'Nebraska Style' Straw House on display at Straw Bale Pavilion during Yuba-Sutter Fair

by Charlie McNiff

On display at the Yuba-Sutter Fair this week in the Straw Bale Pavilion is a "Nebraska Style" Straw House.

No, Virginia, this is not the type of house where the wolf is going to come by...Huff, Puff, and blow your house down.

This is a new technology in house building that has evolved since the mid-1800's when settlers in the midwest were forced to erect dwellings in other than conventional methods.

Straw and sod were plentiful on the plains of Nebraska, the Dakotas, Kansas, Oklahoma, etc. Wood was not. And, besides, wood was not a real terrific insulator against the freezing winters.

The inventive genius of the human mind got to work and built one to two-foot walls of straw and finished the outside and inside walls with sod. European countries still today have thatched roofs that protect its inhabitants from the elements.

Getting back to Nebraska, this reporter remembers his mother relating tales of living in a "straw house" in the early 1920's while teaching school in the northern regions of Nebraska. She recalled, "I couldn't believe how cool it was in the summer...and so warmish in the winter."

So sets the stage for the technology of today. They don't use sod. They use stucco or adobe...state of the art doors and plate glass windows...and conventional roofing. The sod floor Mom trod upon has been upgraded to wood flooring, carpeted or natural.

The cost? Ian McIlvaine, one of the architects from Venice, California, related dollar figures ranging from $10 to $100 per square foot, depending upon your taste and bank account.

This should be an exciting display.

What is it?

It's a structure made of load-bearing straw bale walls which enclose a 14'x22' interior space. Amenitites such as plaster, lighting, flooring, etc. are meant to show that straw bale can be accessorized just the same as a wood frame, masonry or steel frame structure. The pavilion, however, has not been completely finished so that visitors can see how a straw bale structure is actually put together with flooring, etc., etc.

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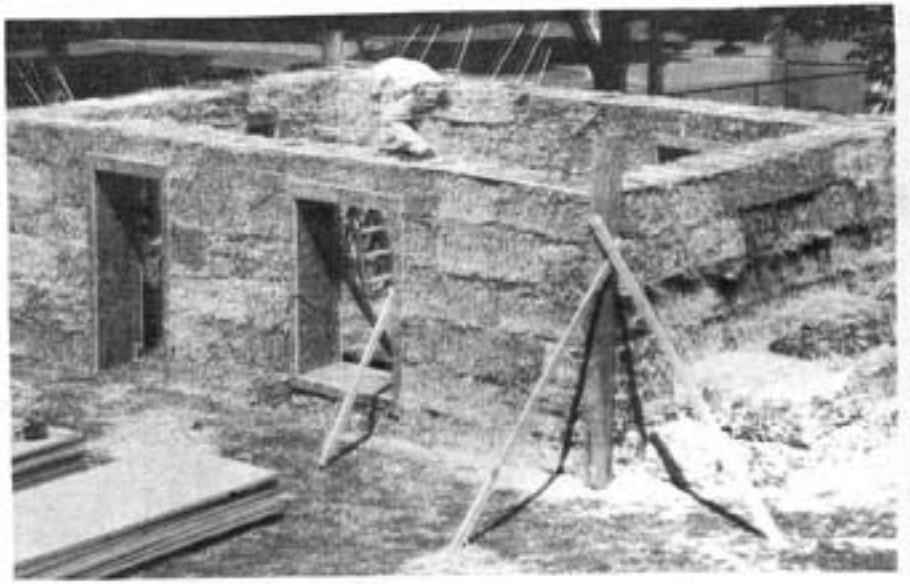
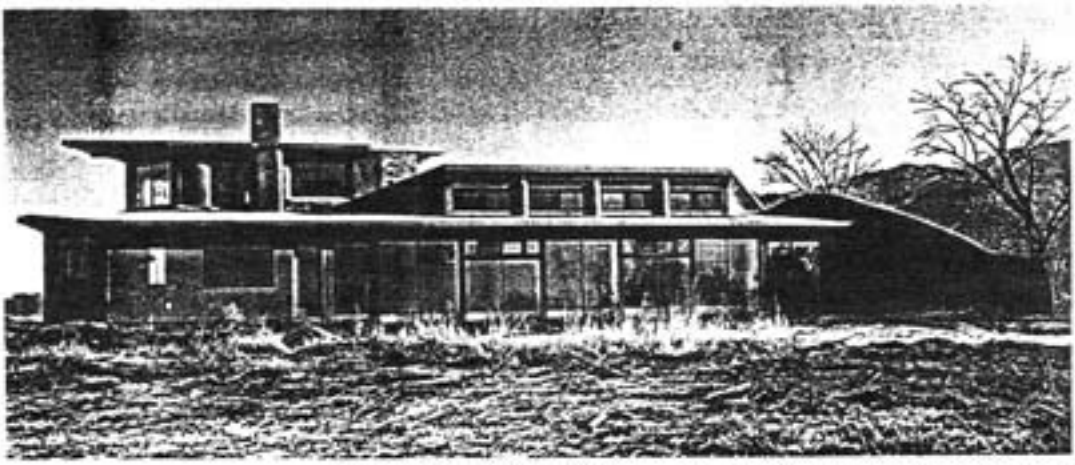


