

BIOTALK

Delivering forage and nutrition technologies

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National forage survey confirms benefits of wholecrop

Results from the recent National Forage Survey sponsored by Biotal, British Seed Houses, Syngenta and Dairy Farmer show some real benefits from growing wholecrop, and this could be good news for dairy farmers after the difficult grass silage season.

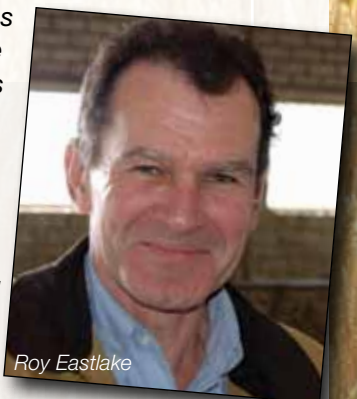
"The dry and late grass silage season has resulted in many light crops with harvest commonly two weeks later than usual," comments Biotal National Technical Support Manager Roy Eastlake. *"This will leave many farmers facing a forage shortfall and in many cases this can be filled effectively by making wholecrop."*

Based on the quantity and quality of first cut Mr Eastlake advises it might be prudent to make wholecrop to boost forage stocks. The results of the forage survey confirm that feeding mixed forages can have a beneficial effect on milk yields.

"The Survey showed that those farms where mixed forages are fed, are on average producing over 1,100 litres per cow more than those farms which relied solely upon grass silage. Mixed forage encourages higher forage intake, increases rumen health and also reduces diet sorting"

"To ensure a palatable well-fermented forage we would recommend treating wholecrop with an additive proven in well-designed scientific trials. The Survey shows the benefits of using silage additives with herds fed on treated silage producing on average 900 litres per cow more than herds fed untreated silage."

"Well made wholecrop silage could be the saving grace on many dairy farms this year faced with lower than expected first cut grass silage crops," Mr Eastlake concludes.



Roy Eastlake

Come and see us at
Cereals 2010
June 9th & 10th

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New technologies extend wholecrop window



Nick Berni

Farmers faced with variable silage stocks can reduce the impact on winter diets by making the correct decision when harvesting cereals, states Nick Berni, Forage Products Manager with Biotalk Ltd.

According to Mr Berni, the increase in the use of cereals for wholecrop production, combined with a range of conservation methods, mean these crops can provide considerable flexibility when planning forage requirements.

“Developments in inoculant technology and preservation techniques have greatly increased the harvest window for wholecrop cereals. Harvesting can now be successfully carried out across a range of crop dry matters and growth stages.

“Farmers can now choose whether to take cereals as fermented wholecrop, high dry matter fermented milled wholecrop or crimp depending on their particular circumstances and feed requirements. The key is to make the decision early and then to focus on optimising the value of the conserved crop.”

Mr Berni points out that the development of kernel processing units mean that cereals can be harvested for wholecrop at dry matters up to 75% which has

greatly extended the harvest window. Fermented wholecrop can be harvested anywhere between 35-75% DM although typically harvesting is at the ‘soft cheddar cheese’ stage equivalent to 35-45%DM is preferable.

Chop length is very important with high dry matter forage. A balance needs to be struck between what is ideal for clamp consolidation and rumen health.

Developments in forage harvester technologies can give farmers and contractors far more control over the precision of harvesting, as Chris Wiltshire from John Deere explained to Nick Berni recently.

“Forage harvesters for wholecrop must be able to produce a high quality material across a range of dry matter contents,” stresses Chris Wiltshire.



Chris Wiltshire

“Our 7050 series Forager Harvesters offer complete whole crop solutions. The Harvest Lab with AutoLOC (Automatic Length of Cut) system uses crop dry matter information to control the chop length to provide the most suitable product for effective clamping.

The HarvestLab sensor mounted in the forager spout measures crop dry matter 17 times per second and is the only proven system on the market for accurate real time dry matter measurement.

“With the AutoLOC transmission linked to the HarvestLab, the operator sets dry matter and chop length information according to the farmer’s requirements. As the dry matter rate within a field varies, the AutoLOC automatically adjusts the cut length in 1 mm increments according to the pre-defined values, ensuring that the cut length is at its absolute optimum according to the dry matter,” Mr Wiltshire explains.

During harvest it is also important to ensure the most suitable additive is used to ensure aerobic stability, minimal waste in the clamp and a highly palatable feed.

“The dry matter of the crop has a significant impact on how it will behave in the clamp and this affects what is required from the additive to ensure a stable, palatable forage,” points out Mr Berni. *“The Biotalk range contains additives which are specifically formulated for use on crops of differing dry matter contents. “By making use of the developments in harvester and preservation technologies, farmers have a far wider choice of options for conserving wholecrop,”* Mr Berni concludes.



Top quality forage underpins success

Wholecrop triticale has proved a valuable addition to the farming system for one leading Derbyshire dairy farm.

