


Insulation of Housing for Small and Backyard Poultry Flocks

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Insulation is any material that reduces the transfer of heat from one area to another. Insulating a poultry house minimizes the transfer of heat from inside to outside and from outside to inside, helping you keep heat in during winter and out during summer. As a result, using insulation both conserves heating energy and provides more comfortable conditions for your flock. Although insulation has these benefits, keep in mind that it also adds to the material costs of a building.

Choosing an Insulation Material

The most common types of insulation are soft materials, such as batt and blanket materials. These substances, however, are attractive to rodents and insects as nesting materials or food sources. If you use batt or blanket material, you should ensure that the insulation is tightly enclosed in a hard outer material. As an alternative, you can use a rigid insulation. Rigid insulations are made from wood by-products, cellulose, or expanded plastic materials, such as polystyrene. The outer surfaces of sheets of rigid insulation vary in hardness, but some types are strong enough to last in poultry houses.

Regardless of whether it is soft or rigid, insulation must be effective. The effectiveness of insulation is indicated by its R-value. The R-value is a measure of the resistance of a material to conduct heat as indicated by the difference between inside and outside surface temperatures. Good insulating materials have R-values of greater than 10.

The effectiveness of insulation can be disrupted by climate. Moisture can condense on the interior surfaces of the exterior walls or ceiling of a poultry house during cold weather if the temperatures of those surfaces drop below the dew point of the inside air. This effect is similar to what occurs when moisture collects on the outside of an iced drink. Some types of insulation lose their effectiveness if they get wet. Consequently, adding a vapor barrier of plastic sheeting to insulating material (on the side of the material that faces into the poultry house) helps keep moisture from reaching the interior surface of the exterior walls or ceiling.

Installing Insulation

You can install insulation in the walls and in the ceiling or under the roof of your poultry house. Insulation installed in the ceiling or under the roof works equally well in insulating the building. However, when possible, such as when building a new structure, it is best to place the insulation directly under the roof, thereby providing fewer nesting spots for rodents and insects.

Your birds should not be exposed to or have access to the insulation or vapor barrier. You should cover any insulation or vapor barrier material with an interior sheathing. The interior sheathing should be durable and made of material that can be easily fastened, painted, cleaned, and disinfected. Options for interior sheathing include wood, plywood, sheet metal, and plastic panels.