



GreenWeaver

INC

**Frequently Asked Questions About
STRAW BALE BUILDINGS**

WHAT ARE THE BENEFITS OF STRAW BALE CONSTRUCTION?

ENERGY EFFICIENCY

Super insulated walls are thermally comfortable in both hot and cold climates, reduce utility costs, and reduce CO2 emissions. Estimated savings are 65-75% over conventional construction.

RESOURCE EFFICIENT

Straw bale walls reduce the use of precious wood resources while using an annually renewable waste product. Straw also has a very low “embodied energy” which is the amount of energy used in the production, transportation, construction and eventual demolition of a building material. Baled straw has 126 times less the embodied energy of fiberglass insulation and is non-toxic, low cost and sequesters carbon.

AFFORDABLE

Straw bale building is being used in the U.S. and other countries to serve homeless and under housed populations. Costs can range from very low to very high depending on many factors. The best way to save money is through simple design, sweat equity in construction and low utility costs for life.

IMPROVED INDOOR AIR QUALITY

Natural plasters such as earth and lime are non-toxic and can help to moderate indoor humidity. Ventilation is also an important element for healthy indoor air.

USE OF LOCAL LABOR AND MATERIALS

Instead of importing industrially produced building materials, straw bale construction relies on local labor and materials. It offers opportunities for micro enterprise and economic development.

ADAPTABLE FOR DIFFERENT CULTURES AND CLIMATES

Straw bale buildings can be designed for different styles and climates. Its use has spread to 49 states in the U.S. and to over 40 countries around the world.

BEAUTY

The beauty of the thick walls, plasters and sculptural elements captivate most people in a surprising way. Besides the human benefit, buildings that are infused with beauty are often longer lasting because they are cared for, making them more sustainable.

POST OFFICE BOX 912 📍 CARBONDALE, CO 81623

telephone 970 379 6779 📞 facsimile 970 963 0905 📠 info@greenweaverinc.com 🌐 www.greenweaverinc.com



COMMUNITY INVOLVEMENT

Straw bale wall raisings and plaster parties bring community together. The process is simple, making it accessible to many skill levels and ages. It's also fun and empowering.

IS STRAW THE SAME AS HAY?

No. Hay comes from alfalfa and grasses harvested green, and is used for animal feed. Straw is the stalk remaining after a harvest of grain such as wheat, rice, barley or oats. It is an annually renewable resource and much of it is considered waste. There is enough straw harvested each year in the United States to build at least 10 million 2,000 square foot homes.

DO STRAW BALE WALLS BURN?

Plastered straw bale walls have passed one- and two-hour American Society for Testing and Materials (ASTM) fire tests and superior to standard wood frame construction with similar finishes. Un-plastered bales must be protected from flame and spark.

WILL THE BALES ROT?

Historical straw bale structures in climates such as Nebraska and Alabama demonstrate that straw will remain in excellent condition if kept dry, through good design and construction. Both straw and wood can rot when wet for extended periods of time. All buildings must be designed and detailed well to avoid moisture issues.

WILL STRAW SPONTANEOUSLY COMBUST?

There are no reports of straw spontaneously combusting. Hay, which is generally not used for building, is susceptible to this risk.

WILL PESTS DAMAGE THE WALLS?

Straw does not have food value and bales offer less of a haven to insects and vermin than wood framing. When well sealed with plaster, access for pests is eliminated.

ARE THEY EARTHQUAKE AND TORNADO RESISTANT?

Yes. Straw bale structures have survived well in earthquakes and severe weather. Structural engineering tests show straw bale walls have both good compressive and lateral strength and good ductile qualities. Programs in China and Pakistan are using straw bale construction for earthquake resistant, energy efficient housing.

WHAT ABOUT THE BIG BAD WOLF?

Don't let the story of the Three Little Pigs fool you. The real moral is "Don't let a pig build your house!"

For more information on fire, moisture, structural and other testing, see www.ecobuildnetwork.org.

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