

GAMES BIRDS

1. Description of Specialty Bird Industry

a. **United States**

The game bird industry in the U.S. raises millions of birds for sale to restaurants and direct to consumers. These include up to 10 million pheasants, 37 million quail (including 12 million Bobwhite), 4 million Chukar partridges, 1 million Mallard ducks, 200,000 wild turkeys, and several other bird species.

Wild Ducks - Today's domestic wild ducks are descendants of either the Muscovy or Mallard species. Americas Long Island ducks are offspring of Peking ducks (a variety of Mallard) brought from China in the late 1800s. A young duck or duckling (usually under 8 weeks of age) has dark, tender meat and weighs about 3 1/2 to 5 pounds. A mature duck is usually over 6 months of age and has tougher meat.

Goose - Geese were farm-raised in ancient Egypt, China, and India. Today's goose weighs between 5 and 18 pounds. A young bird of either sex ("goose" is the female of the species; "gander," the male) has tender meat, while a mature goose of either sex has tougher meat.

Guineafowl - This relative of the chicken and partridge, sometimes called a guinea hen or African pheasant, was thought to originate in Guinea, West Africa. A young guineafowl, about 11 weeks old, has tender meat, while a mature bird has tougher meat. Female guinea fowl are more tender than males. The meat is light red and slightly dry with a mild gamey flavor. Due to their small size, about 2 to 3 pounds, including giblets, guinea fowl are usually sold whole.

Partridge - Most partridge in the market are from European or African varieties. The Grey partridge, a European species, was imported from Hungary and raised in England. Found as far away as the Middle East, this variety is sometimes called Hungarian partridge. Chukar is a partridge species from India.

Pheasant - The female of this medium-size game bird (weighing about 3 pounds) has more tender, plump, and juicy meat than the male, which weighs about 5 pounds. Young birds can be roasted, but older birds need moist heat because their flesh is drier and leaner.

Quail - American quail are known regionally by various names: Bobwhite, partridge, and quail (blue, California, mountain and Montezuma). A ready-to-cook quail weighs about 3 to 7 ounces, including the giblets. Due to their small size, they are usually roasted and served whole. The meat is dark, but mild flavored.

Squab or Pigeon - This species originated in the Middle East and Asia, and is one of the oldest birds known to man. A squab is a young, immature pigeon about 4 weeks old. Because it is too young to fly, the meat is very tender. Squab usually weigh about 12 to 16 ounces, including giblets, and have dark, delicately flavored meat. They are usually stuffed whole and roasted. A pigeon has been allowed to mature and has tougher meat than a squab.

Wild Turkeys -- Turkey is one of North America's native birds. Compared to their domestic counterparts, wild turkeys are leaner, less meaty, not as tender, and have a stronger flavor.

b. Canada

In 1998 Canada produced poultry products worth \$1.6 billion. In that year Canada exported over 13 million chick, poults (young turkeys), domestic fowl, turkeys, ducks, geese and guinea fowl worth \$37.6 million to 37 countries. The United States is by far the largest market for game birds (and other poultry) followed by Japan, Malaysia and the Philippines.

The production of ratites - birds that have a flat breastbone and small or rudimentary wings such as ostrich, emu and rhea - has been increasing in Canada. These birds are usually raised for their red-coloured meat, hide and feathers. Oils from ratites are used in the cosmetics industry. The pheasant industry in Canada is well established and growing. Export of these birds is still small but consistent.

c. British Columbia

In British Columbia the game bird industry is defined as squabs (pigeon), pheasants, quails, quail eggs, partridges silkies (bantam chickens), chukar and tinamou partridge. The total retail value of the BC game bird industry in 1997 was \$4.4 million, which represents an increase of 70% over three years. The overall increase in game birds from 1994 to 1997 can be attributed to silkies, whose population grew from 30,000 to 336,000 over this time period. Although squab production increased steadily at 4% per year between 1994 and 1997, there still appears to be a large unmet demand.

Local production only accounts for 46% of BC consumption, indicating a potential for growth. Most of this imported product comes in as frozen product whereas the market prefers fresh birds. Much of the demand for these products is driven by the Asian and high end restaurant markets although some birds are raised as flight birds to stock hunting areas. The tinamou partridge has been introduced as a new product recently and has yet show any production figures.

Although a small industry, the speciality bird industry has shown growth over the past ten years. As it grows, the industry will realize productivity and efficiency gains through economies of scale and specialization. Information indicates some

unfulfilled demand in the local market and the Asian export market may be a potential area of growth.

