



## Choosing the right twine for big bales



Baling with large rectangular balers has never been more popular. As more and more contractors and farmers seek to increase the output of their balers through the production of increasingly dense and compact bales, there is an evident need for stronger bale twine capable of satisfying the close tolerances on bale density, weight and shape. One such product is Cotesi's Big Baler Twine.

### Cotesi Big Baler Twine

Cotesi Big Baler Twine is able to offer the high knot strength required when baling either the heaviest silage or the most dense barley straw bales. Its exceptional strength is a direct result of the innovative way in which this dynamic solution is produced.

Specifically, Cotesi take only the finest resins and extrude this raw material under closely controlled conditions. This manufacturing expertise and commitment to maintaining the very highest standards, combined with a rigorous quality assurance scheme, allows the company to create the finest yarns which in turn are used to produce a first class baler twine.

Plus, each pack of Cotesi Big Bale Twine contains 2 individually shrink wrapped spools with each spool benefiting from a unique identification marking to ensure full traceability throughout its life.



### Cotesi Big Baler Twine – Bales per pack (approximate guide)

BALER	BALES/ PACK 5' BALES	BALES/ PACK 8' BALES
CLAAS QUADRANT 1150	136	94
CLAAS QUADRANT 1200	82	58
CLAAS QUADRANT 2200	82	58
CASE LBX 331	112	81
CASE LBX 431	90	65
JOHN DEERE 680	118	84
JOHN DEERE 690	78	56
GREENLAND ENTERPRISE	82	58
GREENLAND INDUSTRY	82	58
HESSTON 4750	114	83
HESSTON 4800		48
HESSTON 4860	112	81
HESSTON 4880		65
HESSTON 4900		48
KRONE 80 / 80	118	84
KRONE 120 / 80	78	56
MASSEY FERGUSON 185	114	83
MASSEY FERGUSON 190		48
NEW HOLLAND D710	94	136
NEW HOLLAND D1010	81	112
NEW HOLLAND D1210	65	90
NEW HOLLAND BB920	94	136
NEW HOLLAND BB940	81	112
NEW HOLLAND BB950	70	98
NEW HOLLAND BB950A	58	82
NEW HOLLAND BB960	65	90
NEW HOLLAND BB960A	55	75
NEW HOLLAND BB980	50	66
VICON LB 8200	118	84
VICON LB 12200	78	56
WELGER D4000 & 4050	123	87
WELGER D6000 & 6050	82	58

(Note: the figures shown are only a guide and may vary depending upon conditions. These figures represent the approximate number of bales possible from each 2- spool pack although more spools will obviously be required to satisfy the number of knotters. The table should be used as a guide to calculate the amount of twine needed when baling.)

Of course, choosing a product like Cotesi Big Baler Twine is a good place to start when it comes to the production of bigger, better bales, but there are a number of other factors that also need to be considered.

### Large rectangular straw bales

When producing large rectangular bales, very careful attention should be paid to the bale pressure as this will differ depending upon the type and condition of the crop being used.

For instance, during periods of extended dry and hot weather, a baler may produce bales with lower density and of significantly less weight than in more humid conditions despite being set at the same baler pressure settings. Increasing the bale density setting, in an effort to produce heavier weight bales, will exert greater tension on the twine and could lead to potential twine failures.

In such circumstances it may be advisable to suspend baling until later in the day when temperatures have dropped and humidity levels increased slightly.

### Large rectangular silage bales

As with large rectangular hay bales, there are a few important considerations for producing large rectangular silage bales. Specifically, it is important to ensure the crop being baled has wilted to a minimum of 40 – 50% dry matter (DM) as this will enable both the production of well-formed bales and excellent fermentation.

You should also ensure the twine tension is reduced as much as possible as twine friction experienced between silage bales during baling is much greater than when baling straw. In addition, be sure to eliminate as much air as possible from the crop when baling. This is essential in order to ensure that sufficient crop is packed into the top of the bale to avoid misshapen bales being formed. Such misshapen bales may be difficult for an automatic bale-wrapper to handle properly. A reduction in forward speed will usually help to achieve this by increasing the number of wads per bale.

Ultimately, combining these pointers with a superior quality bale twine like Cotesi Big Baler Twine makes the production of large rectangular bales easier and more achievable than ever before.



Endorsing good quality and great value

## Welcome

Welcome to 'Farming in Focus'. As United Farmers members have done since its inauguration 27 years ago we continue to work hard to source the very best products at great value prices. Representing over 20 major agricultural retailers across the UK and Northern Ireland our combined

strength and turnover of more than €1billion enables us to deliver the economies of scale which will make a difference to your business.

We continually work to stay at the leading edge of product selection, knowledge sharing and best practice to benefit the estimated 100,000 farmers and contractors we serve nationwide. Leading the Group into the next phase of its development is

our newly appointed Chief Executive Officer Mr Jonathan Robinson. Jonathan has worked in UK Agriculture for over 22 years previous to which he spent 5 years farming in New Zealand. His broad experience equips him well to meet today's challenging agricultural marketplaces.