IN LITTLE MORE THAN 15 HOURS, from placing the first bale of hay, the "Straw House" started to take shape yesterday morning in the Straw Bale Pavilion at the Yuba-Sutter Fairgrounds. The "Straw House" will not be complete, according to David Wilson, Sutter County Assistant Agricultural Commissioner. Wilson said, "There won't be flooring, electrical, and other internal finishes. We are only showing a concept of this new type of home construction."

First California Approved Straw-Bale House Constructed in Lone Pine...Owens Valley



SOUTH FACING GLAZING TO MAXIMIZE SOLAR EXPOSURE IN WINTER. *PHOTO COURTESY KEN HAGGARD*

'Nebraska Style' Straw House

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Who built it?

At the request of Sutter County Agricultural Commissioner Stacy Carlsen...Ian McIlvaine, Aidan Bird and Victoria Yust - (young designers from Venice, California and partners in Tierra Sol y Mar Design) - volunteered their time to both design and to coordinate the construction of the pavilion. Two local farmers donated straw bales for the walls of the pavilion. Carlsen and Doris Joaquin of the Yuba Sutter Farm Bureau rounded up miscellaneous building materials from local suppliers. Volunteers (many from the County Ag Department - Dave Wilson, Paul Schwall, his son Jeff, Mike Furuta, Ken Woolery, Dennis Hanna, Navid Khan, David Karnegas) generously helped with the "raising" of the pavilion.

Why Build it?

Simplicity - Unlike so much of our modern life which has become dependent on exotic technologies and the specialists who maintain them, straw bale construction is simple, "lo-tech" and easily accessible. Most straw bale houses built to date have been built by owner-builders, people with lots of energy and intelligence, but not necessarily much experience with construction, architecture, etc. Straw bale does not require expensive or exotic tools or equipment. It does not require specialists for its construction.

Air Pollution - Farmers in California have burned as much as 1 million tons of rice straw every year creating severe air pollution. Providing farmers with an alternative method of disposing of their straw would prevent this needless air pollution.

Because of the high insulative value of a straw bale wall, less energy is required to heat and cool the building. Less energy required means less energy that needs to be generated and, therefore, less pollution from the burning of whatever fuel powers the electrical generating station.

Energy Savings - Straw is produced by photosynthesis, a natural non-polluting process fueled by solar energy. The main energy costs are incurred in the baling, but these are very low compared to other typical building materials. Comparing energy costs for common materials:

- **Concrete:** 96,000 BTU's/cu. ft.
- **Fiberlass insulation:** 6,900 BTU's/s.f. of 3:5" insulation
- **Straw bales:** 3,400 BTU's/s.f. for an R-50 wall.

Sustainability - It is an annually renewable product. Every year there is a new crop of straw to be disposed of. Compare this to traditional lumber products: lumber from tree farms requires 20 to 30 years to grow and is of increasingly poor quality; old growth timber is increasingly scarce and therefore expensive, and is of greater value to the world as forest than it is as a lumber product. Straw is a waste product.

THE FRONT DOOR for the 'Straw House' is being hoisted into position by Mark Brown, left, and Paul Schwall, who have helped with the construction of the structure now on display in the Straw Bale Pavilion at the Yuba-Sutter Fair.