

The Professional Choice

aspla

AGRICULTURAL STRETCH FILM

SUCCESSFUL WRAPPING PRACTICAL GUIDE



Successful wrapping practical guide

ASPLA IS A LEADING PLASTIC PROCESSOR WHO MANUFACTURES HIGH QUALITY AGRICULTURAL AND INDUSTRIAL FILMS. AFTER MORE THAN 40 YEARS EXPERIENCE IN THE AGRI BUSINESS HELPING STOCKBREEDERS, WE HAVE DEVELOPED A LIST OF VALUABLE ADVICE WHICH MUST ALWAYS BE FOLLOWED IN ORDER FOR YOU TO ACHIEVE A PERFECT SILAGE AND SUCCESSFUL FORAGE.

WE DEVELOPED THIS INFORMATIVE BROCHURE TO ENLIGHTEN ASPLA'S BUSINESS PARTNERS AS WELL AS OTHER MEMBERS OF THE FARMING COMMUNITY FROM DISTRIBUTORS AND AGRICULTURAL MERCHANTS TO CONTRACTORS AND FARMERS. WE HOPE YOU FIND THIS GUIDE INFORMATIVE AND THAT YOU WILL JOIN ASPLA IN THE CONTINUOUS PROCESS OF IMPROVING THE ABILITY OF FARMERS TO PRODUCE HEALTHY FOOD AT A REASONABLE PRICE.

THEREFORE, TO GET OPTIMUM RESULTS, PLEASE READ CAREFULLY THE FOLLOWING INSTRUCTIONS BEFORE USING THIS FILM.

The Professional Choice



1

First of all, if you receive either a damaged pallet or any imperfect rolls, don't use them. Report it in writing to your distributor or dealer with full details within 14 days, so that they can be replaced. Provide the production batch number located inside the core.



2

Before use, the film roll must be kept protected in its cardboard box in a dry area, out of sunlight and away from any source of extreme heat. The stretch wrap is a «live» product which evolves over time, its properties will alter if it is not stored suitably. The ideal storage temperature is 15°- 20° C (59°- 68° F).

3

Silage wrap rolls must be used within two years of the purchase date.



4

Treat the rolls with a great care, avoiding blows, particularly on the edges, because during wrapping the film would tear.



5

Avoid the film and bales coming into **direct contact** with any chemical product (for example: herbicides, pesticides, fertilisers, sulphur dust, ammonia, chlorine, mineral oils, copper based products, iron dust, zinc, etc.). These chemicals speed up the natural disintegration of agricultural plastics.





6

Avoid leaving the rolls exposed to the sun while on the tractor, wrapper or in the pick-up. During this time, they should be placed in the shade. Excessive heat could telescope the rolls. Avoid wrapping during hours of extreme heat. It is recommended to wrap below temps. of 35° C (100° F) and in the shade whenever possible.

MOWING & SWATHING



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Cut the grass when it begins to come into ear: The grass will have sufficient sugar-content and will be more easily digested by the animals. Cut the grass at 5-7 cm. height. (2-3 inches).

Cut the grass on dry, sunny days and avoid rainy days. When a bale is sealed with excessive humidity, harmful bacterias, moulds and butyric acid develop which threaten the health of your livestock. Do not wrap in the rain, as this will reduce seal between layers.

BALING

Bales for silage must be sealed with between 35% and 50% dry matter (DM). Low DM content increases the formation of harmful bacteria and toxic effluents. A DM content of more than 55% increases the risk of mould formation and causes sugar loss. In case of making haylage (halfway house between silage and hay), DM content will be around 60% and thus undergo a restricted fermentation.

Although low moisture haylage can be high quality, it has a higher risk of spoilage because it usually doesn't ferment as well and ends up with a higher pH.

It can be very unforgiving if everything isn't done right. This includes making dense bales (large squares work better), avoiding rained-on forage, wrapping quickly, repairing holes, and all the other good management factors.

Moisture should come from the plant, not dew or rain.



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BALING

When making Haylage, DM will be higher than 60% therefore, the fermentation process is weaker and slower compared to wet silage making. This means that oxygen will not be totally consumed and moulds can develop regardless the number of layers applied. Sometimes it is recommended the use of a suitable liquid additive at baling that will provide high levels of fermentable carbohydrates to promote a rapid lactic acid fermentation and will improve the DM preservation of your haylage. Ideally, the makers of haylage should be highly experienced at making the product, and have a good understanding of the requirements for horses.

Haylage for horses should never be made from salvaged hay.



9

The bales must be symmetrical, of equal size and **well compressed** so that they are stable and retain as little air as possible. Dense bales having less oxygen in them, allow less oxygen penetration. Large square bales are typically more dense than large round bales. Size bales so that they are not too heavy for the available loader tractors to handle, or too big for the wrappers. Keep in mind that heavier bales are more difficult to handle without tearing plastic.



10

In bales that are irregular in shape, the film pre-stretches excessively or even breaks and does not achieve correct overlapping, which will allow air to enter the interior of the bale.



11

Do not use Sisal twine (it is impregnated with additives which cause the stretch film to disintegrate). Use only polyethylene net or polypropylene twine for baling.



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WRAPPING



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It is recommended that bales be wrapped within 2 hours of baling in order to reduce the risk of deformation and avoid using more film than necessary. Additionally, and more important, after 2 hours the fermentation process will take place and you risk getting a lower quality silage.



14

Make sure that baler and wrapper are serviced before the season begins after the winter period. Remove rust, dirt and remaining pieces of film. Replace any damaged part, sharp cutting knives, grease moving parts and check that no sharp edges damage film or bales.