**United Farmers: Working together, succeeding together.**

## Cutting grass at the optimum growth stage is crucial for high quality silage



Output from UK grass-based livestock production is valued at in excess of £8bn representing more than 60% of the total agricultural output of the UK.

Whilst grass is undoubtedly the cheapest source of feed on farm, ranging from £30 – £50/tonne DM silage is still the cheapest winter feeding option ranging from £60 – £120/t DM. With the increase in cereal based feeds due to uncertain global production and the increased use of such crops for bio-renewable fuels now is the time more than ever to maximise the value of home-grown winter feed rations. Attention to detail during the silage making process will result in silage with better feed value produced at the same or cheaper cost. The old haymakers' saying 'a good hay is cheaper to make than a bad hay' is probably more true with silage than hay.

The silage making process can be split into three distinct areas - the time up to and including mowing, from immediately post mowing to covering the forage with plastic, be that in a clamp or bale and from then on to feed out. To make top quality silage attention to detail in all of these areas are equally important and failure to adhere to any will result in silage of poorer nutritive value. Within this article we will focus attention on the optimum stage of growth for cutting.

Getting the cutting date right will affect both the chemical composition and the microbiological composition of the silage at feed-out.

### Chemical composition

The ideal date of cutting will vary from farm to farm depending on a number of factors, a key one being the grass varieties or other forage species used. Other factors such as height above sea level and latitude will also play a part and all these variables will alter from one year to the next year on the same farm depending on the season.

### Grass

Four key parameters change with time. These are dry matter yield, crude protein content, water soluble carbohydrate or sugar content and digestibility (D-value). The optimum cutting date involves a trade off between reducing yield but obtaining a crop with a crude protein content of between 14 and 17% in grass but with sufficient sugar to enable a good fermentation (preferably as high as possible) and a good D-value. It is important when producing silage intended to be fed to productive animals, be they dairy cows, beef or sheep, to aim for 67 to 70 D-value which is equivalent to 50% ear emergence. Research at IGER where the same grass was ensiled at two different D-values is shown in Table 1. The research aimed to show the importance of high D-value grass silage animal performance. Grass from the same field was cut either at the ideal time with an ME of 12.6 or approximately 2 weeks when the ME had dropped 2 units to 10.4. Comparing the

optimal ME good practice silage with that of the mature 10.4 ME grass silage gave a 5 litre/day difference in milk yield. So maximising grass quality by cutting at the optimum maturity can result in a big difference in milk yield and thus profitability.

**Table 1 Milk production from grass silage Cutting Date**

	Ideal	Late
Dry Matter (g/kg)	24.3	24.8
pH	3.9	4.1
ME (MJ/kg DM)	12.6	10.4
Intake (kg DM)	13	6
Milk Yield (kg)	24	19

Other key factors are ensuring there is no residual fertilizer nitrogen in the grass prior to cutting, this will help to produce a better quality silage with low ammonia and acetic and butyric acids which will have a better intake potential. Finally if everything else has gone right then the icing on the cake, if possible, is to cut on a sunny day in the afternoon because this will lead to higher levels of sugar required to fuel a good fermentation and raise the level of residual sugar in the silage at feed-out.

# Protecting your baled silage from Wireworms



It has been well documented previously that the correct storage of silage bales is vital to preserve and retain the quality and nutritional value of the feed inside. Handling and storing bales properly avoids damage caused by birds and rodents or even grass stubble. However there is another potential hazard to baled silage, which has until now been overlooked, and that is the damage which can be caused by wireworms.

Wireworms are the larvae of click beetles. They are usually found in permanent pasture and damage caused by them has traditionally been associated with crops following long-term grassland. In recent years wireworm damage has become an increasing problem for potato growers in the UK. As soil dwellers, they bite through roots and stems at ground level and any baled silage stored on the ground could be at risk of attack.

Visible wireworm damage takes the form of 4mm diameter holes created by the worms as they enter the bale. If Farmers wish to store bales on grassland it is possible, as long as the bales are kept at least 10 metres away from any water, including field drains and ditches into which silage effluent could enter. However, storing bales on grassland could lead to the plastic film wrap which is in direct contact with the soil being damaged by burrowing wireworms.

In 2007 Dow Europe and bpi.agri, manufacturers of Silotite, both independently commissioned baled silage trials at IGER (Institute of Grassland & Environmental Research). The test bales from both of these trials were stored on grass at the IGER farm. Upon inspection during the autumn, Rhun Fychan, IGER Silage Researcher, found the bales to be damaged when they were opened. Up to 10%

of the silage surface was found to be mouldy and at first it was thought that the holes in the silage film were due to mechanical damage by the rollers of the bale handler. However, a closer inspection identified that the holes had been caused by wireworms.

Norbert Schulze, Silage Marketing Manager at Dow Europe pointed out that although no case of damage to baled silage stacks by wireworms had been previously reported, and that this was perhaps a rare occurrence, farmers need to be aware of the possibility of this type of damage when choosing their silage storage area.

