Talking Turkey

Reprinted from "The Farmer's Stand" in The Islands Independent, by Barbara Johnstone Grimmer (2009)

This year we ended up with three types of turkeys on our farm – our heritage Black Spanish that we have had for several years, and some unclaimed 4-H poults of the White and Bronze Broad Breasted varieties. The Black Spanish were raised as naturally as possible. They mated naturally, nested in the woods, hatched out and raised their own babies. They ate seeds, bugs, berries, walnuts and grass, and receive some whole grains in the winter months. Black Spanish originated in North America from the wild turkey, and were taken to Spain by Spanish explorers in the 1500s. In the 1600s, the turkeys were reintroduced to North America, bred with wild turkeys, and selected for different feathering traits. These heritage turkeys, once very popular, were on the verge of extinction when the Broad Breasted Bronze and White grew in popularity. In recent years, heritage breeds have been increasing in numbers and ours are part of a living gene bank.

The commercial white and bronze turkeys we raised this year were acquired as poults, or chicks, from a hatchery in Alberta. They arrived by mail at the Pender Island post office. They were raised under a heat lamp with a diet formulated especially for turkeys. As the commercial turkeys grew, their diet changed slightly to a finishing diet, with a final sweet diet of crush grains, molasses and cracked corn. Once feathered, they were let out in the orchard during the day where they ate grass and fallen apples, with walnuts that fell to the ground in the fall.

Physically the white and bronze broad breasted turkeys were different from the Black Spanish, too. They grew much faster – especially the white ones. Most of the turkeys raised commercially are the white broad breasted variety. Commercial turkeys are mostly white because the pin feathers on the processed turkey aren't as noticeable. The white turkeys were originally selected from Broad Breasted Bronze turkeys, which came over from England to BC with Jesse Throssel in 1926. His Broad Breasted Bronze became the foundation of the modern turkey industry in North America.

Some of the difference in growth rate was due to diet, but I have also raised the Black Spanish under similar conditions in the past– with heat lamps and formulated diets – and they still grew slower and matured later. Most of the difference is due to genetics. Over the years, turkeys have been selected for increased feed efficiency and rate of gain. At one point, turkeys became more inclined to eat without becoming full, increasing their growth and fat content unless their feed is restricted. I noticed the white turkeys want to clean up every bit of food, and the bronze types will eat until full, then go exploring. Turkeys are now doubled in size from the turkeys of 1929. They have reached such an increased body weight that natural mating is virtually impossible, and since the 1960's it has become necessary to use artificial insemination with commercial turkeys. They hadn't lost all their instincts to mate. They still flirt and prance about, but they aren't successful at mating.

They haven't lost other instincts or behaviours also. All turkeys are naturally curious and gentle. Curiosity without a lot of intellect spells trouble, and turkeys can get into lots of mischief. The broad breasted turkeys raised at MacDonald Farm have been known to visit the Nu to You and the playschool next door, upon hearing people's voices. They have jumped the fence and followed people down the road. The Black Spanish at home are no better – they have visited up and down the valley, making unwelcome visits to gardens and the golf course. For all the turkeys, if you crouch down they will come and investigate, picking and poking, ever curious. They communicate through vocalization, and will come if called. A few years ago I kept a female broad breasted bronze because she had mated in an apparent monogamous relationship with my oldest Black Spanish tom. She surprised me by nesting and hatching thirteen poults, but lost them due to an inability to talk to them, so they scattered and some followed the Black Spanish mothers. We hope to try a crossbreeding program again, if there are any female Broad Breasted bronze turkeys left after Christmas this year.

The American Livestock Breeds Conservancy's Definition of a Heritage Turkey

All domesticated turkeys descend from wild turkeys indigenous to North and South America. They are the quintessential American poultry. For centuries people have raised turkeys for food and for the joy of having them.

Many different varieties have been developed to fit different purposes. Turkeys were selected for productivity and for specific color patterns to show off the bird's beauty. The American Poultry Association (APA) lists eight varieties of turkeys in its *Standard of Perfection*. Most were accepted into the *Standard* in the last half of the 19th century, with a few more recent additions. They are Black, Bronze, Narragansett, White Holland, Slate, Bourbon Red, Beltsville Small White, and Royal Palm. The American Livestock Breeds Conservancy also recognizes other naturally mating color varieties that have not been accepted into the APA Standard, such as the Jersey Buff, White Midget, and others. All of these varieties are Heritage Turkeys.

Heritage turkeys are defined by the historic, range-based production system in which they are raised. Turkeys must meet all of the following criteria to qualify as a Heritage turkey:

1. Naturally mating: the Heritage Turkey must be reproduced and genetically maintained through natural mating, with expected fertility rates of 70-80%. This means that turkeys marketed as "heritage" must be the result of naturally mating pairs of both grandparent and parent stock.

2. Long productive outdoor lifespan: the Heritage Turkey must have a long productive lifespan. Breeding hens are commonly productive for 5-7 years and breeding toms for 3-5 years. The Heritage Turkey must also have a genetic ability to withstand the environmental rigors of outdoor production systems.

