

# IMPORTANT INFORMATION ON THE USE OF AGRICULTURAL STRETCH FILMS



## Storage of stretch films:

In principle, new and commenced rolls are to be stored upright in the original box.

The storage place must be dry and protected from heat and sunlight.



## BEFORE WRAPPING THE BALES

### Ideal feeding stage for the winding process:

- ▶ Grass at the beginning of the spike shift
- ▶ Alfalfa in the young, less woody stage
- ▶ Clover to bud formation

An earlier or later date has an unfavourable effect on the energy content.

**Too early:** Feed contains reduced nutritional value and low sugar

**Too late:** Woody stage leads to: increase in trapped air, poorer feed preservation, reduction in digestibility; less sugar and rising crude fiber contents disadvantage the fermentation process, which ultimately worsens the silage quality.

The **dry matter content (DM content)** is also decisive, **ideally** between **35 and 55 %**.

### A DM content of < 35 % can result in:

- ▶ An unfinished fermentation (especially as the sugar content is low)
- ▶ Uneven shaped bales
- ▶ An increase in (possibly toxic) leachate and thus a nutritional loss
- ▶ A difficult and unstable storage
- ▶ Generally a worse preservation

### A DM content of > 55 % can result in:

- ▶ Sugar loss
- ▶ Change in fermentation process
- ▶ Increased risk of mould formation

**The cut should not be too low to the ground!** Cutting heights of **seven to eight centimeters** - for alfalfa **ten centimeters** - should be the **minimum**.

A cut too low to the ground can cause dirt to end up in the feed, inhibit rapid regrowth and reduce shading, leading to more evaporation in the soil and therefore dryer lands.



## PREPARATION AND MAINTENANCE OF THE WRAPPING MACHINE

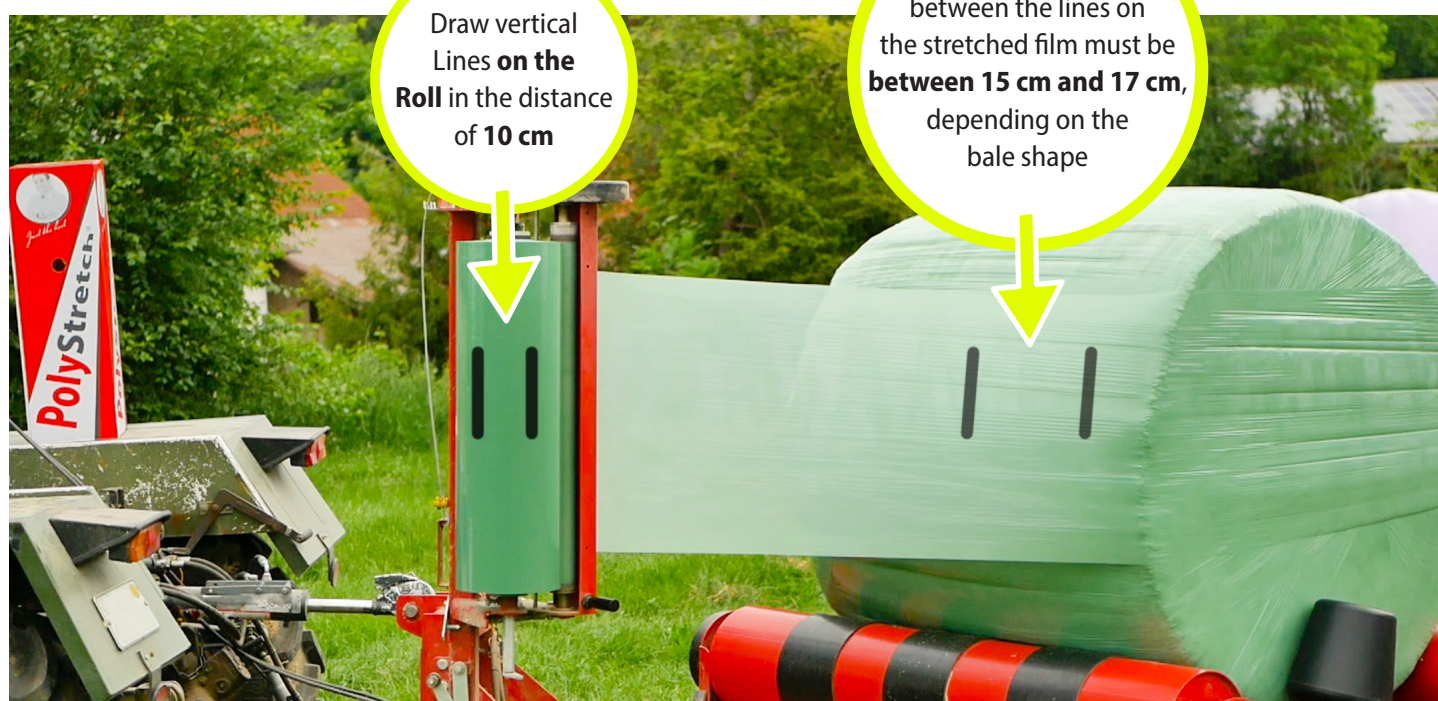
In addition to proper maintenance of the winder, the following should be checked in particular:

