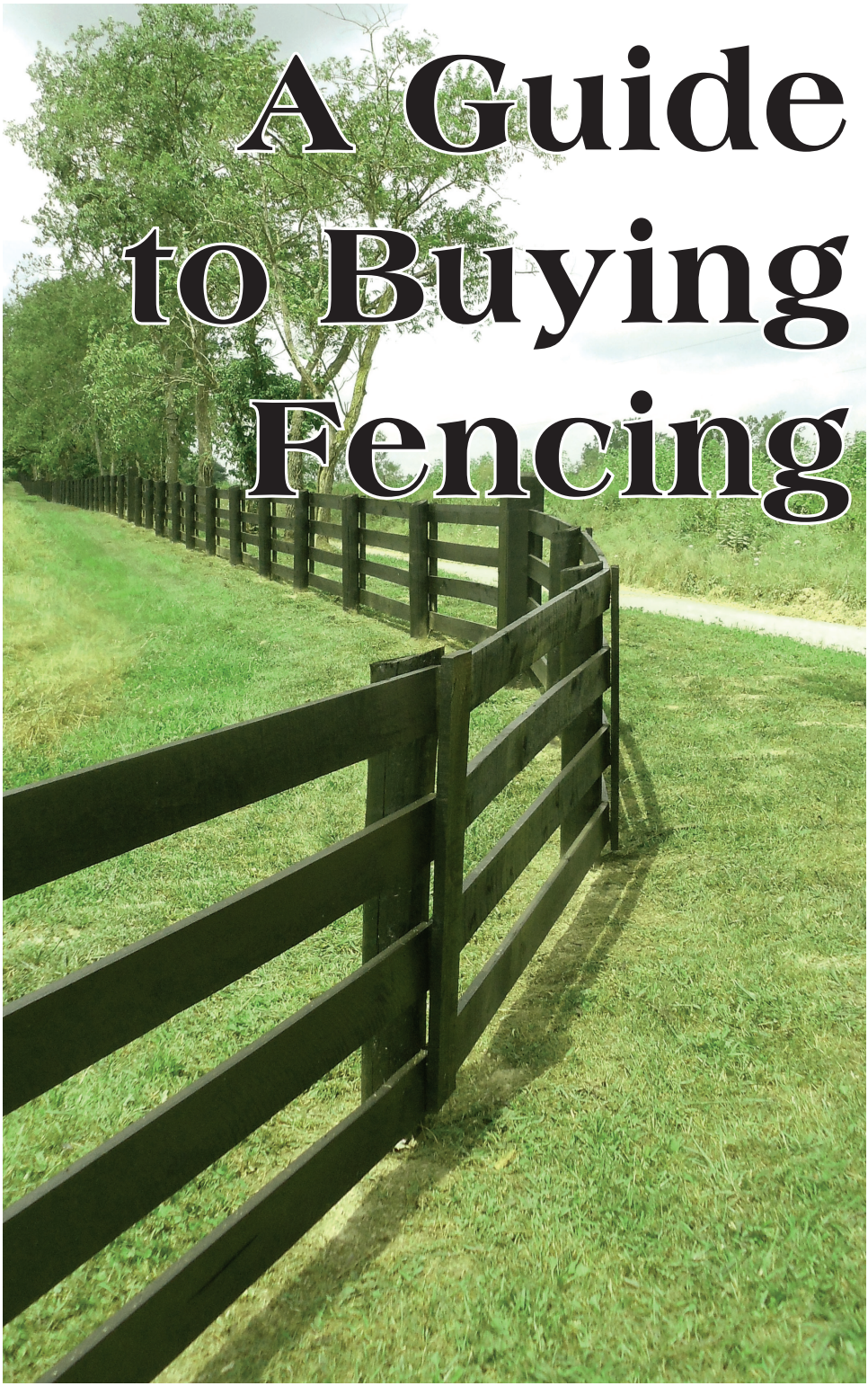
A Guide to Buying Fencing



What choice will YOU make?

Stan's Mistake:

In 2004, **Stan** purchased 200 posts without a warranty from a feed store for $7.00 each. His total cost was $1400, not including tools and labor. Stan was not sure who made the posts he purchased, or if the posts were treated according to AWPA standards, but thought he was getting a bargain price.

In less than 5 years Stan began to notice his posts decaying. By year 10, Stan's cattle had knocked down a large chunk of his fence due to rotten posts. Stan returned to the feed store to purchase more posts. Due to rising wood costs, the posts are now $8.00 each. This time, his total costs are $1600 not including labor and tools. Stan has now spent well over $3000 for posts, tools and labor on what he initially thought was a "bargain price."

