

# Wood Pellets Wrapping

[ A WHITE PAPER BY  
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Industry concerns - Packaging:

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## Abstract

When it comes to choosing the right packing for your products, options are numerous but pitfalls are plenty.

This whitepaper looks at the problems of the wood pellets industry in relation to packing wood pellet bags on pallets and protecting and securing them for indoor/outdoor storage and transportation. How to reduce costs and at the same time add value to the product is the objective of this white paper. It will break with old packing habits of the industry for the benefit of stretch hood - the high speed environmentally friendly packaging method.

Please go ahead and read this white paper - I hope you will find input on things to consider in relation to protecting your wood pellets for storage and transportation.

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## Industry Concerns - Packaging

Moisture and the ultraviolet light from the sun are the main contributors to damaged pallets. Moisture causes wood pellets to immediately swell and break down into sawdust. In other words, the importance of a waterproof wrapping speaks for itself. At the same time, UV protection is equally important to the wrapping in order to prevent material breakdown.

The success of a wrapping is, however, due to other factors as well. Making the most of your wrapping requires a more close look at the costs involved not only for the packing itself, like consumables, but also at possible product claims requiring rewrapping, increased transport costs, production line speed, product appearance, etc.

Selecting the optimum packaging for pellets can be a real challenge. A reduction in packaging costs together with adding value to the products should be the drivers of such a project. Start with a simple analysis in order to find possible suppliers of suitable solutions and then work your way down to the one offering the best packaging quality, at the lowest cost, providing the best ROI and TCO over time.

Imagine being able to increase production capacity. Often seen are semi-automatic stretch wrappers in conjunction with top sheets or pallet bag covers. The top sheets and bags being applied manually. The maximum throughput on lines like this is approximately around 20-30 pallets an hour. Fully automatic operations could increase line speed and output considerably, reduce the need for manpower to manually apply top sheets and bags and in the end save costs.

### Conventional way of wrapping wood pellets

Pellets are usually packaged in 40 or 50 pound plastic bags, or in bulk bags. The product is placed on pallets, then a large top sheet or bag is placed over the loads to help prevent the product from getting wet or dirty. Once covered, the load is wrapped with stretch film to help hold the top sheet or bag on the load. The other purpose of the stretch wrap is to help stabilize the load. This is the most common way of wrapping these load types, but not the most efficient, cost effective, or best way to stabilize them.

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### Drawbacks of conventional Stretch Wrapping

Using top sheets and bags to cover the loads is very inefficient and expensive. In many cases it's a manual operation, which is time consuming and costly. In some cases top sheets and bags are automatically placed on the loads with inline equipment. This type of equipment is not very reliable, due to wind or breezes inside the plant blowing the film and bags off the loads during application. More often than not, this equipment becomes an inefficient bottleneck and is commonly bypassed. When this happens, placing the top sheets and/or bags over the loads, again becomes a manual operation.

### Wet products

A problem with stretch wrapped loads is that top sheets and the layers of stretch wrap are very easily penetrated by rain, dirt, animal droppings, etc., because they are able to work their way between the layers of film. The result is a load with poor visual appearance, dirty and potentially damaged products.

The water that gets trapped between the layers of film also adds weight to each pallet load. We had a customer once who said that the trapped water and moisture absorbed into the product from this water added an additional 150 pounds to each pallet. A very significant problem because they shipped 28 pallets on a truck, multiplied by 150 extra pounds per pallet which equated to an additional 4,200 pounds per shipment.



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### Loading / Transport problems

Yet another factor to consider when transporting stretch wrapped wood pellets is the cling in the stretch wrap film. When loads are being or have been loaded for transportation onto a flatbed truck or into a box trailer, they are generally very close to each other in an effort to increase storage space, or reduce freight costs. This, however, causes the loads to rub, potentially causing the stretch wrap film to tear. As a result, the loads may have to be rewrapped. For those loads that were already shipped, the tears will not be evident until they reach the distributor, box store, retail center, etc. At this point, it is too late. The load appearance is poor, the film torn, you might find leaning loads and potentially damaged products. In the end the result could be an unhappy customer and a hit on your company and product image.

