Poultry Management

Giriraj Prajapati

The last few years witnessed rapid developments in scientific poultry management which aims at maximizing returns with minimum investment, by employing husbandry practices or production techniques that help to maximize the efficiency of poultry production. This book gives comprehensive details about poultry management and talks about practices in poultry production system. It provides information on all such factors that determine success in the various branches of the poultry work—culling, breeding, renewing the flock, brooding and housing, feeding and nutrition, diseases and their control, cleaning and maintenance of poultry house, grading and packaging of eggs and dressed poultry, and even marketing. The book is highly useful for students, researchers as well as commercial and other producers involved in poultry management.

Contents: • Poultry Management • Poultry Farming Techniques • Chick Production in Broiler Breeders • Poultry Feeding • Poultry Nutrition • Egg Production • Integrated Disease Prevention Management in Poultry • Bacterial Diseases in Poultry

Giriraj Prajapati graduated with a honours degree in Agricultural Science from Jawahar Lal Nehru University, Jabalpur and subsequently Master of Science and PhD degrees in Animal Nutrition from Patna Veterinary College. He has held academic and research positions in Various University in India. He has had a distinguished academic career in nutritional science, having published in excess of 80 scientific works, including three books and over 30 book chapters. He has been awarded numerous research grants from national and international sources for his research and has received a number of awards.

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Preface

Poultry management usually refers to the husbandry practices or production techniques that help to maximize the efficiency of production. Sound management practices are very essential to optimize production. Scientific poultry management aims at maximizing returns with minimum investment. Brooder house should be draft-free, rain-proof and protected against predators. Brooding pens should have windows with wire mesh for adequate ventilation. Too dusty environment irritates the respiratory tract of the chicks. Besides dust is one of the vehicles of transmission of diseases. Too much moisture causes ammonia fumes which irritate the respiratory tract and eyes. Good ventilation provides a comfortable environment without draft. All movable equipments like feeders, waterers and hovers should be removed from the house, cleaned and disinfected. All litters are to be scraped and removed. The interior as well as exterior of the house should be cleaned under pressure. The house should be disinfected with any commercial disinfectant solution at the recommended concentration. Insecticide should be sprayed to avoid insect threat. Malathion spray/blow lamping or both can be used to control ticks and mites. New litter should be spread after each cleaning. The insecticides if necessary should be mixed with litter at recommended doses. Suitable litter material like saw dust and paddy husk should be spread to a length of 5 cm depending upon their availability and cost. Mouldy material should not be used. The litter should be stirred at frequent intervals to prevent caking. Wet litters if any should be removed immediately and replaced by dry new litter. This prevents ammoniacal odour.

Heating is very much essential to provide right temperature in the brooder house. Too high or too low a temperature slows down growth and causes mortality. During the first week the temperature should be 95°F (35°C) which may be reduced by 5°F per week during each successive week till 70°F (21·10C). The brooder should be switched

on for at least 24 hours before the chicks arrive. As a rule of thumb the temperature inside the brooder house should be approximately 20°F (-6·7°C) below the brooder temperature Hanging of a maximum and minimum thermometer in each house is recommended to have a guide to control over the differences in the house temperature. The behaviour of chicks provides better indication of whether they are getting the desired amount of heat. . When the temperature is less than required, the chicks try to get closer to the source of heat and huddle down under the brooder. When the temperature is too high, the chicks will get away from the source of heat and may even pant or gasp. When temperature is right, the chicks will be found evenly scattered. In hot weather, brooders are not necessary after the chicks are about 3 weeks old. Several devices can be used for providing artificial heat. Hover type electric brooders are by far the most common and practical these days. The temperature in these brooders is thermostatically controlled. Many a times the heat in the brooder house is provided by use of electric bulbs of different intensities. Regulation of temperature in such cases is difficult although not impossible. Infra-red lamps are also very good for brooding. The height and number of infra-red lamps can be adjusted as per temperature requirement in the brooder house. The housing and management of layer hens can be carried out using one of two methods, caged layer production or floor production. Use of either method can keep the hens in production throughout the year if proper environmental and nutritional needs are met. The poultry house should be located away from other farm structures. The ground should allow good water drainage. Adequate light fixtures are needed to provide proper light intensity. Adequate light is present if the water and feed levels in the troughs can be seen after allowing enough time for your eyes to adjust to the dim lighting. Fresh, clean water should be available at all times. The house should allow for plenty of ventilation and sunlight. Place 1 inch, poultry wire netting over all openings to separate the hens from other birds and animals, both wild and domestic. Removable curtains or doors are recommended so the openings can be opened or closed as the weather changes. Keep the house dry and comfortable by ventilating from all sides in the summer and closing most openings in winter.

The book provides readers with of some of the basic principles of this subject.

—Giriraj Prajapati

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A broiler is a type of chicken raised specifically for meat production. Modern commercial broilers, typically known as Cornish crosses or Cornish-Rocks are specially bred for large scale, efficient meat production and grow much faster than egg or traditional dual purpose breeds. They are noted for having very fast growth rates, a high feed conversion ratio, and low levels of activity. Broilers often reach a harvest weight of 4-5 pounds dressed in only five weeks.

They have white feathers and yellowish skin. This cross is also favourable for meat production because it lacks the typical "hair" which many breeds have that necessitates singeing after plucking. Both male and female broilers are slaughtered for their meat. In 2003, approximately 42 billion broilers were produced, 80% of which were produced by four companies: Aviagen, Cobb-Vantress, Hubbard Farms, and Hybro.

History

Before the development of modern commercial meat breeds (cows, chickens, etc.) broilers consisted mostly of young male chickens (cockerels) which were culled from farm flocks. The males were slaughtered for meat and the females (pullets) were kept for egg production. Compared to today, this made chicken meat scarce and expensive compared to eggs, and chicken was a luxury meat. The development of special broiler breeds decoupled the supply of broilers from the demand for eggs. This, along with advances in nutrition and incubation that allowed broilers to be raised year-round, allowed chicken to become a low-cost meat. Broilers are often called "Rock-Cornish," referring to the adoption of a hybrid variety of chicken

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