

The misconception of technology

Crop packaging is big business to those of you who bale and wrap for a living. The annual round of price comparisons, product knowledge and performance comparisons makes life doubly difficult... as if you didn't have enough to do actually doing the work.

Netwrap will probably be one of your major purchases this year, together with film if you are silaging. There are many netwrap products available, some at unbelievably cheap prices, though these may come with a worry that behind this price there probably isn't the good performance needed, a reputable manufacturer's name nor any back-up should things go wrong. Buying well isn't all about finding the cheapest roll price; the most important factor is the cost to your business.

Year after year, new names enter the market, claiming the best prices and all the promises of security and bale coverage. However, in practice this is often a 'pipe-dream' and all too often the unsuspecting end user will not find out until it's too late.

In 2005, Tama introduced a significantly longer length net to the market, when it launched Edge to Edge Pro-Tec 3600, which produced 20% more bales per roll, effectively reducing the cost per bale of this market leading netwrap, by increasing the yield for each roll and producing savings for the end user. The layman might easily think the limiting factors in this progression should be the weight of the roll, as the length continues to grow. It would seem natural to assume that the overall weight would increase by the same degree and this has certainly been the case with a number of other producers who have also experimented with a 'longer roll' by simply extending the length of their 'traditional' product. The competitor roll may be longer, but the roll weights from these producers are often in excess of 46kgs,

making them difficult and cumbersome to handle. In actual fact, the advanced resins used in the new TamaNet Edge to Edge product have not only allowed the roll length to increase without any noticeable increase in roll weight, the strength of the net has significantly increased in the process. This has been proven in the field where over 12 million bales have been made throughout the UK and Ireland last year, using this new technology netwrap.

Since the introduction of Pro-Tec 3600, Tama has continued developing in this direction, with a volume trial throughout 2006 and 2007, of net that is longer still. The use of advanced extrusions of high-grade polymers has produced a material that allows the roll length to be considerably increased yet still remain well within the roll weight and diameter tolerances of existing netwrap rolls. Such advances might have the sceptics scoffing, thinking that a longer length within the same weight and diameter limits might compromise the strength of the net – absolutely not so. Weight and strength have no direct correlation. Think of steel and aluminium for instance, metals, with similar uses, but notably different in weight.

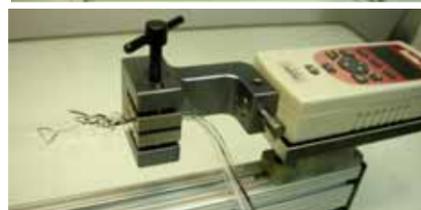
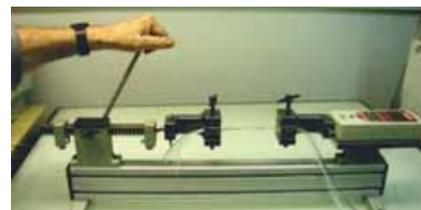


Chris Chilvers at the 2007 Doe Show tests the strength of the net himself

The same applies with advanced polymers. Those fortunate enough to have been part of Tama's development volume trial were amazed to find that roll weight has been maintained around the level they have been used to,

however roll length and the net strength have both increased significantly. This subject is a fascinating one, which could bring huge benefits for the end user of netwrap in their baling businesses, where the requirement is for a good quality, affordable net. With such an increase in roll length and strength, yet still allowing the roll to be easy to handle and easily able to fit into all balers, bale costs for using Tama's Edge to Edge netwrap can be reduced yet again.

To help demonstrate this, Tama and the Crop Packaging Association invite you to compare your netwrap with the new TamaNet; to see that weight and strength really are two different things. During the year, at every exhibition, show and dealer event that UAT and the Crop Packaging Association attend, you will have the opportunity to test, for yourself, your own net against Tama's new generation net, on an easy to use, purpose built netwrap strength test-rig. This hand operated device, is digitally calibrated to give an instant read-out of net strength, allowing an instant and highly accurate comparison to be made.



Like Chris Chilvers at the 2007 Doe Show, come along and try it for yourself – you might be surprised.



News

Crop Packaging Association News

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A commitment to the silage market

Like most film markets throughout Europe, the UK market for stretchwrap is very competitive, with many players. Leading manufacturer Rani are at the forefront of quality and technology to try to give an advantage to the end user and through a long relationship with leading resin supplier Dow are well placed to take advantage of this.

Dow has a long term commitment to the silage market and since 2002, has embarked on the next generation of involvement in the main silage markets throughout Europe. Innovation through research has been their key focus, as they believe it is important to understand completely what goes on inside the wrapped bale – what influences the process of fermentation, how silage wrap can minimize losses and enhance the quality of the ensiled fodder.

