## Insulation, ventilation are important for swine buildings

NEWARK, Del. - A heated, well-ventilated hog house is important for providing comfort and good health for baby pigs. Fuel bills can be a major expense during winter months if producers don't insulate and ventilate properly.

Ernest Walpole, University of Delaware Extension agricultural engineer, says a well-insulated building is a must. For the Delmarva area, R-values of 14 in the walls and 22 in the ceiling are suitable.

Doors and windows lose a lot of heat. They should fit tight to prevent drafts and be insulated for winter, or removed and permanently replaced with insulated wall sections. Exposed concrete foundations should be insulated as well as a two-foot depth of the building's perimeter.

Once a building is well-insulated, Walpole warns producers to watch for two potential problems. Rodents in the insulation can

destroy most of the insulation value in parts of the wall, ceiling or perimeter. A good rodent control plan is essential.

Moisture is the other potential problem. A good vapor barrier is needed to keep moisture in the air from moving into the insulation. Condensation under the roof or

leaks in the roof can result in wet ceiling insulation. "Wet insulation has little R-value and also can rot wood structural members," he says. So repair leaks promptly and ventilate the attice space to avoid moisture buildup.

Once a building is insulated, most heat loss occurs through ventilaton. As much as 90 percent necessary expense, says the of the heat may be used to warm cold, incoming ventilation air. Over-ventilation offsets savings from insulation.

Ventilation should be managed to remove moisture, dust and odors for a good environment. Any additional ventilation is an unengineer.

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In hog houses with manure storage in pits under the floor, be sure to maintain the minimum recommended ventilation rate to remove the gases produced in the pits.

## water referendum **KEA** endorses DJ

HARRISBURG — Penn-sylvania's rural electric HARRISBURG cooperatives have endorsed the \$300 million water bond loan referendum that will appear on the November 3, 1981, General Election ballot. The action was taken at the Friday, October 9, 1981, meeting of the Board of Directors of the Pennsylvania Rural Electric Association, an organization representing over 600,000 rural Pennsylvanians

"High interest rates and the rapidly escalating cost of construction has limited the efforts of many domestic water supply systems, both public and private, to make improvements necessary

and General Manager William F. Matson, said, "I see no other way by which we can refurbish the Commonwealth's water systems, especially the rural water

systems, than providing the low interest loans this referendum will authorize. The problem has reached crisis proportions." Matson declared.



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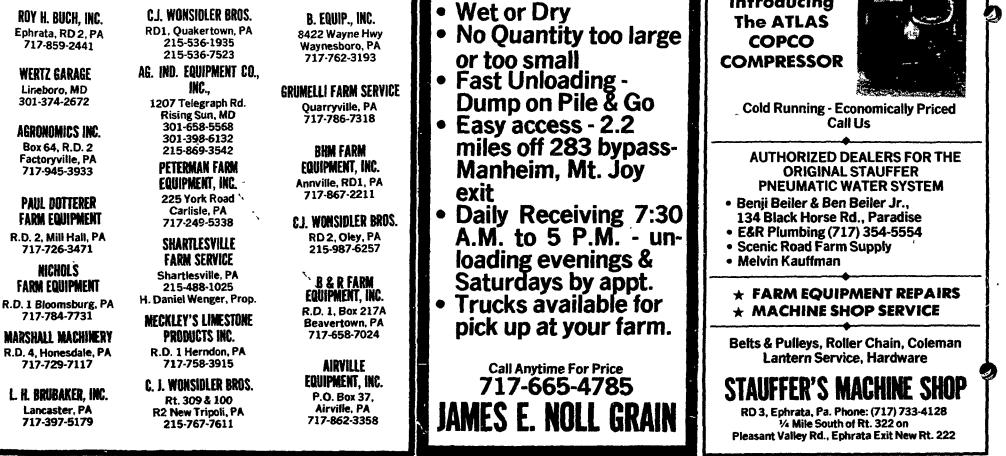
to 115 pounds per blade and working widths of 15 to 331/2 feet Available in center-fold or extra-wide double-fold A rugged clean design the Models 2100 (mounted units) and 2300 (pull-

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