DONAGHYS
Contractors Club

September 2016

BALING TWINE BALENET SILAGE WRAP SILAGE COVERS SILAGE BAGS SILAGE TUBES BALING TWINE

The SEVEN® - the strongest silage wrap on the market.

The world is changing at an increasingly rapid pace. There are always new needs, new opportunities and new challenges that lead us to adapt. We are used to this in the agricultural and livestock world. Specifically, silage conservation has undergone many stages, during which increasingly flexible and efficient conservation methods were developed: Tower silos, pit silos, bunker silos, individual bags, silage tubes, silage wrap etc.

In the last 25 years we have witnessed a huge development in bale wrapping in all countries that have a high milk production. Strangely enough, for years the technology for plastics conversion used to produce agricultural stretch films remained relatively stable and was mainly used to supply films with just minimum resistance, enough for the bales to be suitably airtight.

Currently, the evolution of the agricultural machinery used to harvest and bale large areas of grass means that the plastic films used for wrapping are much different than those available in the early 90's.

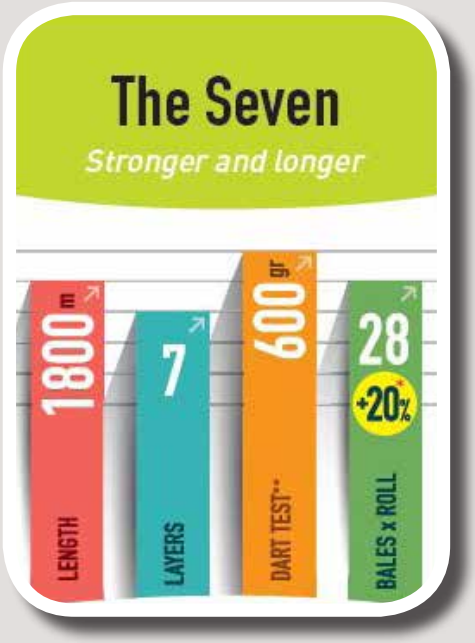
In its constant search to provide the best products for this application, Aspla has developed a range of coextruded 7-layer films that have the best mechanical resistance features available on the market.

"We are marketing the Seven-7®, a film developed for the demanding contractor who wants peace of mind when wrapping thousands of bales per year on latest generation combiwrappers, but who also wants a product with greater strength and few roll changes throughout the day," say Tomas Gomez, CEO of Aspla.

The Seven-7® has three times the mechanical resistance to impacts and perforations compared to a standard 25-micron thick film. Thus, it is a perfect choice for wrapping all types of silage. It also has a very competitive cost per bale, as there is no other film on the market that combines the advantages of Seven layer technology and high strength.

Again, Donaghys as a reputable and integral part of the rural community, continues its vocation as a leading supplier of performance products and offers its clients a full range of silage wrap manufactured by Aspla, with solutions adapted to every need.

Donaghys, through its Crop Packing division, is introducing in New Zealand The Seven, a NEW GENERATION OF



SILAGE WRAP. To this end, it has partnered with Aspla.

Aspla belongs to the Alvarez Group, one of the world leaders in polyethylene film conversion for the agricultural market.

Aspla currently offers a wide variety of plastic films for many applications: E.g. food packaging, greenhouse films, printed bags for big bale silage wrap.

“Our commitment is to supply, worldwide, an excellent mix of competitive and high performance products and added value crop packaging solutions,” said the director Mr Gomez.

At Donaghys, our best reward is to gain your trust and your satisfaction on a daily basis. With the new generation of 7-layer films with more metres per roll, we bring higher performance, increasing the efficiency of the bale wrapping process.

Seven Layer Production line

Seven-7® is an economical solution for wrapping round or square bales. You can now enjoy a film that is three times stronger than a standard wrap. The new generation of Aspla 7-layer films is the result of combining a highly resistant blend of polymers with the savings of a longer film, which together further reduce bale costs.

Through the use of state-of-the-art 7-layer technology co-extrusion technology along with the best virgin polymers and adding extended length to the rolls, we achieve outstanding results: a very smooth silage wrap that is perfectly adapted to the bale surface, creating a very effective airtight barrier producing optimal fermentation and improved silage quality.

