

Farm Structures FACTSHEET



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Poultry Housing and Handling



POULTRY HOUSING AND HANDLING

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Modern poultrymen tend to specialize in one type of production and poultry housing must be geared to each individual operation. Houses for various enterprises, such as turkey, egg or broiler production, may differ greatly in size, appearance and arrangement of facilities. However, they also have some similar requirements. A good location and a well-insulated building equipped with proper ventilation, heating and lighting systems are important in poultry housing for any type of operation.

Location

Poultry houses should be located on a well-drained site of adequate size, not only to serve present needs but also for future expansion. The buildings should be separated to ensure reasonable protection against fire and to allow ventilation around them.

Every construction project must be planned. Consider all-weather road access, drinking water, electric power, storage facilities and manure utilization. Before any new construction, obtain approval of local authorities.

Ventilation

Various ventilation systems are available. Canada Plan Service plans illustrate the commonly used cross-flow system consisting of manually adjusted, air-intake slots on one or both sides of the building and banks of exhaust fans on one side. An ideal system should provide maximum flexibility between the minimum and maximum output according to the age and weight of the birds and the outside temperature. For proper ventilation, buildings must be adequately insulated against local climatic conditions.

A good ventilation system:

- Keeps litter dry;
- Prevents condensation and sweating;
- Maintains a suitable and uniform temperature;
- Provides a rate of air change appropriate to age and weight of the poultry and to outside weather conditions;
- Prevents drafts; and
- Provides fresh air uniformly to all poultry in the building.

A standby generator is valuable for maintaining ventilation during electric power failures. In the absence of a generator, construction plans should include insulated panels that can be opened for emergency natural ventilation.

Heating

A heating system is necessary for certain types of production, such as brooding young poultry, and to provide supplementary heat to improve cold-weather ventilation. The choice of a system depends on cost and local availability of equipment, cost of available energy, and cost and availability of insurance on the heating equipment chosen. The system must be easy to regulate and must operate safely.

Types of heating equipment used by the poultry industry include:

- Oil-fired or electrically heated hot-water systems using black iron or fin pipes for radiation;
- Electric radiant heaters for brooding, with electric unit heaters for supplemental heat; and
- Propane brooders and unit heaters.

These temperatures are guides only; always adjust the temperature according to behavior of chicks. If it is too hot, the birds cluster along the cardboard enclosures. If it is too cold, they stay under the brooders and stop eating and drinking.

Lighting

Since natural light does not provide the desired day lengths for various poultry management systems, artificial lighting is used almost exclusively in modern poultry housing. All outlets should be controlled by wall switches and time clocks. If a variable level of lighting is desired, a rheostat or additional controls should also be provided.

General recommendations for lighting installations are as follows:

In Laying Houses

For birds on litter, slats or wire, install ceiling outlets 12 ft apart on center. In addition, on a separate circuit, provide one 10-watt dim-light outlet for each 400 sq ft of floor area, in a row slightly back of the bright-light outlets towards the roosts.

For birds in cages, install ceiling outlets every 12 ft on centerline of aisles between double-tier cages; and every 10 ft on centerline of aisles between triple-tier cages.

For feed and preparation area, install one outlet for every 100 sq ft.

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Agricultural Building Systems Handbook

B.C. MINISTRY OF AGRICULTURE AND FISHERIES

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