3. Slow growth rate: the Heritage Turkey must have a slow to moderate rate of growth. Today's heritage turkeys reach a marketable weight in about 28 weeks, giving the birds time to develop a strong skeletal structure and healthy organs prior to building muscle mass. This growth rate is identical to that of the commercial varieties of the first half of the 20th century. Beginning in the mid-1920s and extending into the 1950s turkeys were selected for larger size and greater breast width, which resulted in the development of the Broad Breasted Bronze. In the 1950s, poultry processors began to seek broad breasted turkeys with less visible pinfeathers, as the dark pinfeathers, which remained in the dressed bird, were considered unattractive. By the 1960s the Large or Broad Breasted White had been developed, and soon surpassed the Broad Breasted Bronze in the marketplace.

Box 477 Pittsboro, North Carolina 27312 USA 919-542-5704
albc@albc-usa.org / www.albc-usa.org

Turkey facts

Reprinted from "The Farmer's Stand" in The Islands Independent, by Barbara Johnstone Grimmer

"For my part I wish the Bald Eagle had not been chosen the representative of our Country. He is a bird of bad moral character. He does not get his living honestly....For the truth the Turkey is in comparison a much more respectable bird and withal a true original Native of America...a bird of courage, and would not hesitate to attack a Grenadier of the British Guards who should presume to invade his farm yard with a red coat on"

Benjamin Franklin, 1774 regarding the choice of the eagle as the national bird of the United States

Benjamin Franklin had the right idea, but obviously not everyone agreed. The turkey is a magnificent bird, loyal and brave. Fossil records place them in North and Central America over ten million years ago. They were initially domesticated by the Aztecs and natives of New Mexico and ranged over the entire U.S. and southern Canada. The Spanish explorers were so impressed with this beautiful and tasty bird, that they took some back home to Spain from Mexico in the 1500s. They selected for black feathering and over time the turkey increased its popularity throughout Europe. An excited female Black Spanish turkey has a way of spreading her tail feathers out in a fan, and holding herself proudly, reminding one of the flamenco dancers of Spain. Could it be that turkeys are fashion setters too? In the 1600's, the turkey was reintroduced to North America and crossed with the wild turkey. Selection over time resulted in standard breed turkeys with names such as the Spanish or Norfolk Black, Narragansett, Blue Slate, Bourbon Red, all with different colours and markings. These breeds would hatch out in the spring and after six months or so would be ready for market, coinciding with US Thanksgiving and Christmas.

Meanwhile, back in England a turkey known as the Sheffield Bronze, for the wild-type colour of the sheen on its feathers, was selected over generations for a heavier muscle in the breast area and improved hatchability. The breeder, Jesse Throssel, moved to Canada in 1926, and had some of his flock sent to his new home in BC. He developed a hatchery and was soon exporting eggs and poults throughout BC, Washington and Oregon. His Broad Breasted Bronze became the foundation of the modern turkey industry in North America. Over time, white birds were selected so that the pin feathers wouldn't be so noticeable. As the birds were selected for muscling, they became unable to breed naturally, relying on artificial insemination. Now 99% of the breeding stock, held by just three multinational companies – one in Ontario – are made up of only a few strains of Broad Breasted White turkeys – providing the basis for the nearly 300 million turkeys required to meet the demands in the US and Canada for our holiday feasts.

At the same time, the standard breeds, also known as heritage breeds, became slowly endangered as their numbers dwindled. In 1997, the American Livestock Breeds Conservancy (ALBC), an organization that conserves rare breeds and genetic diversity in livestock, surveyed North American turkey populations to assess the genetic status of the breeds. They were very surprised to find that a number of the heritage turkey varieties including the Bronze, Narragansett and Slate were on the verge of extinction. For turkey growers, heritage birds hold important genetic traits such as disease resistance, critical to the turkey's long-term health and survival. I have observed that although the Broad Breasted Bronze females can reproduce naturally and hatch out chicks, they have lost the ability to vocalize to their chicks, a trait that may be genetically linked.

Wild turkey numbers were also reduced because they were so easy to bait and hunt using corn. By the 1930s it is estimated that there were only 30,000 left in the wild of the US, and none in Canada whereas there used to be millions. Conservation efforts have brought back the wild turkey, and also have saved the standard breeds, now referred to as heritage breeds.

Scientists and dedicated enthusiasts have been central to these efforts. Margaret Thomson,of Salt Spring Island is one such person. There was a need for more rare breed turkeys, and she had looked into the work of the Domestic Fowl Trust while on a visit to England. This inspired her, so she contacted Rare Breeds Canada and found a source for heritage turkey eggs from Ontario. From an initial shipment of 48 eggs, 11 hatched. Another shipment resulted in one chick. That fall she went to Meadville Pennsylvania to attend a two day workshop on handling, selection, hatching and rearing heritage turkeys led by Frank Reese of the American Livestock Breeds Conservancy. Now, six years later her flock has included Narragansett, Bourbon Red, Black Spanish, Blue Slate and recently Ridley Bronze, from the University of Saskatchewan. I purchased a breeding trio from Margaret five years ago, and now have a healthy flock of Black Spanish turkeys that forage for food all year and eat blackberries, thistle seeds, hawthorn berries, grapes, grass and even walnuts. You wouldn't believe how good a turkey tastes after it has eaten walnuts! They even prefer to roost at night in the walnut tree. They not only breed naturally, they also nest and brood their own young. Females will even help each other out and raise their young together. It's not unusual for a hen who has lost her poults to join in with another hen and serve as a type of nanny. By keeping these old breeds alive, we are ensuring that their valuable genetics are retained as a living gene bank for future generations.