Seven-7® offers contractors a new level of protection, with the peace of mind of achieving, all at the same time, performance improvements, extended length and a much better impact and tear resistance than with standard films.

Seven-7® is a step further towards facing the challenges of today’s agriculture: it helps to achieve a more nutritious silage and increased productivity for milk producers.

To find out more, talk to your local Donaghys Territory Manager.

Why use silage wrap . . . ?

Baled silage has become popular in New Zealand because among other benefits, it saves on the capital expense of building a clamp, it is less dependent on weather and is easy to transport.

When it was first produced in the 1970s it was ensiled in plastic bags, but this is now uncommon as wrapping increases silage quality and reduces waste.

Extended research shows that baled and wrapped silage leads to lower dry matter losses (effluent, fermentation and respiration) than clamped silage. During wrapping the thin film is stretched and overlapped around the bale to produce a minimum of six layers, although for haylage above 40% DM eight layers may be beneficial to reduce puncturing. With more layers of wrap, less air should enter the bale, decreasing spoilage, losses and risk of moulds.

Combi Cover – Next Generation silage covers saving farmers $ $ $

The process of covering silage with a thin impermeable film, prior to conventionally sheeting with a black/White cover, comes as second nature to Contractors & farmers around the world.

The combi vapour layer is a silage cover with the benefits of using a 40 micron cling film underlay and a 127 micron UV stabilised outer.

The Primary Oxygen Barrier Film sheet sucks down onto the silage creating a vacuum, where all oxygen trapped under the cover is absorbed by the natural fermentation process in the clamp. The product provides greater impermeability to oxygen than the simple use of a silo film (as this product combines two films: silo + underlayer). The result is an air tight clamp with little to no top or shoulder waste. Usual waste can be eliminated by as much as 100% saving hundreds, maybe thousands of dollars in lost silage. Not only saving money but also delivering enhanced silage quality.

Dry matter loss in the top metre of silage is reduced by up to 50% compared to silage covered with a conventional black white silage cover. Users can save up to $5.50 per ton of silage by covering with a Combi cover.

Along with the cost savings aerobic stability is increased by up to two and a half days, so silage on the face and in front of the cows stays fresh and nutrient rich longer.

Manufactured using blown co-extrusion multi-layer technology providing long term protection. Combining the products Low Density Polyethylene (LDPE) thermoplastic with Linear Low Density Polyethylene (LLDPE) with the technology generates a stronger and tougher film without compromise.

Covers with this technology are less likely to tear or puncture during the handling and covering operation making them tougher and stronger than traditional covers. All covers are UV stabilised for New Zealand conditions and are guaranteed for a minimum 12 months in the field before UV degradation.

Combi covers are easy to deploy with Donaghys free fold rolling meaning both the underlayer and top cover can be unfolded in one action unlike other systems where the underlayer must be placed first then the top cover rolled out over top.

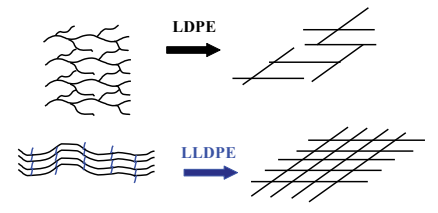
Combi covers are selling fast so to lock in your seasons requirements contact your local Donaghys Sales representative today.

Are all plastics created equal?

Plastics or polymers are one of the main materials used in the manufacture of Crop Packaging products. There are different types of polymers that can give very different physical characteristics to the finished product and this can be utilised to enhance the properties depending on what the end use is.

Silage covers are a great example of this. Silage covers are extruded from Polyethylene, but what type of polyethylene makes a huge difference to the final physical properties of the film.