Producing good quality silage is dependent on using good quality materials and equipment and that includes the bale wrap film, says Dow Senior Marketing Manager Mark Saurin "Silage stretch film provides an effective airtight cover which is one of the most important factors in successful bale silage production". Stretch film bale wrap should meet several requirements:

- maintain bale density and integrity over a prolonged period in widely varying climatic conditions and withstand typical handling.
- present a water and oxygen barrier and keep the carbon dioxide gas inside the bale as a preservation agent.

The key physical properties needed for this originate from the resin, the best of which are tailor-made to perform for the needs of the silage market. In 2002, Dow introduced the DOWLEX™ 2045S resin specifically designed

for silage application, a bespoke resin to meet the above outlined requirements, which means better quality and a more reliable film for bale wrap.

Naturally, being oil based, raw material resins are a hostage to the world economic situation, which has a direct effect on the finished goods price. The average annual price of resin has been increasing since 2003. Many varying factors contribute to the pricing levels of resin for stretch film, including oil refining capacity and price volatility, which are affected by external political, economical and environmental factors.

Mark continues "Global demand for crude oil remains high and is soaring in emerging markets. On the other hand, refining capacity is under huge pressure as low refining margins limit investment in new capacity and existing refineries operate at near or full capacity".



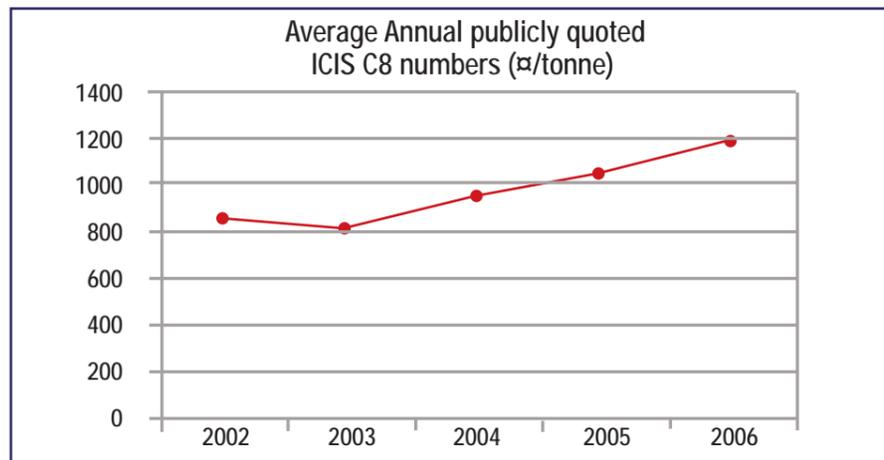
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Global growth in polyethylene continues to lead towards changing supply/demand balances which affect product availability, which is expected to continue affecting the price volatility.

The table shows the annual average polyethylene resin prices, for the period 2002 – 2006, as provided by ICIS, the world's largest information provider for the chemical and oil industry, providing unbiased and independent chemical and oil price reporting.



COTESI gets closer to UAT

Europe's largest twine manufacturer, Portuguese producer Cotesi S.A., have been a supplier of high quality baling twine to the UK market continually since the mid-1970s, longer than any other company. This is quite an achievement, in a market that once boasted many well known and long established names in rope and twine making.

Cotesi baler twines are imported and distributed by leading Crop Packaging Specialist company UAT Ltd, who offer their complete range of Polypropylene and Sisal, conventional and Big Bale twines, as well as Movtex Maxicover netwrap. The relationship between Cotesi and UAT was established in 1997, with UAT being instrumental in bringing Cotesi's name to the fore in the UK market, their products having previously been supplied under private brands of their previous importer, which did little to expose this leading producer's identity to their end user customers.

Cotesi currently supply a significant amount of the UK's twine requirements, with particular focus on the heavy 'Big Bale' twine, of which they are a renowned specialist, with the Cotesi Big Bale twine being the preferred product in the UK by most leading Big Baler manufacturers, such as Case IH, Claas, Krone, New Holland, Viccon and Welger.