Emu may also be considered as an alternate bird product. Production of this bird was only recently introduced into Canada. The initial acceptance of emu as a food product has been tentative in the BC market. There is no traditional consumption pattern to support the product, as has been the case in the game bird industry. However, emu has met with some success in the restaurant trade and the nutritional characteristics and taste of the meat, coupled with careful marketing, may win out in the long run. There is already a healthy market for ducks and geese.

2. Production

Many game bird production operations are small-scale, backyard enterprises at least in the initial stages. This has literally been done for centuries with these types of animals. It usually does not require a large amount of land but it is a labour intensive operation as the flock needs constant attention. Unlike varieties like domestic chickens, game birds need one male for each female for fertilization and incubating eggs. Pigeons, for example are monogamous and retain the same mate for life.

There is a need for a sound biosecurity and disease prevention program. This will include isolation of new breeding stock and control of all human contact as well as pets, wild birds and pests.

Pheasants convert feed at the rate of 4.5kg per kg of body weight gain and reach market weight at 20 weeks. The birds require between 0.5 to 1.5 square metres per bird. The birds are fed high quality turkey rations and need to be beak trimmed at 6 weeks of age to prevent cannibalism.

Quail are raised in conditions similar to broiler chickens. They are small birds and require little floor space. Quails are ready for market in seven to seven and a half weeks. At maturity the birds weigh 0.2kg eviscerated.

Partridge are produced much like broiler chickens.

Squab weigh 0.45kg dressed weight. A breeding pair of pigeons produce 10 squab per year.

Silkies are bantam chickens. They have a dressed weight of 0.7kg and convert 3.5kg feed per kg of body weight gain. They lay only 120 eggs a year when it is mature. The birds require 0.1 square metres of barn space per bird.

3. Financial Requirements

After land costs, feed is the highest single cost item for a game bird operation. An average yearly consumption of commercial feed per pair of squabbing pigeons is about 50kg.

Most operations are small enough not to need a great deal of off farm labour. However, larger operations will incur this cost in addition to the training involved

There may also be significant costs for disease prevention and treatment. Once a flock contracts disease the solution is often elimination of the animals and restocking with non-infected breeding stock.

4. Marketing

Game birds look like small roasters when they are cooked. In restaurants the larger game birds such as pheasants may be served as quarters or halves. Sometimes only the breast meat is served. Quail eggs are boiled and pickled. Some pheasants are produced for use on non-agricultural hunting reserves. Some quail are raised for feeding falcons and other hunting birds. Meat of the silikes is used as a medicine in Asian communities.

The meat is usually sold to a processing plant who wholesales it to hotels, restaurants and institution or to retail outlets. Some farmers butcher the birds on farm, pay the processing plant to process the birds and then take the birds back and sell them.

5. Regulatory Issues

There is no supply management system or border controls on the amount of product that can be imported.

The Canadian Food Inspection Agency ensures inspection standards are maintained with the implementation of the Humane Slaughter of Food Animals Act, the Meat Inspection act and the Canadian Agricultural Products Act.

6. Keys to Implementation

< Choose a farm site

Farm location is heavily influenced by the perishability of live birds which inhibits their transport over long distances. The raising site should be near the processing facilities.

< Choose a species to raise that has a demonstrated market.

< Learn the behaviour, reproductive biology, habits, nutritional requirements and susceptibility to diseases and parasites of the chosen species.

- < Determine issues such as selecting breeding stock, what type of enclosure and barn to use and what type of marketing system to employ. Develop a formal business and marketing plan.

7. Advantages of Chilliwack

The majority of the BC game bird raising and processing industry is located in the Fraser Valley region of southwestern British Columbia in and around the municipality of Chilliwack. The local municipal government is highly supportive of this industry and the provincial government has recently designed an area of farmland in this area available to the processing industry that previously was restricted to crop cultivating and animal raising.

The Trans Canada Highway, CN and CP Railways provide excellent transportation links to the port of Vancouver and to the rest of North America. The Greater Vancouver area has a population of approximately two million, is a major Pacific Rim port and borders the western United States to the south. This location provides excellent local and export market opportunities for nursery products. Situated in the heart of the Fraser Valley just outside of the Greater Vancouver area, Chilliwack has the benefits of the mild climate and access to markets without the high land prices found elsewhere in the Fraser Valley. In addition, Chilliwack has a good supply of trained agricultural labour with almost 7% of the work force being involved in the agricultural industry.

Some other strengths of a game bird industry in Chilliwack include:

- < Most existing producers in the area have a long history in the industry and a strong desire to continue in the business.
- < The low Canadian dollar gives domestic producers a competitive advantage vis-a-vis producers in the United States.
- < The Agriculture Land Reserve in BC supports the industry by limiting alternatives use of the land and thereby placing significant downward pressure on land rental rates.
- < The mild weather in the valley reduces costs of protecting animals from inclement weather.