Ask@

Independent Sawmill & Woodlot MANAGEMENT

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Q If I build a solar kiln and can get my 5/4 and 8/4 walnut down to 7%, how long will it take for it to come back to equilibrium, which seems to be about 13% in Missouri? I hate to kiln dry it and have it regain MC if I do not sell it quickly.

A If you empty the kiln with 7% MC lumber and store it in an unheated shed in Missouri (13% EMC), the increased moisture will likely be an issue after 30 days. Here are three options:

1. When dry, you can keep it in the solar kiln forever without a moisture gain; but do not add some fresh lumber that needs drying to the kiln, so the kiln is not a dryer and storage chamber at the same time.

2. A more practical procedure is to wrap a pile, partial pile, or several boards with a plastic film (like Saran®; a big 3-ft. wide roll from the box stores make wrapping easy). Wrap the lumber pile totally, using duct tape as needed to secure the edges. This bundle will maintain the low moisture content for a year or even more because moisture cannot get in or out.

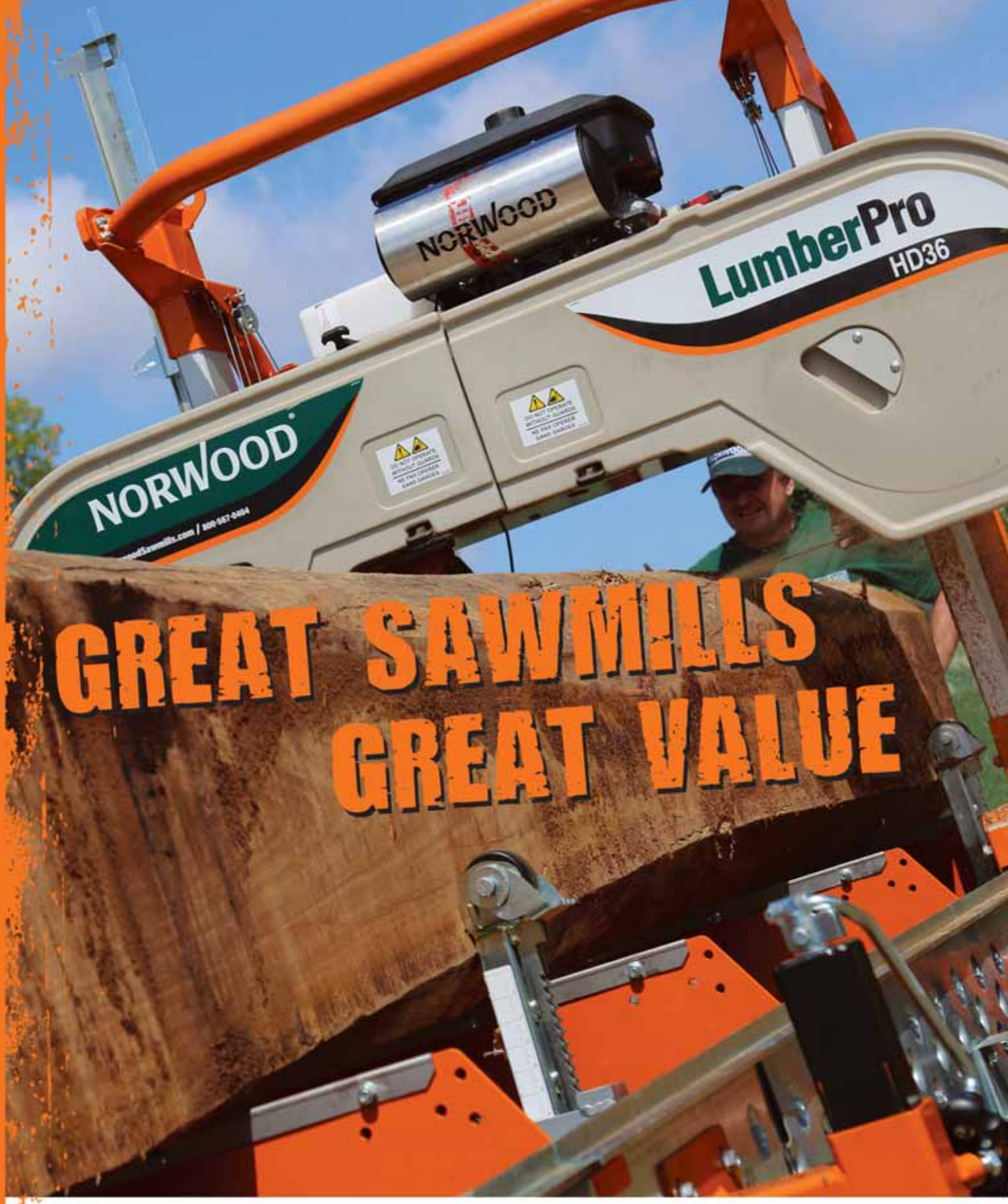
3. For a larger storage area, make a small room in a building using thick plastic sheets for walls. Inside this "sealed" room, you will need a household-style heater (controlled with a thermostat), and household humidifier (when it is too dry in the wintertime) and dehumidifier (when it is too humid in the summertime) controlled with a humidistat. Humidity is critical; usually set the control to 35% RH (plus or minus 4% RH).

Q I need a larger dehumidifier kiln–more volume of lumber and more horsepower per board foot for the compressor. The new unit I am considering has a maximum temperature of 160°F and I've been told that it will definitely help the drying process. Do you agree?

A This is a wise move for many people, as the larger unit is more versatile (temperatures and humidities), allowing you to dry different species efficiently and quickly. (Remember, however, that drying speed is limited by the requirements of the wood species and lumber thickness. Hardware, unless undersized, does not often control the speed. The biggest key for speed is to lower the MC with air drying or other processes BEFORE the wood gets to the kiln.)

Q I have several SYP logs down from this past summer and a few standing that I will take down this weekend—dead from Pine Beetles (at least that's what we've always called them here in east Texas). Do I need to saw them promptly? Will the beetle infect lumber that I have air drying now?

A There are five species of the so-called Southern Pine Beetle (SPB), and there are variations in their names as well. *Dendroctonus frontalis* is the most destructive insect pest of pine in the southern United States. The beetle kills the tree by plugging the conductive cells. The beetle also brings in the blue stain fungus. Pines are most susceptible to the SPB when they are stressed: drought, flooding, storm damage, or by stand conditions such as over-crowding (very important), old age, or root disease. Lightning struck trees are particularly vulnerable to attack, as are trees damaged by road building or logging activities. Once the tree dies and the MC decreases, the major risk is heavy blue stain and eventual infestation by other fungi and bay insects. For this reason, prompt harvesting and sawing is encouraged. As soon as we get the lumber dried, there is no risk of additional blue stain or other fungal or insect damage (other than termites). There is no need to treat the wood with poisons. There is no risk for other lumber in the air yard. Heavy blue stain does affect strength, grades, appearance, gluing, and finishing.



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