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Housing Burley Tobacco on Portable Curing Frames

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Portable frames, wood and steel, and tractor lifts will make tobacco housing a little easier. The following story describes the use of these items in housing a burley tobacco crop.

HOUSING BURLEY TOBACCO ON PORTABLE CURING FRAMES

Elmon E. Yoder

Housing burley tobacco by conventional methods requires about 40 man-hours per acre. Although this represents only about 10 percent of the total work hours required to produce the crop, severe labor problems concern the burley farmer during each housing season. Contributing to these problems is the necessity of obtaining workers in adequate numbers from a seasonal labor supply which increasingly regards housing as disagreeable work.

The objective of a research project conducted jointly by the Department of Agricultural Engineering and the United States Department of Agriculture is to improve working conditions and reduce labor requirements by mechanically handling the crop during housing. A system has been developed which involves portable curing frames, a front-mounted tractor-loader, transport wagons, and air-cure barns.

During 1967 at a demonstration farm at Lexington, two acres of tobacco were housed by this experimental procedure. This farm is open to visitors during 1968. A field day during housing season is scheduled to occur during first week of September.

4M-8-68



Figure 1 - Modifications to a conventional tractor-loader involved extending the tines and constructing vertical masts at the rear of the tines for operator safety. Each wooden frame was constructed from 88 board feet of unsurfaced lumber and 4-1/2 square feet of exterior plywood.



Figure 2 - Tobacco was placed into the frames the day following harvest. Twenty-five sticks were placed on the 12-foot rails, requiring 54 frames per acre. Twelve man-hours were required to place an acre of tobacco into the frames.



Figure 3 - The tobacco wilted on the frames at the field for approximately a week. A 1/2-inch rain during this time caused no visible damage.

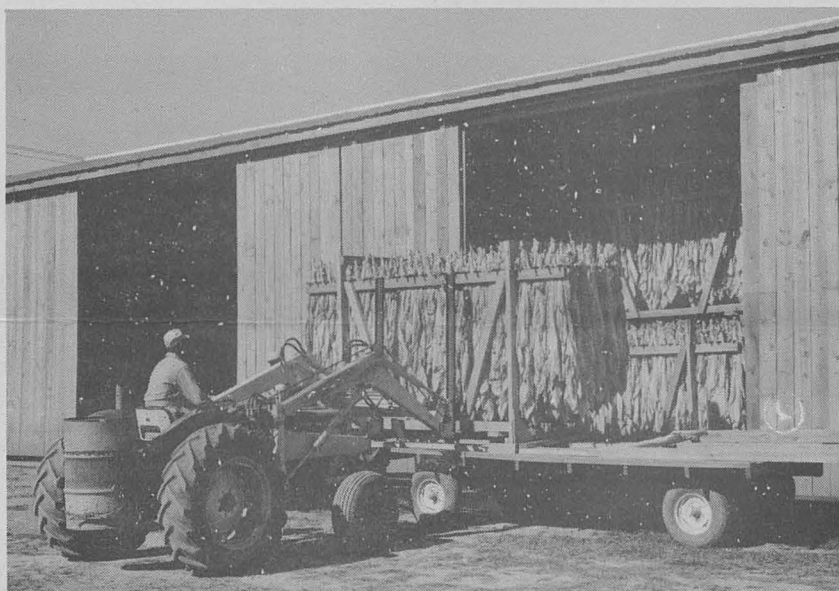


Figure 4 - All transporting between field and barn and placing filled frames into the barn can be done by the loader-operator working unassisted, allowing the total housing operation to be performed in 20-22 man-hours per acre. The barn at the demonstration farm was constructed in a manner illustrating how a conventional burley barn could be modified to this mechanical procedure.



Figure 5 - An overhead ducted heater provided supplemental heat. Tobacco handled mechanically yielded 3,116 pounds per acre at an average market price of \$0.737 per pound. Tobacco handled by conventional practice yielded 2,833 pounds per acre at an average market price of \$0.733 per pound.

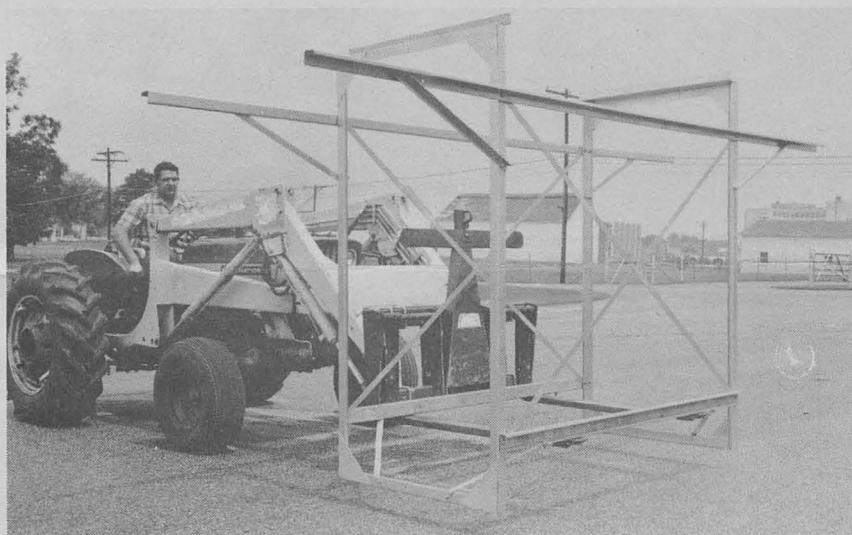


Figure 6 - A galvanized-steel portable tobacco curing frame is now being manufactured. The frame is assembled with bolts at the farm. These frames will be used at the R. J. Reynolds Tobacco Company demonstration farm during 1968. For further information on this frame, contact Elmon Yoder, Dept. of Agricultural Engineering, or Ira Massie, Dept. of Agronomy, University of Kentucky, Lexington, Kentucky 40506.