7 Essential Steps To Straw Bale Success - Day 3

Choosing The Best Bales for the Job

Now that you have an understanding of your land and a home design that fits that understanding, you need to know where your bales will come from. In fact, it is best to secure your bale source while you are designing so you know exactly what size the bales will be. This is important during the engineering and/or framing design. There are many farmers out there with available bales; however, don't buy from just anyone. Instead, know what to look for and buy the best bales you can find in your area. The price difference should not vary that much, so a little extra effort is worth it.

VISUAL INSPECTION

Pay attention to the color of the bales. This simple detail is a tell tale for the history of the bales. Have they seen weather? Have they been stored properly with enough ventilation? The appearance of surface mold is a good indicator that the bales have been wet in the past or improperly stored. If there is a lot of white dust released from the bales when you hit them, they may have considerable interior mold; in other words, mold you cannot see on the surface of the bale. To be sure that the dust released from the bales is mold and not dirt, use your nose. If it is mold, the smell is unmistakably musty. If you discover upon visual inspection that the bales are water damaged, moldy, or otherwise not in good condition, don't investigate any further as using these bales in construction will jeopardize the integrity of the house.

BALE DENSITY

The density of the bales is another important factor to be aware of. In fact, most building codes that recognize straw bale construction call out a specific density requirement. For example, here in Oregon, the code says "Bales…shall have a minimum calculated dry density of 7.0 pounds per cubic foot (1.10 kN/m3)." If you do not know the density of the bales, you will not be able to guarantee the building inspector of the quality of the bales. A simple field test of a bale's density can take the stress off the inspector and therefore off of you!

MOISTURE CONTENT

Perhaps the most important factor when choosing bales is their moisture content. If a bale reaches a moisture content of over 20%, it has reached the level in which mold growth and decay can take place and can be sustained. Once that level is reached, it is difficult to reverse as the decay process produces the two things the bales need to rot: moisture and warmth. When measuring the moisture content of the bales, keep in mind that they will take on or lose moisture in response to ambient moisture in the atmosphere. It is important to get accurate readings of the bales, not the atmosphere. In other words, do not measure the bales in the early morning when dew may affect the reading. Check the bales during

the most neutral time of the day so that the reading is accurate and truly representative of the condition of the bales.

In all, there is much you can do to identify quality bales. Use your eyes, your nose, and your common sense along with whatever science your local codes require to make your decision. Use local bales if you can find them. The further away from the building site they are, the more impact on the environment they will have. They will also be more expensive if they are transported a long distance. After all, transportation is not as cheap and clean as it used to be! The bales should be of the best quality you can find; however, you could search for the perfect bale for the rest of your life. Therefore, once you find bales that meet your criterion and are within your price range, buy them and move on to the next step of the design/construction process.

Tomorrow we'll take a look at Framing Considerations

Happy Baling,

Andrew Morrison
Professional Straw Bale Contractor
Learn Straw Bale