October 2006 saw a strengthening of the relationship between these two leaders in the UK's crop packaging business, with Cotesi S.A.'s Managing Director, Mr Pedro Violas, confirming that this long-term agreement will "build a business framework for the benefit of commercial and economic interests of both companies". The future holds a lot of promise, with new and important advances with Big Bale twine development in the planning stages and UAT is well placed, through their market expertise, to project these advances and develop important new business as a result.



left - right
 Pedro Borges - Sales Manager Cotesi S.A.
 Bart Cope - Managing Director UAT
 Pedro Violas - Managing Director Cotesi S.A.
 Tim Carr - Sales Manager UAT

PLATINUM Big Bale twine: an answer for high density straw baling

Hot summer weather can bring many benefits for the baling contractor, but also some serious headaches too. Shortages in grass for silage baling was an obvious point last season, but more important to the big arable straw baling contractor is the ever present difficulty of achieving bale density and a good bale weight, which seem almost impossible on those hot and very dry days of July and early August.

Bale density, bale weight and twine strength are a constant battle at that time of year, when the obvious solution would be to bale when the humidity levels increase, thus making bale formation easier and bale weight more achievable. However, this is not always an option and many struggle to increase bale density to help make up for the reduced bale weights, to help make the transporting of the bales cost effective. This entire situation has always been dependent upon the capability of the twine being able to withhold the bale at the highest density setting possible, before a twine fails and the whole bale then bursts as each other twine gives up in turn.

This season will see limited quantities available in the UK of a revolutionary new twine from

Cotesi S.A., manufactured using advanced grade polymer resins and modified extrusion methods, which gives a massive increase in the knot strength possible from a pack of Big Bale twine. The usual type of twine for this type of baling, a 7,200ft type (2-spool) pack of twine, typically has a knot strength around 200kgf.



The new twine is designed specifically for the difficult conditions encountered with dry, high density straw and the twine offers a huge 50kgf increase in knot strength over the next best twine available.

Baler twine will always break at the knot when under extreme tension and many manufacturers, including Cotesi, have long offered a slightly heavier twine, typically in a

6,800ft (2-spool) pack, to try and reduce this, although these twines have only been able to achieve an increase of up to 20kgf over the previous twine, so not really a viable answer for the problem. Ahead of the pre-launch of this new twine, Cotesi conducted an analysis of 15 different twines available in Europe, which showed many variances in strength and performance between them, bewildering for the serious bale contractor, who really just wants a strong twine that doesn't cause hold-ups.

In Europe, twine is sold on its specific runnage (weight per metre length) whilst the UK has traditionally used the pack length as its type identifier. In reality, this is the worst way to make your twine choice, as the pack length indicator gives no clue to its actual strength.

Big Bale straw contractors and straw merchants should be able to see an immediate benefit in this twine, being able to produce significantly denser bales with weights that will offer far better economics when transporting a load of bales cross-country, when, typically, the load 'bulks out' long before ever reaching maximum weight.

Advantages of baled silage

UK based IGER (Institute of Grassland and Environmental Research) and Dow Chemicals, producer of polymer resins for silage film, recently collaborated on an in-depth survey on true cost and benefit comparisons between traditional clamp silage and that baled and wrapped. The results showed that there are clear gains to be made using the baled option, quite apart from the convenience and versatility that baled silage offers the end user.



The study compared the costs, output and losses possible from one hectare of land, taking Fresh and Dry matter forage for both dairy and beef production. The study costs were based on harvesting clamp silage costs per Ha and costs on bales based on individual bale preparation, assuming bale wrapping cost of £1.00; with economic benefit based on milk price of 18p/ltr and beef value of £1.90/kg live weight gain.



Cost of production £/tonne

Clamp £18 Fresh Forage
£61 Dry Matter
Bales £28 Fresh forage
£68 Dry Matter

Forage/tonne (hectare)

Clamp 48
Bales 48

% losses during harvesting and feeding

Clamp 20
Bales 8

Production from 1 tonne harvested fresh crop

Clamp 526 litres milk
41.3kg live weight gain
Bales 604.9 litres milk
47.4kg live weight gain

Economic benefit in favour of Baled Silage

Dairy = £12.20/tonne Fresh Silage
Beef = £9.80/tonne

The figures show potential losses from spoilage in the harvesting, storage and feeding of clamp silage can make a significant impact on the return in capital employed in the operation. It must be remembered that, typically, the penetration depth of air into a normally compacted silage clamp is approximately 1 metre. If the normal feed rate from a clamp is 1 metre per week, then in time the entire clamp will be exposed to oxygen for 1 week. This is in stark contrast to baled silage, which allows a more controlled utilisation of forage with less exposure per tonne



Baled silage is normally assumed to be valued between £10 – £15/bale, depending upon the quality of the bale and the crop ensiled, of course. However, current stocks of baled silage are trading at a higher than normal price due to the shortages created by the hot summer of 2006, which is rumoured to repeat again in 2007, suggesting baled silage could be one of the safest bets for forage conservation in 2007.

