A hatchery is not a typical industrial building; it is highly specialized with unique requirements for construction and operation. In reviewing the literature for this chapter, a very recent document was discovered that covers practically all the main concerns for building a modern hatchery. The document, *Designing the Ultimate Hatchery*, was prepared as a joint effort by Chick Master Incubator Company¹ and Hatchery Planning Company,² companies that are involved in the planning, design, and day-to-day operation of poultry hatcheries. It provides an excellent description of the most important concerns beginning with the planning phase and continues through design, construction, and operation of the modern hatchery. An edited version of this document is presented here.

36-A. WHAT TO CONSIDER WHEN DESIGNING A HATCHERY

Determine the Budget

A new hatchery represents a substantial capital investment. Costs vary considerably, depending upon capacity, construction materials and methods, equipment selection, engineering, geographical location, and automation. The old adage, “you get what you pay for” often rings true, but so will the law of diminishing returns. Sometimes additional expense does not result in increased productivity.

¹ Chick Master® Incubator Company, P. O. Box 704, Medina, Ohio 44258 USA.
² Hatchery Planning Company®, 2437 Clay Road, Austell, Georgia 30106 USA.
Keep one goal in mind: the construction of an efficient building, at a reasonable cost, that consistently produces a maximum number of live chicks per eggs set. When making monetary decisions, make sure that the initial expense is weighed against the potential effect on future productivity and longevity. Identify available resources and budget constraints before beginning the planning and construction phases.

Set a Production Capacity

One of the first decisions concerns the production capacity of the hatchery, and future requirements. Production capacity will, to a great extent, determine the size and cost of the hatchery. Design and construct the hatchery with a final production capacity as a goal. If the objective is for the hatchery to produce one million birds per week, a specific number of incubators and hatchers are required. These machines, in turn, require a specific amount of space. Likewise, the size of egg storage, processing areas, and mechanical room will all be relative to production capacity, as will the cost of ventilation, plumbing, electrical, and mechanical systems. Therefore, the importance of determining production capacity early in the planning phase is essential.

Confer with an Experienced Design Consultant

Once the production capacity has been determined, and before construction begins, hatchery plans must be developed to meet the specific needs of the owner. A custom design greatly enhances the overall success of the operation. Every hatchery is a specialized facility that requires an experienced design consultant. The design consultant should fully understand the requirements of incubation equipment, including ventilation, floor construction, slopes and drains, and minimum space requirements. In addition, the design firm should be well-versed in the production process, which includes workflow, room sizing, waste disposal, and automation (miscellaneous) equipment layout.

Designing the Ventilation System

Except for the incubators and hatchers themselves, the overall ventilation system is probably the single most important component in the hatchery. Hatchery ventilation design demands a specialist because hatchery ventilation is quite different from commercial and industrial building ventilation.