Also in 2004, **Joe** purchased 200 posts from a local company for $8.00 each. His total cost was $1600, not including tools and labor. Before Joe purchased his posts, he did research on the company. Joe chose this company because it followed AWPA standards and was able to offer him a written 30 year warranty on his posts.

In 5 years, Joe's posts still looked brand new, making him feel confident that spending a little extra during his initial purchase was a smart move. In 10 years, Joe still had no reason to replace his posts. Because he did not have to replace his posts, Joe ended up saving over $1600 and now expects to get many more useful years of life because the posts met AWPA specifications.

Buy posts that meet or exceed AWPA standards and SAVE.

Buying posts under warranty is saving money.

Make a wise investment, don't be like Stan!

Make a wise investment

When constructing a fencing project whether on a farm, residential property, or through contract work, it is important to consider the quality of product in which you invest money and time. The following is a guide of questions, answers and definitions written for fencing buyers who need to be pointed in the right direction, or who need a little assurance that the purchase they make will result in years of strong, reliable fencing.

Consider the following questions, answers and facts before you purchase fence posts to make an informed and educated investment in the future of your property.

What is "AWPA"?

The quality of your fence posts begins and ends with AWPA.

The American Wood Protection Association or AWPA, was founded in 1904 to create and maintain safe usage standards for wood products. AWPA standards are developed by technical committees in an open, consensus-based process involving individuals from many aspects of wood preservation. These guidelines are universally specified for wood preservation in the USA and are recognized worldwide. Reputable companies adopt these standards to ensure customers receive the highest-quality and best performance possible from a product.

The AWPA Book of Standards is an in-depth manual of over 600 pages that covers topics from safety procedures to chemical breakdowns of preservatives. Many companies fail to follow, or do not attempt to follow, AWPA guidelines due to the rigorous and high standards of operation required.

The AWPA is here to set and uphold high product standards and give customers the best possible value. For more information, visit www.awpa.com

Do the posts meet or exceed AWPA standards?

This needs to be your first question. It is the most important question.

If AWPA guidelines are not followed, choose a company that follows AWPA; companies that do not follow AWPA guidelines cannot produce high-quality, long-lasting wood products.

Where did this wood come from?

Many companies do not know where, or how its loggers harvest wood. Only a fresh cut tree can be properly preserved and protected in pressure treatment.

Fallen timbers that are picked from the ground have already started to decay. Using decaying wood means buying a decaying fence post. Pressure treating does not cure current decay, it prevents future decay. AWPA standards dictate that all wood must be free from defects before treatment.

How long were the posts dried before treatment?

According to the AWPA, posts must be air-dried between 2 and 5 months before pressure treatment. Kiln drying can accelerate this process, but adds significant costs. The posts should be kept in an open yard to allow proper air circulation; stacked and spaced according to AWPA standards. Air drying is the most cost-effective way to dry wood.

Were posts tested by a moisture meter prior to treatment?

Testing wood post moisture levels with a special instrument known as a moisture meter is vital to the pressure treatment process. Wood should have a maximum moisture level of 30 percent before pressure treatment.

If treated while wet at a moisture level above 30 percent, preservatives used in the pressure treatment process become diluted and will only stain the outside of a post instead of soaking into the wood. While a post treated wet might look protected at first glance, any crack the post incurs will be an open invitation for environmental moisture, leading to fungal decay and insect infestations.

In other words; if the post is treated while wet, just like a soaked sponge, it will not be able to absorb more liquid.

What is the "penetration level" of preservatives?

Penetration refers to the depth at which preservatives extend into the wood. When it comes to penetration levels, companies should fall back on AWPA's "2 inches or 85 percent rule." This means if 2 inches of sapwood is available, 2 inches should be penetrated with preservatives. If 2 inches of sapwood does not exist, then 85 percent of existing sapwood should be penetrated with preservatives. If this rule is not followed during pressure treatment the resulting posts will not perform properly.

What preservatives are used during pressure treatment?

The heavy metal chemical compound CCA is the predominant preservative chemical used to pressure treat farm fence posts in the Midwest.

Why are heavy metals used to preserve a post?

Because nothing eats metal, including insects! Other common preservatives used include ACQ and Creosote; specifics on these preservatives can be found in the AWPA Book of Standards.

From what species of tree is the post made?