The use of 6 layers of film on the bale, in preference to the normal 4 layer application will also serve long term benefits, by offering a significant increase in the protection of the crop inside but, more importantly, providing a far more productive environment for good fermentation of the crop, with air contamination almost eliminated. This was outlined in studies carried out 3 years ago by The Centre for Dairy Research (CEDAR) at the University of Reading; which showed that the losses incurred to an 800kg+ bale of silage wrapped with 4 layers was almost 9% of its total feed value, compared to less than 1% for a bale wrapped in 6 layers.

If a bale was valued at £15, for good quality crop and bale condition, then the 8% saving in feed value amounts to almost the entire cost of the film used to wrap it in 6 layers. The figures don't lie...

TamaNet Pro-Tec 3600 – one year on

It seems incredible that the notion of a much longer length roll of round bale netwrap is now so normal. It was, after all, almost 2 years ago that the market was introduced to the concept of significantly longer length rolls of net and all the consequent benefits that this brought, when Tama launched Edge to Edge Pro-Tec 3600m.



The benefits of a roll 20% longer than standard net are easy to comprehend and appreciate, with the new longer length rolls delivering anything up to 60 more bales per roll than other makes of net. In practice, for the large scale end user, this translates simply as needing only 4 rolls for the same number of bales that would have required 5 rolls with standard 3,000m white net. This enormous saving has many knock-on benefits, not least of which is handling far fewer rolls in a season.

For almost 20 years, the market for netwrap had been almost static on any development on roll length, with every other producer content

to remain at 3,000m. Tama Plastic Industry, known for its innovation, did highlight this fact a few years ago when it introduced 3,150m XL rolls, giving a guaranteed 5% more net in every roll, to emphasize the point that many other makes of net were actually up to 5% shorter, due to not being able to give a guaranteed minimum and consequently could only claim a '+/- 5% tolerance' on their roll lengths – meaning, in essence, 5% shorter.



Two years ago, Tama pushed this differential much further, through an advanced development programme of higher specification raw materials and new concept manufacturing. The new Edge to Edge Pro-Tec 3600m net was given a limited introduction in 2005 ahead of its full market launch at the start of 2006. In its first full year of national sale, the Pro-Tec 3600 product was in such demand that it quickly became the industry 'norm' on roll length, with many distributors confirming that they actually sold more rolls of net than ever before, even considering the increased length

– meaning a double bonus in the amount of net actually sold.

The net's performance remains that of Edge to Edge of old, giving full bale coverage to produce far better quality bales than 'standard' net and continues to have all the well known features which are part of the familiar, Zebra striped, market leader.



Benefits from longer length rolls mean an increase in real-time output of the baler, meaning fewer delays due to roll changes, which throughout a busy week can make quite an impact on the baler's performance. 20% more net on the roll also means fewer pallets in store for the same amount of net, making storage and deliveries more beneficial for dealers or large scale end users. Another important, though slightly less obvious point, comes from the reduction in roll packaging that now needs to be disposed of along with other farm waste - one fifth less waste packaging than before does have an effect.



XtraNet 3600

- 20% more netwrap in every roll
- The best bales at a lower cost
- Improved efficiency, lower production cost





20% more perfect bales per roll

Consider carefully the value of your bales and the work involved in making them. A cheaper priced roll may not only be more expensive per bale, it will not offer the level of crop protection you are able to achieve with Pro-Tec.

Do your own calculation:

$$\frac{\text{Price per roll}}{\text{No. of bales per roll}} = \text{Cost per bale}$$

and the value?

Cost per bale like this  or Cost per bale like this 

HOLD ON.... let's see what this year brings

The weather forecasters told us 2006 was going to be a hot summer and they were not wrong, well, up until the end of July at least – then August dawned and became the wettest August on record, ever! Unfortunately, this did follow a particularly wet spring, which severely delayed the start of silaging for many making, particularly in the south and midlands. Such conditions did have a considerable effect on the amount of baled forage produced in first cut, which was later compounded by the prolonged hot weather that then followed, when re-growth was slow or, in some cases, non-existent. However, the good weather did offer many the chances for more hay making, which, together with the confusion over the Single Farm Payment scheme, did conspire

to reduce the amount of silage stretch film used in 2006.

If the 2006 season was difficult to predict, this coming year could be just as complicated. However, there are a number of things to consider that might help to see which direction to go. Raw materials prices remain high. An 'old chestnut' perhaps, but world conditions are well known on the oil and polymer front that this situation may be with us for the foreseeable future. It is very likely that twine and netwrap prices are likely to see a small increase, with twine forecast by some to be anything up to 5% higher. This is mainly due to the actual raw material content in twine, which accounts for most of the final cost,

unlike netwrap, for instance, where a greater proportion of the finished price is due to the higher costs involved knitting the net – twine being a much more straightforward product to produce by comparison. That said, netwrap may still show a marginal increase of up to 3%.

