## THERCULITE®

How Choosing the Right Agricultural Curtains Protect Your Livestock and Beef Up Your Profits





## Table of Contents

## Part I: Why Barn Curtain Fabric Is Important - Pg. 4

- » Ventilation Pg. 4
- » Insulation Pg. 5
- » Temperature Control Pg. 5
- » Shrinkage Pg. 5
- » Light control Pg. 6

## Part II: Determining Fabric Quality - Pg. 6

- » Breathable fabric Pg. 7
- » Non-Breathable fabric Pg. 7
- » Part III: A Worthy Investment Pg. 7
- » Longer Lasting Pg. 7
- » Fewer Installation Costs Pg. 8

Part IV: Find The Best - Pg. 8

Part V: Conclusion - Pg. 8



In the world of livestock and dairy cattle, there is more to success than bloodlines and feed quality. There are myriad reasons why better conditions can mean better yield, better products and better profits, and only some of them are controllable. Each year, farmers work to create the best environment for their livestock and dairy cattle, while investing smartly in their operations and environment in order to see the best return on that investment.

Studies show that animals bred and kept in uncomfortable conditions are less productive and more prone to disease. Moreover, weather conditions can be a major cause of stress on a farm's stock. Too much heat or cold can put the animals in a state of stress that can affect their viability and productivity.

The farmers who prepare for these situations – those who make the investment necessary to keep their livestock comfortable – are those who will see the best results year after year. In order to see this success, decisions about the environment livestock live in are key. The farmer that looks at long-term results and stable returns over quick fixes and cheaper materials is likely to win out over time.

Nowhere is this decision-making process more important than in agricultural curtains.

These curtains come in all shapes, sizes, colors, thicknesses and materials. Finding the product that best suits a particular farm can seem daunting. In the end, though, the farm that chooses high-quality, custom curtains such as those from Herculite is likely to see more long-term benefit than the farm that installs cheaper, lower-quality materials that are less protective and have a shorter life span.

#### In this e-book, we will examine:

- why agricultural or barn curtain fabric is important,
- how to determine quality,
- why better fabrics are worth the investment, and
- where to find the best fabrics.



With this guidance, any livestock operation will be able to determine the curtains that best fit its needs and how to take the first step toward making this necessary investment.

# Part I: Why Barn Curtain Fabric Is Important

Agricultural curtains – or barn curtains, as many farmers call them – are a key part of the livestock environment. Unlike static barn walls, these curtains allow flexibility for the farmer to provide ventilation, cooling and warmth for the animals inside, depending on the season and climate.

Regular exposure to fresh air promotes the well-being and productivity of livestock, and the natural ventilation provided by a curtain system fights dust, gas, mold, moisture, airborne diseases and more. Properly ventilated barns have less occurrences of respiratory illness, especially in young animals, and clear or light-colored curtains let the sun shine in, increasing solar gain in the winter and reducing energy costs.

In many cases the curtains can be adjusted to match airflow for maximum ventilation in warm conditions or be closed off for protection in colder conditions. Some curtains – especially higher-quality materials – can be used to block out the sun completely, providing cool, dark conditions that minimize livestock stress.

Let's look at each of these benefits of quality barn curtain fabric.

#### Ventilation

The ability of a farmer to provide this natural air is a key to maintaining a successful operation.

These benefits have been studied for years, with reports on proper installation and adjustment showing that off-the-rack, lesser-quality curtains provide less uniform ventilation than those that are of higher quality and are custom designed for the farm operation.

According to one study, "Natural ventilation does not require energy to operate fans or a furnace, which means fuel conservation and cost savings. If we assume that 35 percent of Indiana's hogs are finished in confinement, the difference in fixed and operating costs



between mechanically- (environmentally-controlled) and naturally-ventilated swine finishing buildings would exceed \$500,000 annually. If we included gestation buildings, the figure would be even higher."

Quality curtains are able to stay in place in the stiffest winds, providing consistent ventilation. Lesser fabrics are more likely to tear and less likely to direct air where it is needed most. This can lead to inconsistent conditions and stressed animals.

#### Insulation

In the same way that high-quality fabrics help to guide the air toward livestock when needed, the best curtains are those that are able to keep the harsh winds out. In cold, punishing conditions, animals need protection just as a human does.

If the fabric isn't of the best quality, minor rips and tears can mean the difference between a comfortable area and a bone-chilling area that puts dozens of animals in peril.

#### Temperature Control

No matter the time of year, animals provide heat of their own, so even on some cool days, swine curtains might need to be adjusted to allow more air in or to keep the animals from overheating in their quarters. The better the quality of the fabrics in those curtains, the more direct control the farmer will have.

Instead of investing in and running expensive HVAC systems, curtains enable farms to open a section of the barn's sidewalls to get fresh air circulating throughout the structure.

## Shrinkage

Over time, fabrics can break down and shrink. A cycle of moisture and sun can cause some barn curtains to contract, allowing air in through the corners and providing less protection for the animals. Farmers who choose to make the investment in high-quality fabrics will see less shrinkage, which means a longer life for the curtains and better protection for the livestock.