The most common types of Polyethylene used in Crop Packaging products are High Density Polyethylene (HDPE), Low Density Polyethylene (LDPE) and Linear Low Density Polyethylene (LLDPE). HDPE is used in some products, usually for its stretch characteristics rather than for strength. LDPE and LLDPE are used in plastic film production due to their ability to provide tear strength and puncture resistance. LLDPE is more expensive than LDPE but gives better mechanical properties due to its different molecular structure. At a molecular level when chains of LDPE are placed side by side, this forms an incomplete matrix meaning that there are some weak points in the matrix, whereas the LLDPE molecular chains form a matrix that is complete and therefore does not contain weak spots. The following diagrams illustrate this:



When covering a stack or pit of silage the cover is designed to protect the valuable silage as much as possible, so the better the mechanical properties of tear and puncture resistance, the less likely the cover is to be damaged or punctured during the process of putting the cover on. To reduce cost some cover manufacturers use recycled Polyethylene (which has lower physical properties than virgin material) and also LDPE with as little LLDPE as possible. The overall result of this is a cover with much lower tear and puncture resistance than one produced with virgin Polyethylene and a sufficient content of LLDPE.

A very simple scientific test for the tear and puncture resistance of a silage cover is to grab a stubbie of Speights (depending on where you are from, other types of beer may work!) and with the bottle on a flat surface, hold the cover with both hands and pull it down over the top of the bottle. The degree of ease with which the cover fails in this process is a good indicator of the quality of materials used in its manufacture. An added bonus is that if it's late enough in the day you can drink the Speights (or other beer), as long as its cold enough! Who said the science behind Crop Packaging isn't fun!

When choosing a cover for protecting yours or your customer's valuable silage, make sure it's the best that you can possibly buy. Given the dollar value of silage that the cover is protecting, why put that at risk by using a lesser quality cover that may save a few cents per metre?

Silage Wrap Supplier Profile - Aspla

I am pleased to have the opportunity to introduce you to ASPLA. We are situated in the north of the Spanish peninsula, in the province of Cantabria, an area of green grass land beside the rough sea and high mountains.

ASPLA – the company: Our company belongs to the ARMANDO ALVAREZ group, a privately owned company and one of the largest plastic film manufacturers in Europe. The range of products manufactured by Aspla includes films for industrial and agricultural applications. Our forecast for the 2016 year is to produce approximately 400,000 tons of film. In the agriculture sector, we manufacture film for green houses, mulch films, silage pit covers, bags and silage stretch wrap. Around 40% of the total capacity is for agricultural usage. Agricultural stretch wrap production was started in 1994. Since then the capacity has been increased continuously. Currently we extrude over 30,000 tons of stretch film a year. Agricultural stretch wrap for ASPLA is a very important core business which is given high attention.

Production of Aspla silage wrap

In 2007, the first 5 layer machine for blown stretch wrap was installed. Since then all of the old 3 layer machines have been replaced with state of the art blown film extrusion technology.

During 2014 Aspla installed the latest 7 layer production line with a second line coming on line in time for next season. This in combination with only using selected high quality grades of raw materials allows us to produce the most uniform film of the highest quality standard on the market today.

Research and Development: Creating new ideas, developing new products to improve performance or saving costs are driving our research and development. We listen carefully to our customers, to learn their needs and to understand their requirements. ASPLA cooperates with renowned Research Institutes in Sweden, Austria and Spain. Intensive practical testing of the performance of our film as well as scientific analysis of the silage quality are integral parts of our projects. Cost saving – without losing the performance of the film was and is an overall target of our film research and development. The latest results are new types of 5 and 7 layer bale wrapping films - “Seven” will be one of these products available in NZ in limited quantities this season - after serious testing in many countries we can offer these new generation films as the most economical solution for bale wrapping.

Preparing for the future: For ASPLA the evolution of agricultural film does not stop. We anticipate new wrapping technologies will continue to be developed. Lighter cheaper stronger films are here now making old 3 layer or cast film obsolete. ASPLA continues to investigate and invest in new equipment and will continue to develop the right products on time to match new technologies.

