



The University of Georgia

Cooperative Extension Service

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HATCHERY/BREEDER TIP . . .

INSULATION IMPORTANT FOR COST SAVINGS IN HATCHERIES

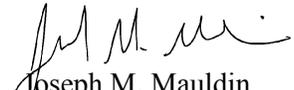
The use of insulation in hatcheries is vital to cost saving in a number of ways. The size and cost of the heating, ventilation, and air conditioning units can be smaller when insulation is used. MacKinnon (2002) provided an example of cost savings in the size of air conditioning equipment needed in a 9 inch thick brick wall hatchery housing 10 tunnel-ventilated incubators. Comparisons of estimated equipment cost were made between no insulation, 2 inches, and 4 inches of insulation (R values of 4, 10 and 20) for a hatchery with 10 tunnel incubators. For the estimates, temperature was 104°F dry bulb and 76°F wet bulbs (see Table). Note how the amount of BTU's needed to ventilate the hatchery decline as insulation is increased from 0 inches to 2 inches to 4 inches. In addition to equipment cost savings, the addition of insulation insures significant savings in energy expenditures. There is also a room performance advantage of adding insulation to the hatchery walls. Insulation facilitates the maintenance of uniform environmental conditions in hatchery rooms. This will increase the efficiency of performance in the incubators resulting in less energy expenditure for the machines. When incubators have to work hard due to non-uniform room conditions, not only is extra energy required for operation, additional losses in hatchability and chick quality result from the development of "hot" and "cold" spots within the machines.

PUTTING KNOWLEDGE TO WORK

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Material	R Value	BTU/hr	Tons	Est. Cost	\$ Savings
9 inch brick no insulation	4	438,488	37	73,081	
9 inch brick 2 inches insulation	10	369,188	31	61,531	11,550
9 inch brick 4 inches insulation	20	346,088	29	57,681	15,400

Source: Ian R. MacKinnon, 2002. Hatchery Ventilation. Georgia Poultry Conference, Proceedings: Athens, GA.


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****Consult with your poultry company representative before making management changes****