The best posts are made from DENSE Southern Yellow Pines, the wood with the highest strength and longevity. These high-density pines are tougher and thicker than other pine species, resulting in overall longer lifespans.

Low-density Southern Yellow Pines out of Texas, while still useable, are weaker. These low-density pine incur cracking more easily due to softness and thinness of the wood structure.

The weakest pine species with the shortest lifespans when used in outdoor wood products are Red Pines and Lodge Pole Pines, rendering them less desirable than low-density Southern Yellow Pines.

Is the post covered by a warranty?

Finding a post with a warranty is rare because it is difficult for companies to adhere to ALL AWPA standards of performance.

Warranties are typically provided to customers by direct distributors and manufacturers of fence posts. Large chain stores, and other farm and feed stores are profit motivated, not product motivated, and do not know where their wood comes from or how it has been treated. Because of this, these stores do not offer a warranty to customers.

Demand a warranty on a fence post!

Why?

Finding a company that can provide a warranty on posts is important. Providing a warranty proves a company is willing to stand behind the quality of its product and take responsibility if that product does not meet or exceed performance expectations.

Buying posts is an investment in time AND money. When a post is not under warranty and it only lasts a few years, customers are forced to purchase new posts, spending double or even triple the cost of their initial investment to replace the posts not including tool, time and labor expenses.

3 Steps to a Valid Warranty:

In order for a supplier to offer a valid warranty, they should use a chemical that is warranted by the manufacturer. Next, the wood must be properly conditioned and prepared to receive an adequate amount of chemical as specified by the AWPA. Finally, the amount of chemical and pressure used in the application process should meet or exceed AWPA specifications. Coring tests should be completed to verify that all of the steps were taken and their goals were accomplished.

Only after all of these steps have been followed can a supplier offer a valid warranty to the consumer.

Don't buy a pig in a poke...

Demand posts that meet AWPA specifications and are backed by a warranty

Pressure treatment:

This process (when done according to AWPA guidelines) is what keeps fence posts standing through mother nature's worst! Pressure treatment is a process that infuses preservative chemicals with wood to protect it from environmental decay, fungus and insects. After wood is properly stripped of bark, it is bundled and placed in a large cylinder. Here, vacuum opens the cell structure of the wood and 150 pounds of pressure is applied to move chemical preservatives deep into posts. This creates a high enough preservative strength to protect the posts' heart wood. For a better explanation, and to see this process in action visit Youtube.com/McArthurPosts.

Retention level:

Retention is the amount of preservative that remains in wood after the pressure treatment process is complete. It is expressed as "PCF" or pounds of preservative per cubic foot of wood. Retention rates also determine if wood can be classified as suitable for "ground contact," which requires a .4 PCF. A post needs to be at a .4 PCF level to be used effectively without quickly incurring rot and decay. Wood products meant for "above ground use" like fence boards, for example, only need .25 PCF, while boards used for freshwater docks require .80 PCF. Unfortunately for customers, many chain stores are oblivious to where the wood used in their posts came from and may not be willing to research the woods' origin. Because of this, many chain stores carry posts that are not at suitable PCF levels, but are more or less stained as opposed to being treated at adequate levels.

Quality Control:

This is a company's ability to control the quality of a product from start to finish. AWPA standards were created to establish quality control in the wood product industry. The only way to establish the quality of a wood post is to core it like an apple. Then after coring, a radio isotope device is used to take x-rays of the wood. This process is done to determine if preservative levels in the sapwood of a post meet AWPA standards.

From choosing how trees are harvested initially, to proper conditioning/treatment and providing a warranty, the business that customers choose should practice superb quality control!

Sapwood:

Sapwood naturally surrounds heartwood. It acts as a ribcage, or the armor of the heart. It is the area of wood preservatives are infused into during pressure treatment. It is of utmost importance that sapwood is pressure treated correctly according to AWPA standards in order to protect the underlying heartwood, which is naturally untreatable. Proper treatment of sapwood prevents environmental decay of a post.

Heartwood:

This refers to the naturally untreatable sturdy center of a tree. This is what the pressure treatment process protects, the heart of a post. Pressure treating is all about penetrating wood deep enough so preservatives can surround the heartwood, to protect it from insects, moisture and decay.

Cylinder Post:

This style of post is cut in a uniform way to assure it is the same diameter from top to bottom. Due to being cut in a cylindrical shape, this type of post cracks more easily than a tapered post, and typically is not under warranty because of the stressful manufacturing process. They are also typically weaker than a tapered post.