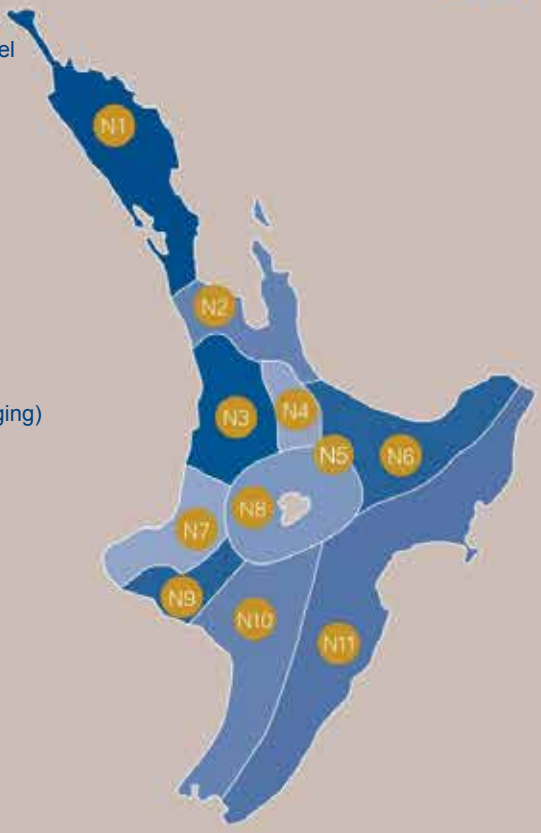
Worldwide relationship. To have a strong relationship with DONAGHYS, for the whole ASPLA SILOGRASS team is something special. It isn’t just based on sending a couple of containers filled with plastic film half way around the globe. It excites us to know that contractors and farmers, at the very opposite side of our world, trust in the quality of our product. We highly appreciate the work we do together with our professional colleagues in DONAGHYS.

To our valued current and future users of ASPLA agricultural stretch wrap films - we take your trust in our products as an order to do our best to manufacture and innovate to very high standards.

During the research and development process, Aspla cooperates with renowned technical and science institutes to regularly implement systematic trials and quality analysis of its films and new prototypes.

All the knowledge resulting from this research is applied to permanently improve the solutions developed for you.

More feet on the ground - and there when you need a hand



N1 **Martin Topp**
Northland, Auckland
027 495 5753
mto@donaghys.co.nz

N2 **BB Unka**
South Auckland, Thames, Coromandel
027 278 2765
bbu@donaghys.co.nz

N3 **Dave Hewson**
West Waikato, King Country
027 633 3640
dhe@donaghys.co.nz

N4 **Tim Rogers**
Central Waikato
027 479 1289
tro@donaghys.co.nz

N5 **Nicole Hyland**
Waikato, Bay Of Plenty (Crop Packaging)
027 593 6566
nhy@donaghys.co.nz

N6 **Allan Clarke**
Bay of Plenty
027 435 3068
acl@donaghys.co.nz

N7 **Tracy Heta**
Taranaki
027 435 7780
the@donaghys.co.nz

N8 **Gavin Dunn**
South Waikato, King Country
027 479 8470
gdu@donaghys.co.nz

N9 **Mark Wark**
South Taranaki
027 482 8535
mwa@donaghys.co.nz

N10 **Stephen Maclean**
Wanganui, Manawatu
027 442 3929
sma@donaghys.co.nz

N11 **Ben Pearce**
Gisborne, Hawkes Bay, Wairapa
027 454 8754
bpe@donaghys.co.nz

S1 **Holly Geddes**
West Coast, Marlborough
027 332 3462
hge@donaghys.co.nz

S2 **Pete Shannon**
North Canterbury, West Coast
027 434 4716
psh@donaghys.co.nz

S3 **Bruce Smith**
Canterbury
027 530 8306
bsm@donaghys.co.nz

S4 **Peter Vaughan**
South Canterbury
027 271 8795
pva@donaghys.co.nz

S5 **Aaron Medder**
North & Central Otago
027 432 6351
ajm@donaghys.co.nz

S6 **Greg McIntyre**
Central, South & West Coast
027 432 5754
gmc@donaghys.co.nz

S7 **Caleb Smith**
Southland
027 224 2676
cas@donaghys.co.nz

National Sales Manager
Hunter Darry 027 271 3307
Freephone 0800 942 006

DONAGHYS
PERFORMANCE FIRST