15

Ensure that the wrapper with its pre-stretching unit is correctly maintained (the pre-stretch rollers regularly cleaned with white spirit to remove tack, specially wrappers fitted with rubber rollers and the pre-stretcher moving parts adequately lubricated as recommended by the manufacturer).

The pre-stretching unit must be assembled on the wrapper in such a way that the film roll is horizontally aligned at the same height as the centre of the bale.



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Place film reel on the pre-stretch unit so that exterior side of the film will face inwards towards bale when applied since this is the most adhesive side.



APPLICATION



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In order to calibrate the wrapper and checking the number of layers of film are being applied, count the number of turntable or arm rotations needed to cover the bale, then add, 1. Multiply the resulting number by 3 and this will be equivalent to apply 6 layers of film.



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For round bales: pre-stretch the film between 55% and 70% maximum.



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For square bales use only 750 mm. (30") width film and pre-stretch to a maximum of 65%.



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Check the pre-stretching level by measuring the width of the film on the flat side once it is stretched over the round bale: The film width has to be always between 38 and 42 cms. (15-16.5") for 500 mm. (20") rolls and always between 58 and 62 cms. (23-24.4") for 750 mm. (30") rolls.

If after measuring the width of the film on the flat side of the bale, the previous values are exceeded, up or down, stop wrapping until the problem is found and solved. An over stretched film is easily broken leaving the bale unprotected. Excessive pre-stretching prevents the correct overlapping of the layers of film and this would allow air to enter the bale causing mould formation and spoilage.



APPLICATION



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Although bales can be made with a minimum of 4 layers of film, we strongly recommend that a minimum of 6 layers are used over all surface of the bale. To achieve this, use the 2+2+2 system (=6 complete turns of film over the bale with a 50% overlapping). The use of 6 layers of film gives optimum protection and greatly increases the quality of the silage due to the reduction of mould formation.

For square bales always cover with a minimum of 6 layers of film although 8 layers are recommended when storing for more than 6 months or when wrapping haylage.



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Many tests have proven the relationship between silage quality and the number of layers applied and demonstrated that the use of a minimum of 6 layers of film results in more consistent silage quality.



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Where silage bales are wrapped using four layers of film, the average wastage figure is approximately 7%. However, using 6 layers of film this falls to just 0.2%, virtually eliminating wastage.



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Although the additional cost of the two extra layers can add up small amount per bale, reductions in spoilage and improvements in quality more than compensate.



APPLICATION

When wrapping using a continuous tubeline system, a minimum of 6 layers of film must be applied to the joints between the bales.

With continuous wrappers, bale uniformity is important in order to avoid air gaps between bales. Use windrow and baling techniques to maximize bale density and uniformity.

These include wide uniform windrows (no barrel-shaped bales), slower baler ground speeds, and using large square, hard core and round-silage balers with precutters.

It is recommended the use of light colours of film for continuous wrapping, as they keep cooler under the sun, therefore less dilation tensions are suffered by the film.



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HANDLING & STORAGE

Make sure that the end of the film does not hang loose from the finished bale. Some wrappers cut the film when the bales are on the ground leaving a 1 meter tail.



26

It is very important to carry out the wrapping process near the area where the bales are to be stored in order to avoid unnecessary handling which could allow air to enter the bale. Ensure that on completion of wrapping, bales are not damaged when they are off loaded.



27

Bales must be handled with care and taken to the storage area as soon as possible, avoiding dents, friction and holes during transport. This greatly limits the risk of air or water entering the bale. Mishandling wrapped bales always risks damage and spoilage of part or all of the bale.

Adjust the pressure of the tractor clamps to the right bale size, shape and weight.



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HANDLING & STORAGE



29

Round bales with a high dry matter (DM) content may be stacked on three levels. In contrast, bales with a low DM, less dense, must be stored on just one height to avoid that the weight from on top deforms the bale letting air to enter the bales.



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Whenever possible, we recommend that the bales should be stacked vertically, resting them on one of the two flat sides. Stacking the bales on their flat ends may reduce potential damage to the plastic.

SAFETY TIPS



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Store the bales away from trees, railings, sharp objects and away from accumulated water, excessive mud or water courses. A sand or fine gravel surface is ideal.



32

We recommend the use of a polypropylene net over the top of the stack to cover and protect the bales from animals such as birds and cats. It is also recommended to set rodent traps with the proper markings and identification around the storage area.



33

The film has been treated with anti U.V. additives to guarantee a 12 months outdoors exposure under a maximum 120-140 Klangleys sun radiation assuming that all the previous guidelines have been respected. Therefore, bales should be used at most within 12 months of wrapping.



SAFETY TIPS



34

Remove any visible spoilage within the bale on opening, before feeding to livestock. Fodder which contains spoilage must not be fed particularly to breeding stock or horses.



35

Regularly check the bales and repair any breaks in the film using polythene adhesive tape in order to prevent air entering the bale. (do not use transparent office tape).



36

Wrapping has to be performed only by duly trained persons who have read and followed all the recommended instructions. Do not allow children to have access to the balewrapper or the bales when stacked.



37

Since there are many variables which influence the final result, the silage quality is out of the control of the film producer and reseller. Liability is restricted to replacement of the film only and claims cannot be accepted for consequential loss.



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Because the plastic wrap can be used for baled silage only once, it is important to check with your local government on applicable statutes in your area for disposal or recycling. Used plastic, should be baled and collected for recycling. Do not bury or burn it.