Tapered (Traditional) Post:

The tapered-style post naturally varies in diameter from top to bottom by one inch every 8-10 feet. This post sets more suitably in the ground than a cylinder style post, it is stronger, longer-lasting, and able to be warrantied.

Quality Control Makes Posts Last!

This post is over 29 years old with years of life left!

Fencing Types

Board Fence:

A traditional style of wood fencing that has been used on farms for generations. Constructed of wooden rails typically 1”x6”x16” attached to wood posts. This type of fence can also have electric fencing attached behind it to keep horses from chewing on the wood.

Split-Rail:

Commonly used both as a livestock fence and decorative landscape fence. This type of fence can be assembled and disassembled quite easily and has a “stacked” appearance. Fence rails are inserted and set in holes through fence posts. The rails are paddle-shaped on each end to easily slide through and sit firmly.

Diamond-Rail:

Similar to the split-rail fencing; rails are inserted into holes drilled in posts. This type of rail is made from a square post that is turned on its edge and paddles are cut on both ends.

High-Tensile Wire:

Commonly known as “smooth wire,” this wire is installed in single/multiple strands. This type of fence is the cheapest option for wire farm fencing. It is easy to install and can have electric added to prevent livestock from leaning and pushing on the wire.

High-Tensile Field Fence

Woven wire constructed of high-tensile galvanized metal. This wire is cheap, light and easy to work with. It has a higher-break strength than traditional low-carbon field fence.

Low-Carbon Field Fence

Traditional woven-wire fencing that is much heavier and harder to work with than high-tensile field fence. Even though this wire is heavier than high-tensile field fence (9 or 11 gauge) it has a lower break strength.

No-Climb Wire

Woven wire fencing constructed with 2”x4” squares. This type of fencing is ideal for horses; it prevents them from getting their hooves caught in the wire.

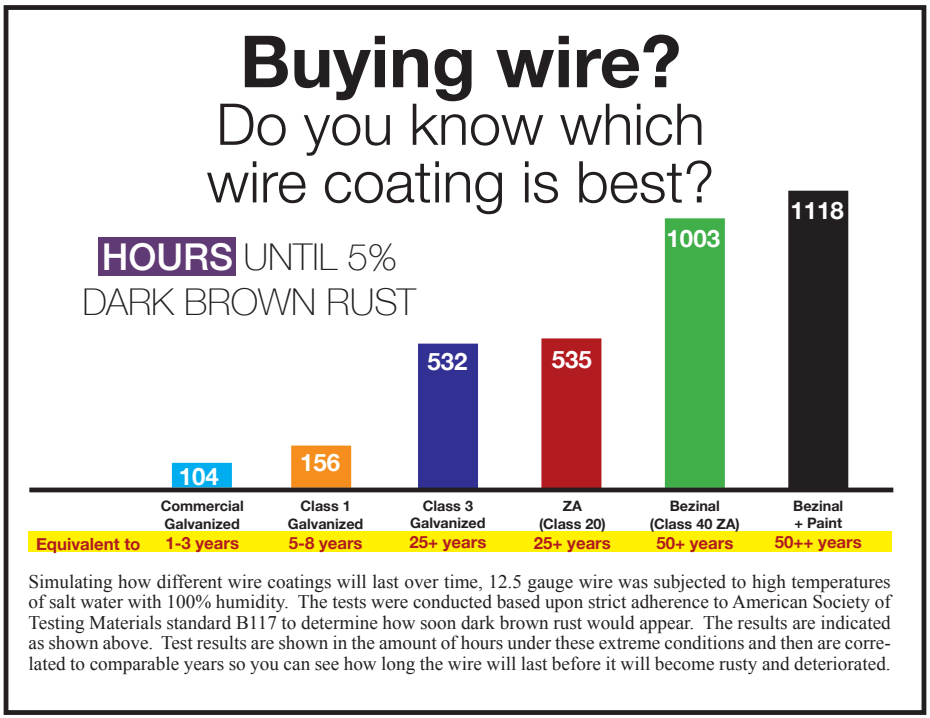
Wire Fencing

Class 1:
This class of wire fencing will usually rust in 5-8 years. It is commonly sold in chain stores. Most reputable fence installers will not use this wire.

Class 3:
Roughly 2.5 to 3 times the galvanization of Class 1 wire. This wire is expected to begin rusting in 25+ years.

Bezinal:
A coating made from 95% zinc and 5% aluminum alloy. Bezinal has roughly 1.5 to 2 times the longevity of Class 3 wire, making Bezinal a strong choice.