- ▶ The **wear condition** of parts susceptible to wear (springs, bearings, rollers, gears, cylinders, etc.)
- ▶ Proper **lubrication** of all elements to be greased (chains, gears, couplings, etc.)
- ▶ The **rotational speed** of moving elements, including the winding plate and arms
- ▶ The **cleaning of the pre-stretching rollers**, which must be free of any adhesive tray
- ▶ The **height adjustment of the pre-stretch system** (align the roll and bale center on a common axis)

- ▶ The **system setting of the pre-stretcher** to achieve an elongation of the film in the longitudinal direction between 50 and 70 % for round bales and between 55 % and 65 % for the square bales

To **check the degree of the pre-stretcher**, proceed as follows:

On the roll before stretching, draw two vertical lines at a distance of 10 cm. Once the film is stretched on the bale, the distance between these two lines must be between 15 cm and 17 cm for a round bale and between 15.5 cm and 16.5 cm for square bales.



**Pre-stretching is indeed an important component:** Too **weak stretching** impairs the correct adhesion of the film layers and carries the risk that air penetrates into the bale - so the preservation is no longer guaranteed. **Stretching too much** makes the film **too thin** and too narrow, it loses its optimum effect and threatens to tear.



# THE FEED PRESSING



In order for the wrapping film to be used properly, the **pressed bales** must be **uniform and consistent** and have a **good press density**.

Prerequisites for this are:

- ▶ symmetrically shaped swaths,
- ▶ a press set according to the manufacturer's specifications and
- ▶ appropriate conditions of use (good degree of compaction, constant and adjusted speed).

Disregard threatens to tear the film during or after wrapping.

# WRAPPING PROCESS

In general, each bale should have **at least 6 layers of film** at each point of the bale.

**In addition, note the following:**

- ▶ For **woody feed** such as alfalfa apply **at least 8 layers** of stretch film
- ▶ For **continuous wrapping**, **2 additional layers** should be included for the **transition between the bales**
- ▶ If **yarns, netting or blades of grass** thread **between the first two layers of film** during the wrapping process, **two additional layers** must be attached to the affected bales until it is packed airtight for sure.

**The film layers should overlap at least 50%!**

Please note: **750 films offer a better overlap** than 500 and therefore improve the sealing of the bale and thus a good feed preservation all the more!

**Check regularly while wrapping:**

- ▶ The **cleanliness** of the pre-stretcher rollers and clean them again if necessary
- ▶ The **pre-stretch degree** (must be set unchanged as before winding; otherwise check winding machine!)

**Important:**

- ▶ Grass continues to live even after mowing, and cell respiration continues in the presence of oxygen and consumes sugar. The nutrient value of the feed also decreases. **It is therefore very important to wrap the bale quickly after pressing (maximum 2 hours afterwards)!**
- ▶ The wrapping should not take place in the rain (the moisture reduces the adhesion of the film) and **not during the hottest hours** (heat affects the stretching).
- ▶ The **adhesive side** of the film must be **in contact with the feed!**

# HANDLING AND STORAGE OF THE WRAPPED BALES

**Wrapped bales** should be **moved as little as possible**, in particular to avoid friction and impact during storage and transport. Each processing means a potential air entry into the bale as well as a possible nutritional loss of the feed.

It is essential to **use tongs or tools specially designed for handling bales** to avoid damaging them in the process!

**Any processing must take place either in the hour after wrapping or at the earliest 72 hours after!** Due to the air pressure in the bale, any **intervention from the second to the 72nd hour** endangers the impermeability of the film layers and **impairs the feed preservation**.

The round bales should only be **stored on the flat side** („**upright bales**“). Bales with a high dry matter content (between 45 % and 55 %) should not be stacked on top of each other more than three times, bales with a low dry matter content (between 35 % and 45 %) should only be stacked twice.

We recommend storing the bales close to the farm on a firm and plane surface (preferably concreted or asphalted). Apart from the type of storage area, **under no circumstances** should the bales be stored **on a surface** where holes, watercourses, hollows or drainage **water can accumulate**.

In fact, the effect of water can cause the film to lose its properties of impermeability to oxygen and water, which in turn can lead to a reduction or loss of feed quality or even of the feed itself.

The film does not withstand damage caused by animal attacks (birds, cats, foxes, rodents, etc.). Therefore, all wrapped bales should be covered with a protective net suitable for this application like the **Polytec® bale protection net** or **Zill silage protection cover**, enclosed stored and **protected** from rodents by appropriate measures.

Any perforation of the film causes an oxygen entry into the inside of the bale and an impaired preservation of the silaged feed. Thus, bales must be checked regularly for perforation or other external damage. In the case of perforations, the holes must be sealed with the **agrifol® special adhesive tape** and the feed - if it is still suitable for feeding - used up quickly.