Following the discovery the damage was assessed by Peter Dennis, an ecologist at Aberystwyth University. Mr Dennis is in no doubt that the damage was caused by wireworms as it is similar to damage observed previously on sugar beet.

Louise Yates, Marketing Manager at bpi.agri commented: "We are disappointed that the trial bales have been affected by wireworm attack which has been a growing problem in other areas of UK agriculture. However it is important to let others know of our experience so that they are aware of this potential hazard."

IGER recommend that farmers check their bale stacks as they feed this winter assessing the silage stretch film for wireworm damage in the areas where it occurs i.e. around the periphery of where the bale touches the ground. Wireworm damage will not be an issue on hard standing areas so if any such problems are identified it is worth considering moving the bales to this type of storage area where possible.

## Top Five Tips for preparing farm waste

Since the introduction of the farm waste regulations Farmers and Contractors across the country have been working hard to ensure their farm waste is disposed of carefully through the proper channels. As part of its ongoing education programme, bpi.agri, manufacturers of Visqueen Poliwrap has put together five top tips for preparing your farm waste.

1. Items for collection should be clean, dry and free of other contaminants to reduce transport and processing costs.
2. Store it carefully – your storage area should be easily accessible to a collection vehicle.
3. Remember to separate the various elements of farm waste into separate groups i.e. bale wrap, net wrap, baler twine, fertiliser bags and plastic containers so that they are not all mixed together.
4. Ensure that each group is ready for collection either by being baled/tied together or packed into a suitable container or bag.
5. Ensure you use a registered waste removal company who will dispose of your waste properly. Remember - it is illegal to burn or bury waste.

bpi.agri also remind us that used bale wrap doesn't have to go to waste – post-use polythene can be used to manufacture damp proof membranes, garden and street furniture, pallets and refuse sacks amongst other things.

bpi.agri's sister company, bpi.recycled products, is the largest polythene recycler in Europe and has reprocessed the farm plastic waste collected through the Irish IFFPG scheme for several years. In 2006 it invested some £2million at its recycling facility in Dumfries with the installation of a second wash plant which doubled its capacity. Subsequently it also acquired additional plastics washing and recycling equipment for agricultural films at its site in Rhymney, South Wales.



## Visqueen Poliwrap. Proven protection for wrapped bales



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Manufactured by bpi.agri, Visqueen Poliwrap has built a reputation as the reliable choice in bale wrap and is used by farmers and contractors worldwide. It owes its widespread popularity to its impressively high levels of performance, reliability and strength. Visqueen Poliwrap combines technical innovation, the highest quality raw materials and years of manufacturing experience to deliver a whole host of benefits including:

- Suitable for use on conventional and high speed bale wrappers
- High tack level for excellent sealing between layers
- Consistently high performance in all weather conditions
- Proven performance on millions of bales



## In round baling, there is only one Winner

There are now quite a number of netwrap manufacturers in Europe, many of whom offer their products to the UK farmer and contractor. Some are obviously better known than others, a few have 'come and gone' over the years and some of the early names have almost faded from the scene. There is one very well known name, however, that has been around since the very beginning, who is still at the fore-front today.

Italian net producer Novatex was one of the very first netwrap producers to supply netwrap to the UK market in the early 1980s, at the time a very small market. Amongst the many producers of net, Novatex was, and still is, totally unique, as the only company to design and build their own knitting looms, and produce the net on these

machines; unlike all others who utilise basically the same type of knitting loom produced by a loom manufacturing company. Nowadays, Novatex is well known as the manufacturer of the distinctive Winner netwrap, with its characteristic Italian flag colours.

With a long history of supply to the UK, most farmers and contractors know and trust the Novatex name. When introduced, Winner net was an instant winner too, which continues to this day. The distinctive look is for a number of reasons: firstly, the different colours help to easily identify one side of the roll from the other when loading in the baler, also making bale un-rolling more obvious, knowing which way the bale was made from the differing coloured edges.

However, it is the exceptional bale covering performance of Winner net that makes it so popular. The net is manufactured with the unique 'edge to edge' technology, invented and patented by Tama Plastic and used under sole license by Novatex in the production of this net. This unique feature allows the net to remain its full width of 4' when being applied to the 4' wide bale, unlike 'normal' white net which has the natural tendency to 'neck-in' to a narrower width when passing through the baler. The result of this is a fully covered bale, leaving no exposed edges, which is exactly what is really required when silage baling.

Fully covering the bale means film covering is easier and less problematical, as exposed 'fluffy' edges to a bale are a perfect trap for air, which will spoil the fermentation process, vital in good silage making, as well as being a danger to the flimsy film when wrapping. The fully covered bale, with no 'shoulders', will also reduce the risk of film damage as it is pulled over the edges of the bale, which on badly covered bales can puncture the film causing breaks and costly hold-ups when wrapping.



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