Partner Profile: Alberta Hatching Egg Producers

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Overview

The Alberta Hatching Egg Producers are committed to provide the industry with a superior quality product while fostering profitable growth. The AHEP prides itself in fostering confidence in the hatching egg industry through effective communications and by building co-operative relationships with other stakeholders in the poultry industry value chain.

What is a Hatching Egg Producer?

Hatching egg producers are poultry producers engaged in the production of broiler hatching eggs (seed stock) for the commercial production of chicken meat. Broiler hatching egg production in Alberta is a regulated industry which is governed under Alberta Marketing of Agricultural Products Act.

Vision

The Alberta hatching egg producers are committed to provide the industry with a superior quality product while fostering profitable growth.

Mission

To ensure the availability of a high quality product by encouraging and promoting high standards and efficient practices.

To provide an economic environment for the profitable production of broiler hatching eggs.

To foster confidence in the hatching egg industry through effective communications and by building co-operative relationships with other stakeholders in the poultry industry value chain.

To provide input into the agricultural policy regulatory environment and general agricultural policies impacting broiler hatching eggs.

What We Produce

What is a broiler hatching egg?

A broiler hatching egg is a fertilized egg that is produced as the result of a hen and rooster mating. Farmers ship their eggs to a hatchery where baby chick's hatch after the eggs are incubated for 21 days. Once hatched, the chicks are transported to a chicken grower's farm where they are grown and shipped to a processor. After being processed, chicken meat is supplied to retail stores and restaurants for human consumption. A broiler hatching egg is never sold in retail stores and is not meant for human consumption.

100% of all registered hatching egg farms are family owned and operated.

There are currently 30 registered producers in Alberta.

All birds are “free run” (not caged) in large, clean barns. Stocking density policies established by AHEP requires that producers provide a minimum of 1.8 sq. feet per hen.

The hatching eggs produced in Alberta supply the hatcheries with 85 percent of the chicks needed for their provincial broiler market. Hatcheries import the remainder of their hatching egg requirements from the United States under the terms of the North American Free Trade Agreement (NAFTA).

The broiler hatching egg industry is a highly specialized production system that is the foundation of the chicken meat industry. As the first link in this food supply chain, hatching egg producers follow very strict bio-security and food safety protocols. All hatching egg production facilities in Alberta are certified under AHEPs “On-Farm Food Safety Program”. Participation and compliance in this program is ensured through a system of audits.

How are Hatching Eggs Produced?

Grandparent Breeding Stock

Breeding stock used by the hatching egg industry comes from specialized bird strains developed by one of three breeding companies with offices worldwide. The grandparent flocks that supply the industry in Alberta are located in the south eastern part of the United States.

Pullet and Cockerel Rearing

The hatching egg production cycle begins when a hatching egg producer places pullets (females) and cockerels (males) as baby chicks in their grow facilities (grow houses). Producers must carefully manage the bird for the first 18 weeks by allocating quantities of feed to achieve specific growth and body weight targets. These targets are important to ensure that the bird achieves the body composition traits necessary to create an efficient breeder hen and/or cockerel. Because the target weights for cockerels are approximately 25% to 30% higher, pullets and cockerels are usually raised and fed separately.

A primary challenge during the grow phase is to ensure that the flock is highly uniform in body weight This requires careful attention to the distribution and control of feed and water as well as air quality and lighting control. Typically, birds are transferred from the grow house to the lay house when they are between 18 to 20 weeks of age. At the time of transfer, the pullets will have achieved a body weight of approximately 2 kilograms and cockerels will weigh approximately 2.6 kilograms.

Egg Production

The lay house is designed to provide the space and environment for birds to exhibit normal mating behavior and have free access to nests. While barns may be configured differently, birds are typically provided with a “scratch” area consisting of litter (either straw or shavings) as well as a raised “slatted” area that is elevated approximately 16 to 20 inches above the litter. This slatted area(s) provide birds a place to “roost” and is where the nesting system is located. Because the nutritional requirements of hens and roosters are significantly different during the production period, separate feeding systems are used. The feeding process must be carefully managed to minimize males and females stealing each other’s feed.

The number of males that are placed into the lay house at the time of transfer various considerably between producers. By the time birds begin to achieve sexual maturity however, (usually between 23 to 25 weeks of age), an optimal ratio of males to females must be obtained. This ratio varies from flock to flock and is primarily gauged by the level of male aggression. Depending on bird strain, male body weight and condition as well as the ratio of male to female body weights, the optimal ratio is usually between seven to nine percent.

Once the flock has been transferred into the lay house, the process of bringing the birds to sexually maturity and egg production begins. Initially feed increases are provided to achieve specified body weight targets that may vary somewhat between bird stains. Usually at about 22 weeks of age a lighting program, also known as "photo stimulation" is undertaken. The lighting program involves incrementally increasing the number of hours that the lights remain on from the standard 8 hours of light each day to16 hours over a period of approximately 5 weeks. During this time period, most producers will also increase the light intensity. The lighting program is designed to simulate the onset of the spring season and triggers the development of the bird's reproductive system. Egg production will usually commence within two to three weeks of starting the lighting program and will gradually increase in volume.

The time period from when the lighting program is initiated until the birds are in full egg production is arguably the most critical time to properly manage feed increases in the life of the flock. The rate of feed increases should be determined by the rate of sexual maturation and if not properly managed will have a seriously negative impact on the overall reproductive performance of the flock. If properly managed, flocks will achieve a peak level of production of approximately 85 percent. This means that the number of eggs produced daily will be 85 percent of the number of hens in the lay house. Peak production is usually achieved by 31 weeks of age and gradually declines to approximately 50 percent by the end of the production cycle (usually 59 to 60 weeks of age). Peak fertility rate (the percentage of eggs that are fertile) is usually between 96 to 98 percent in well managed flocks. Peak fertility is usually achieved at about 35 weeks of age and will normally decline to between 85 to 90 percent by the end of the production cycle.

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