Michael and Caroline Wainwright farm the 150 acre Dowlow farm, near Buxton where they run a herd of 60 dairy cows plus youngstock. Farming at 1250 feet above sea level brings particular challenges, not least a seven month winter and some real restrictions on potential forages. But that hasn't stopped the Wainwrights producing prize winning silages and achieving yields of over 10,000 litres per cow.

The farm was all grass until 2005 when Biotal Technical Specialist Ian Smith suggested trying wholecrop. "We wanted to boost forage intakes to promote and preserve rumen health," Ian explains. "After one year growing lupicalbage we have grown triticale as it suits the farm better and provides exceptional rumen scratch factor."



Michael and Caroline Wainwright with Biotal's Ian Smith

Michael and Caroline have been growing 14 acres of winter triticale which is then followed by a five year ley. This year however they do not have a suitable field so they will be wholecropping winter wheat grown by a neighbour.

The wholecrop is cut by a contractor at the soft cheese stage and is not milled to keep the grain intact. Particular attention is paid to filling the clamp to minimise waste and ensure a good fermentation. The crop is treated with **Biotal wholecrop gold** and the clamp is filled in a day, being covered with a plastic sheet and Secure covers with pea shingle bags on the shoulders.

"The attention to detail produces an excellent forage which has averaged 50% DM, 10.5 MJ ME and 22% starch. It is an ideal complement to the grass silages which are often a little wet, averaging 22 - 25% DM," Ian continues.

The diet comprises two thirds grass silage and one third wholecrop, fed as a TMR with a bespoke blend, **Biotal SC gold** yeast and protected fat to provide M+30 litres. An 18% dairy compound is fed to yield above this.

Attention to detail has resulted in Michael and Caroline winning the Derbyshire Grassland Society alternative forages competition and being runner up in the grass silage competition.

"Adding wholecrop triticale to the system has improved intake and yields while providing a good lead into an early reseed. Farming at the altitude we do, we need to ensure a good supply of quality forage and wholecrop triticale fits the bill," Michael Wainwright concludes.



David Holdcroft with Biotal's Jayne Dandy

National forage survey winners

The lucky winner of the first prize of two flights to New Zealand was David Holdcroft of Houndings Lane Farm, Sandbach.

The five runners up, who each win £200 flight vouchers are Aled Owen from Denbigh, Chris Wilson from Penrith, Andrew McPhillimy from Newtonstewart, Nigel McCutcheon from Omagh and Robert Symms from Sherborne.

Wholecrop brings significant benefits



Peter Lord

Introducing wholecrop into the diet of the 400 cows at Hartpury College, Gloucester has brought some significant benefits.

The herd is currently housed all year round and the diet had been based on maize and grass silage but Peter Lord, who manages the farm for Velcourt, was keen to introduce wholecrop. He thought it would help improve forage intakes and also solve some of the problems with the rotation on the farm.

The results have been significant and wholecrop will remain an integral part of the system despite a significant change to the farming system.

“Our initial aim with a third forage was to improve rumen function and wholecrop seemed to fit the bill,” Peter explains.

“We also wanted a crop which would be easier to follow with grass as we were not achieving good results following maize with grass.”

Peter initially grew 15ha of wheat but this has steadily increased and this year 49ha of wheat has been grown. Peter believes the key is to treat the crop as if it were being grown as a grain crop and not to cut back on inputs.

On 2009/10 crop Peter has applied 180kgN/ha in three dressings. Fungicides are applied at GS30, 31 and 39 and he also uses a growth regulators. An insecticide is used to control aphids and he uses herbicides to control blackgrass and broad leaved weeds.

“We want as clean a seedbed as possible when we follow wheat with grass. Changing the rotation means the grass is going in far sooner and we achieve a much better germination. We can subsoil as required, something that is not possible in most years after maize as the ground is too wet, plus we have been able to adopt a minimal tillage system in some cases before sowing the grass. After maize we always had to plough so we are saving on establishment costs and are reducing carbon release.”

The crop is harvested at the soft cheese stage, usually in the second or third week of July. Peter looks for a consistent crop across the whole field before harvesting. The crop is cut by contractor and will all be harvested within two days. It is treated with **Biotol wholecrop gold** and is sealed with clear film and plastic. The crop averaged 30t/ha at 47%DM and 11.5ME.

The wholecrop is fed in a TMR with maize and grass silage, crimped maize, a protein blend, sugar beet pulp, molasses and protected fat. All the forages made on the farm are treated with the appropriate Biotol additives. The all year round calving herd is averaging 8,600 litres.

Peter has been very pleased with the results. *“When we first added wholecrop we saw a yield response, particularly in cows in the first 100 days. Milk quality was also much improved.”*

“When the wholecrop ran out in the first year we saw a decline in appetite as the cows adjusted to a higher proportion of maize in the diet. Yields also fell so we now grow enough to ensure we never run short.”

Peter is so convinced of the merits of wholecrop that he is retaining it in the system despite a plan to reduce cow numbers to 250 and reintroduce grazing. *“With the price for rented land increasing and the problems of slurry storage in an NVZ, we have decided to reduce numbers but we will continue to grow an equivalent amount of wholecrop as it is working so well within the diet and the rotation.”*

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