration software to help you identify areas for improvement.

Tel 07795 373433 or email dairyconsultancy@aol.com