

House Walls made out of Firewood - A Stackwall House

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A viewer in Brandon, Man. had some questions about why his stockwall has started to shrink and crack. Art asked whether it is the aggregate he used or the logs themselves. Good question and I couldn't really help much. (But read on and you will see that at least one of our viewers does have some answers.) Their formula of mortar and sawdust was according to old time recipes. If a log shrinks a lot, it will generally have a radial crack, so if you don't have many radial cracks, you probably don't have too much shrinkage in the logs themselves and the culprit is probably the mortar formula and the dry prairie climate. I have to admit that I think building a house this way is slightly crazy anyway. Logs, as we can see in the corners of log cabins, are very prone to rotting out at the core. In a stackwall this means holes right through the house wall. And I am not quite sure why the sawdust in the mortar. That seems like a formula for shrinkage to me. From questions I have received in previous years, I think shrinkage and rot problems are precisely why we don't see too many stackwall houses. I will admit that if it is going to work, it is probably going to work in the relatively dry prairies, rather than in the muggy Maritimes. A little oakum for the cracks, or modern polyurethane caulking? Minwax makes a wood hardener that can prevent shrinkage, but it comes in small quantities. Available in many hardware stores. BCS from Cavan, Ontario distributes wood restoration epoxy products that are often used for log cabins and even will migrate into moist wood to stop future expansion, contraction and rot as well. This product is made and sold in the US under the name Smith & Co. ----- I received this letter from Jim in Yarmouth, N.S. after he saw this show: "I saw part of your show the other night where a viewer was having problems with cracks in stackwall. I presume that he dried the logs over a period of time before he started building. There is a very good book on stackwall building, STACKWALL, HOW TO BUILD IT, available from the University of Manitoba bookstore (by Al Lansdown, Ph.D., P.Eng., Kris Dick, Ph.D., P.Eng, published by A&K Technical Services, P.O. Box 22, Anola, Manitoba, R0E 0A0 ISBN 0-9682368-0-4). It states that "wall construction is basically a two season project" and that "the gaps which appear between the logs and mortar are to be expected, need not be a cause for alarm, but must, nevertheless be filled". I have never heard of mixing sawdust with the mortar, as your caller mentioned? The stackwall book mentions using sawdust (mixed with lime to discourage bugs) as a filler between the logs for insulation. This in walls up to 2 foot thick?" Thanks Jim and someday I must stop by and see those Angora goats.

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