Silage stretchfilm is much more difficult to predict. Given the raw material situation, there could be a good argument for a higher price in the market this year than last. However, with further increases in manufacturing capacity in Europe for this type of product, coupled with a considerable stock-pile of product already in the 'supply chain', due to the factors outlined above, price levels similar to those of 2006 could be quite likely.

More moves to longer length – Movtex just got longer

The past 2 seasons have shown, quite clearly, that the demand for longer length netwrap is real and that the ability to increase the baler's output is essential.



In a move that shows its commitment to this important and growing sector of the UK market, Cotesi S.A. have announced that their popular Movtex Maxicover has also grown in length and now contains 3300m in every roll, an increase in length of 10%.

Cotesi S.A. Sales Manager Perdo Borges recognises the importance of this move, "the longer length roll is the way to go on this product, to offer the farmer and contractor a more efficient way to work, with more bales per roll".

The new, long length Movtex Maxicover will be easily recognisable from its 3000m predecessor, thanks to revised and distinctive new packaging and the fact that the roll colour identification has changed to reflect the recent changes. The Movtex Maxicover 3300m rolls are now manufactured with distinctive two colour identification threads, to ease with roll loading, orange and blue colours replace the twin blue of the 'standard' length product being replaced.

Movtex netwrap has become a familiar product with UK farmers and contractors since its

introduction back in the late 1980s, being one of the first makes of netwrap to be imported into the UK market on a large scale, which helped to establish it as one of the most popular types of net available.



WIN!

Win a pallet of TamaNet Pro-Tec™ 3600m worth over £3000



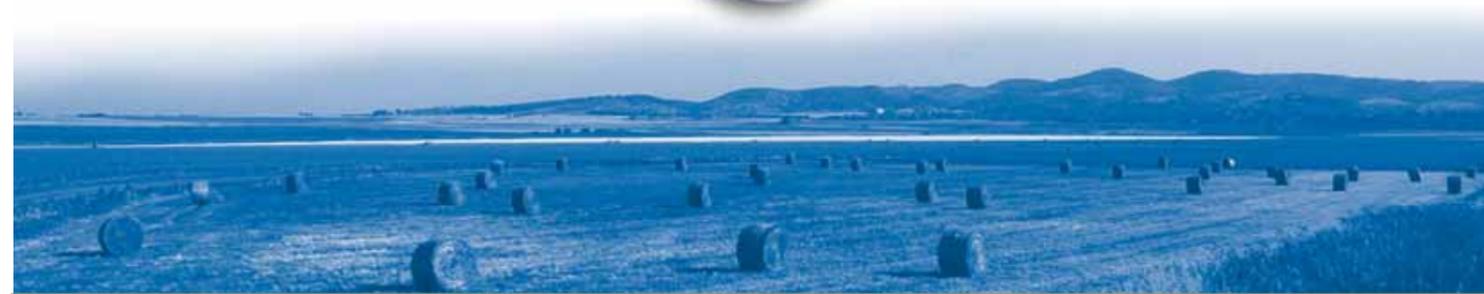
To be in with a chance to win all you have to do is return this by freepost.

Closing date: 15th June 2007

The winner will have the pallet delivered to their choice of address within Great Britain & Ireland by the end of June 2007



www.croppackaging.com



Hi Yield Baler Twine

manufactured by

Available from your local dealer

Fine 22,300 • Supersoft Hay 10,000 • Medium 12,000 • Big Bale 7,200 • Big Bale 8,600

Conditions:

1. This is a FREE prize draw – entry is FREE to anyone except employees of Tama, or other suppliers approved by the Crop Packaging Association.
2. To enter, simply fill in this competition card and return to the Crop Packaging Association, Freepost (SCE6386), Alton, Hampshire, GU34 1BR or visit our website: www.croppackaging.com.
3. Closing date – 15th June 2007
4. Winner will be notified in last week of June 2007.
5. The winner will have the pallet delivered to their choice of address within Great Britain & Ireland by the end of June 2007
6. Prize delivery will be managed by UAT.
7. Decision on winner is final – No correspondence will be entered into.

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Address	<input style="width: 100%;" type="text"/>		
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Number of bales	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Hay</td> <td style="width: 50%; text-align: center;">Straw</td> </tr> </table>	Hay	Straw
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