

# WHY WOOD?

## Pressure Treated Wood in Agricultural Applications



Wood Preservation Canada

**Locally sourced** – Most treated wood agricultural posts are manufactured by a Canadian company. Supporting local means that you're supporting Canadian workers and buying locally-sourced products that are harvested responsibly. By choosing Canadian-made posts, you're also reducing the carbon footprint associated with transportation, promoting sustainable practices, and contributing to the growth of our national economy.

**Sustainable** – Wood is the only renewable building material and it sequesters carbon dioxide – talk about green construction! The environmental impacts of wood products over their life cycle are vastly lower compared to more carbon-intensive alternative products. In Life Cycle Assessments published by the Treated Wood Council, CCA-treated wood agricultural posts (when compared to galvanized steel):

- use nearly half the amount of fossil fuels in their production;
- generate 1/6 of net greenhouse gas emissions compared to steel; and
- are responsible for less than half of the ocean's acidification and eco-toxicity ratings.

**Did you know?** The wood agricultural posts you purchase are likely harvested within 200 km of your location and are sourced from responsibly harvested forests.

### What is pressure treated wood?

Pressure treatment is a process that forces preservatives into the wood to protect it from insects such as termites, and wood rot caused by fungal decay. The pressure treatment process is considered the best and most effective method to extend the service life of wood products.

### The treated wood industry has standards!

The governing standard for the treated wood industry in Canada is CAN/CSA O80 Wood Preservation standard. The CSA O80 Wood Preservation standards provide a thorough set of requirements for the use and application of pressure treated wood under Canadian conditions.

The quality control requirements of pressure treated wood products, as outlined in CAN/CSA O80, are results-based tests that are measured by sampling the wood after the preservative treatment process. Instructions are provided to the treating plants for sampling (quantity), analysis (methodology), and minimum depth of penetration and preservative retention (amount of preservative injected into the wood).

**Biophilia** This term refers to human tendency to interact or be closely associated with forms of nature. While imitation may be the highest form of flattery, there is no comparison for the beauty of natural wood.



## Agricultural Applications

- fencing: cattle, bison, buffalo, sheep, wildlife exclusion such as deer and big game
- buildings & structural elements, posts and plywood: silage bins, hay sheds, pole barns, outdoor venues
- crop stakes and supports: grape, apple, berry, other orchard/vine trellising
- livestock enclosures

## KEY BENEFITS

- **Longer service life** – compared to non-treated wood
- **Workability** – wood is easy to install and to work with in the field (no hidden costs)
- **Durability** – creates a stronger, more durable fence
- **Sustainability** – wood is superior to steel or concrete in terms of environmental impact
- **Versatility** – wide variety of sizes available
- **Renewable** – wood is the only renewable building material
- **Aesthetic** – the natural look of wood blends well with the landscape and fields where it is used
- **Greater value** – wood is cost effective, low maintenance, and has low replacement costs; plus it works!

## Safe, strong and made to last!

In Canada, treating plants utilizing CCA must perform a process called 'fixation' on treated wood. Fixation reduces leaching of the preservative, ensuring environmental efficacy and longevity of the product. Testing is performed after the fixation process to ensure that it was completed correctly. Fixation helps to keep preservative in the wood, extending the service life of the product.

## Environmental Considerations

Wood is the only renewable building material within the three major building material types: wood, steel and concrete. In exterior applications, wood is subject to deterioration from natural elements and biological attack, but when properly protected, its service life can be extended for many years. The most effective way of protecting exposed wood is the use of wood preservatives. Preserved wood products can have 5 to 10 times the service life of untreated wood. This extension of life saves the equivalent of 12.5% of Canada's annual log harvests (source durable-wood.com).

The addition of preservatives increases the in-service life of exposed wood products. The results are lower replacement costs, prolonged carbon storage, and a reduction on the demands of the forest resources – as an increased service life provides time for a tree to mature in the forest.

Assessing the environmental benefits of any building product requires a systematic, science-based approach such as life cycle assessments (LCA). The process of conducting an (LCA) considers the full cradle-to-grave analysis of a product. The LCAs for pressure treated wood products are conducted in accordance with the International Organization for Standardization (ISO) 14044 Standard and have been subject to scientific peer review to confirm the results. In recent years, the US Treated Wood Council has undertaken life cycle assessment of pressure treated wood compared to other materials used in the same product category.





Pressure treated wood guard rail posts Life Cycle Assessment data is often referenced for similar products such as agricultural posts:

- **Less Energy & Resource Use:** Treated wood highway guard rail posts require less total energy and less fossil fuel than galvanized steel highway guard rail posts.
- **Lower Environmental Impacts:** Treated wood highway guard rail posts have lower environmental impacts than galvanized steel highway guard rail posts in five of six impact indicator categories assessed: anthropogenic greenhouse gas, total greenhouse gas, acid rain, ecotoxicity, and smog-causing emissions.

Visit [woodpreservation.ca](http://woodpreservation.ca) to view the life cycle assessment reports.



### Preservatives

Health Canada's Pest Management Regulatory Agency (PMRA) is the federal agency responsible for managing preservative registrations in Canada. Under the Pest Control Products Act (PCPA), wood preservatives must be registered and meet the label requirements, which include scientific data on occupational exposure, human toxicology and environmental chemistry, and toxicology associated with wood preservatives.

There are two categories of preservatives available: waterborne and oilborne. The following waterborne preservatives can be used for agricultural applications in Canada:

- CCA – Chromated Copper Arsenate
- CA-B – Copper Azole, Type B
- MCA – Micronized Copper Azole

### Regulated & Standardized

In Canada, wood preservatives are registered with Health Canada's Pest Management Regulatory Agency (PMRA). Individual treating facilities undergo regular environmental assessments and follow the recommendations for the design and operation of wood preservative facilities as outlined in Environment Canada's Technical Recommendation Document (TRD).

The CSA O80 Series of Standards specifies the requirements for the preservation of treated wood. These Standards provide a thorough set of requirements for the use and application of pressure treated wood under Canadian conditions.

### Wood Preservation Canada

Wood Preservation Canada (WPC) is the industry association that represents the treated wood industry in Canada. WPC operates under Federal Charter and serves as a forum for those concerned with all phases of the pressure treated wood industry, including research, production, handling/use and the environment. WPC members are committed to producing safe, quality products in an environmentally sound and progressive manner. Visit [woodpreservation.ca](http://woodpreservation.ca) to learn more.