## Stretch Hood Wrapping

The best possible wrapping for wood pellets is a wrapping that offers the best protection, the easiest handling and integration with existing production processes, that saves money and at the same time improves company and product image by satisfying customer requirements and needs.

### How to Stretch Hood Wood Pellets

Stretch hooding is a much more efficient way of wrapping wood pellets. It offers better load stability, costs less per load and provides a much nicer visual package. The stretch hooding process starts with the machine, which uses a polyethylene gusseted tubular film. The film is automatically measured for length and sealed at the top to create a five sided enclosed protective hood for the load. The protective hood has no layers, unlike stretch wrapping, so there is no risk of water and dirt running down between the layers of film, potentially damaging the product and negatively altering the load appearance. The hood is also smaller than the load, which reduces the amount of film consumption per load. It relies on its elasticity and memory characteristics, along with the machine, to stretch open the hood, apply it down over the top of the load. The hood can be released on or under the pallet for optimum load stability.



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Benefits of Stretch Hood Wrapping:

### Five sided protection from harsh indoor/outdoor environments

- 5 sided plastic cover for dry and clean products
- No water penetrating between film layers

### Lower your wrapping costs per load

- Reduce film consumption per load
- Minimize product damage caused by bad wrapping
- Reduce manual work and manpower needed for wrapping

### Increase load protection from UV damage

- UV protected stretch hood cover allowing for outdoor storage
- Increased durability of the wrapping

### Tall loads

Wood pellets are challenging to wrap, because of the load instability due to tall heights, ranging in heights from 48 inches to sometimes 96 inches or more, depending on the supplier. Slick plastic bags and overhang of the loads on the pallet also present challenges. As a result, conventional stretch wrapping methods experience problems trying to provide the proper load stability that is needed for this industry. Lachenmeier's stretch hooding system is the proper wrapping solution for this industry.

In order to be successful with wrapping wood pellets and tall loads in general, the equipment being used must have the flexibility to adjust to the tall loads and the product overhang that is commonly found with these loads.



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Lachenmeier's stretch hood machines have that flexibility. Our patented film unwinding during stretch feature (#US7040076), allows us to properly stretch the film, prior to applying it. This process reduces the amount of film consumption per load, provides more film thickness on the corners for extra holding force. It also helps control how the film is being applied, achieving maximum load integrity. For more demanding situations, where extra rough handling may be an issue, Lachenmeier equipment can apply unique wrapping patterns to the load for extra reinforcing and stabilization needs.

### Benefits of Lachenmeier Stretch Hood

Lachenmeier's stretch hooding solution is a one machine, one step process. It saves on production line space, because of a small machine footprint and the elimination of upstream top sheet machines, or bag placers. The equipment has less moving parts than most stretch wrapping systems and requires fewer steps to properly wrap the load. As a result, the overall cost per load is reduced, because there is no manual labor involved, it eliminates the need for top sheets or bags, no pop conveyors needed to release the film under the pallet, no need for trucking tarps, reduced maintenance, etc. The Lachenmeier system is extremely reliable, very efficient and highly recommended for this industry.

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## Conclusion

The best possible wrapping for wood pellets is the wrapping that offers the best protection, the easiest handling integration with your production process and that at the same time improve your company and product image by satisfying customer requirements and needs.

A waterproof packing guaranteeing dry and clean products capable of being transported on flatbed trucks without any problems with cling when rubbing against each other and capable of being stored outside even in harsh weather.

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## About Lachenmeier

Since our founding in 1969, Lachenmeier has been committed to providing the global market with high-quality pallet wrapping equipment. Our unmatched industry experience in stretch hooding and shrink hooding systems, enables us to manufacture high quality, efficient and cost saving equipment, with the flexibility the global market demands. As a result, we are able to develop cutting-edge technologies with our equipment, that offers the best pallet wrapping solution for our customers.

In addition to Lachenmeier US providing stretch hooding and shrink wrapping equipment, we are the only stretch hood equipment manufacturer that offers its own stretch hood film product line. Our premium quality films provide reduced film usage, excellent load stability and load appearance, improved hooding efficiency, resulting in increased throughput and profitability.

Lachenmeier's complete stretch hooding system approach eliminates the finger pointing between equipment and film manufacturers. We are the only single source stretch hooding system supplier in the US.



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