### Light control

Some animals need more sunlight than others. With this in mind, barn curtains can be installed as translucent – which allows more sunlight in – or as blackout curtains to keep the barn darker. This can be a key issue for farmers looking to install curtains, as some curtains might profess to be blackout curtains, but because they are of lower quality, they do not quite live up to that promise. When sunlight is an issue, it is even more important for a farm operation to invest in fabrics that will provide the best results.

## Part II: Determining Fabric Quality

Studies have shown that the quality of barn curtain fabric can make a huge difference in the protection provided for the animals. In fact, a non-breathable curtain intended to keep air out of a barn can be no more beneficial than a breathable curtain if the quality and installation of the curtain are not good enough.

According to the report, "During the heating season, controlling curtain infiltration is a major concern. In addition, if fans are used to deliver minimum fresh air to the building during the heating season, curtain sealing is critical if fans and inlets are to operate at desired balance points."

What this study – and many others – found is that there is a difference in fabric quality.

Operators must look at a few things when deciding which fabrics to choose.



#### Breathable fabric

When looking at barn curtain fabric, it is key to decide whether breathable fabric is desired. This fabric will provide some protection for animals, but it is not adequate for keeping in heat and provides only minimal ventilation control.

#### Non-Breathable fabric

More often, operations prefer non-breathable fabric that can be installed and adjusted. Herculite agricultural curtains are among those that include high-quality fabric and protective layers that keep the fabric intact longer and allow for greater control of ventilation.

Where fabrics differ is in quality and production. A cheaper, lower-quality fabric is more likely to break down, which necessitates more frequent replacement. According to experts, "Curtains will have a tendency to crack upon repeated use, rendering the film coating useless, and this will promote increased infiltration. A regular maintenance schedule on curtains is critical, especially when curtains are used along with mechanical ventilation."

In the end, livestock operations must choose the fabric that best suits their needs, but the experts are clear that quality does produce better results.

# Part III: A Worthy Investment

Despite the statistical benefits, some operations are sure to consider price as a key factor in buying dairy curtains, barn curtains, or any agricultural curtain. It makes sense that investment cost must be part of the discussion to be balanced with animal welfare and other operational costs.

With that in mind, there are a number of reasons why making the greater commitment to a high-quality curtain is worth more in the long run.

#### Longer Lasting

As mentioned previously, the lower the fabric quality, the more rapid the decay of those layers that protect animals most. A livestock operation would would be better served by investing in curtains that last two or three times as long as the lesser-quality fabrics.



A second benefit of the longer lifespan of higher-quality curtains is the lesser disruption on the animals that live within the building. Replacing the low-quality curtains costs time as well as money. While low-quality curtains remain, the protection is lower for animals, and replacement time can put animals at further risk while waiting for the new curtains.

#### Fewer Installation Costs

Imagine having to paint every building on the farm every couple of years. At some point, the operation would suffer because of all the labor costs associated with such a reality. The same can be said for barn curtains.

The operation that is willing to invest in top-quality curtains and installation is far more likely to benefit in the long term over the operation that must continually pay for more installations.

## Part IV: Find The Best

Finding the right barn curtains or agricultural curtains can be a daunting task. There are vendors and distributors around the country that can offer a wide range of curtains – including those made of inferior fabrics.

The farm operation looking to make the best investment in agricultural curtains can look for a brand such as Herculite when searching for curtains. Herculite is unique in the industry in that the company manufactures not only the curtains but the fabric that is within the curtains. With many curtain manufacturers, the curtains can have materials that have not been watched from creation to production.

### Part V: Conclusion

It is a new day in livestock and animal production. Companies are serious about making sure that their products are coming from animals that have been raised in a stress-free environment.

Livestock operations around the country are looking at ways to control the environment while also controlling costs. When it comes to barn curtain systems, there are a number of

options to choose from, and each decision is one that balances investment with return. With this e-book, farm operators can make the best decision for themselves while remembering the following points:

- Fabric matters: All the engineering in the world cannot account for lower-quality fabrics in barn curtains. The farm operation that chooses to invest more in fabric will have much more control over the animal environment and will, in the end, reap a greater yield from these less-stressed animals.
- » **Consider quality:** There are many questions to ask, but remember that academic studies show that higher quality does make a difference, and cheaper curtains often break down more quickly.
- Commit to livestock: The animals in every farm operation are the key to yield and profits. By putting the necessary investment into a barn curtain system, each operation can protect the animals while also reaping greater financial benefits in the long run.
- Find the right brand: The curtain purchase process can be daunting. Farms that do the research and choose a company such as Herculite that controls the fabrics as well as the manufacturing process are more likely to find the curtain system that will bring the best results.

Barn curtains can look just like a simple piece of white fabric that hangs around a barn or poultry house, but the reality is that these curtain systems are extremely important to the animals within and to the profits of the farm operation.

Just as an ice cream company wouldn't keep its products out in the sun, livestock operations must make the best decisions to put animals in a positive and productive situation. In this way, quality matters. By choosing a high-quality barn curtain company such as Herculite, farms can keep their livestock happy, which will lead to a happier bottom line.

Get in touch with a Herculite representative to discuss your next agricultural curtains purchase by contacting us via this web form or call 800-772-0036.