Bezinal & Paint:
This coating is Bezinal (described above) with a layer of paint added. This is the longest-lasting wire fence customers can purchase, having double the life expectancy of Class 3 wire.



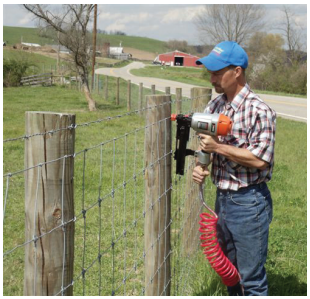
Simulating how different wire coatings will last over time, 12.5 gauge wire was subjected to high temperatures of salt water with 100% humidity. The tests were conducted based upon strict adherence to American Society of Testing Materials standard B117 to determine how soon dark brown rust would appear. The results are indicated as shown above. Test results are shown in the amount of hours under these extreme conditions and then are correlated to comparable years so you can see how long the wire will last before it will become rusty and deteriorated.

Fencing Installation

Post Drivers by Wheatheart

Wheatheart post pounders are ideal for fencing applications on farms, ranches, vineyards and orchards. Heavy duty construction, hard-hitting power, low maintenance, adjustable hammer height and greaseless horizontal poly slides combine to ensure safe, efficient and reliable fence post installation. Operation is made easy with two hydraulic tilt cylinders controlled by a conveniently located joy stick. The four way tilt mast is easily maneuvered side to side, forward, or backward for perfect post alignment on even or uneven ground. A hydraulic operated post hugger ensures reliable control of each post as it is driven. The large variety of models and hook up systems available allow you to utilize your own machinery (tractors, skid steer, etc.) in combination with the post pounder to get the job done efficiently and safely. Alternately, self-contained and self-propelled models are also available. In terms of quality, safety of operation, efficiency, reliability and durability, the Wheatheart post pounder is way ahead of the competition.

Make Building Your Fence EASY With A Fencing Stapler



Anyone who has ever built a fence knows that the most time-consuming and painful part is hammering staples in by hand. Now there is a much better alternative. The Stock-ade ST-400 pneumatic stapler is ideal for farm fencing. It is durable and very powerful and will drive fence staples into the hardest posts you can find. It shoots a 1 3/4" or 2", 9 gauge, barbed staple and features a sequential trigger system, a depth of drive adjustment and a staple wire angle guide. This tool will save you many hours of time, which equals more money in your pocket.

Common fence installation products and tools:

Brace pins:

Holes are drilled into the vertical posts and metal brace pins are inserted through the holes to help hold horizontal posts in place. These pins also help reinforce the posts' positions, and should be made of galvanized metal for longevity.

Strainers:

Despite the deceiving name, this small tool is simply used to tighten wire fencing strung between posts.

Ring Insulator:

Ring insulators are used to secure wire on wood fence posts firmly so it is not easily pulled from the post.

Tube Insulator:

Often made of rubber or plastic covering a metal insulator. Used to hold wire on fence posts, most commonly used on electric fencing and corral panels.

Crimp Sleeves:

Small pieces of galvanized metal used to repair wire fencing. Used during the repair process to patch and hold broken pieces of wire together.

Tension Spring:

This wire spring is used to indicate the amount of tension in electric or galvanized wire fences. It also acts as a shock absorber; helping to absorb any expansion or contraction of the fence.

Spinning Jenny:

Allows galvanized high-tensile wire to be wrapped around a spool and re-rolled for easy storage, then rolled out for easy installation.

Post Pounder:

Also called a post-driver it is used to drive fence posts into the ground. It can be manual having two handles on either side of enclosed steel, or automatic and run using fuel and a grip mechanism. See page 10 in booklet.

Fence Stapler:

Used to secure wire fencing onto wood posts. It resembles a nail gun and is a hand held device that deeply implants metal staples into posts. It is used to speed up labor time installing fences and make fence installation safer. There is only one fence staple tool, the Stockade. See page 10 in booklet.

Buy quality products...it pays!

Helpful Resources:

www.fencing.bekaert.com
For how-to fence installation videos, instructions on picking the right fence for livestock, wire comparisons, and more!

www.Youtube.com/McArthurPosts
To see a pressure-treatment facility in action!

www.AWPA.com
For American Wood Protection Association standards, guidelines and information on how to stay informed in a changing market.

http://www.call811.com
For information on how to locate gas lines BEFORE you begin digging to ensure safety.

Thanks to
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