



Canary Production[#]

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ABSTRACT

Canary (*Serinus canarius*) is one of the most beautiful cage birds. They are small and delicate songbird species. Their origin is the Canary Islands in the Atlantic Ocean. They were first brought to Europe by the Spanish sailors in 1478. Than Britain, Germany, France, Netherlands and Italy were started professional canary breeding. The wild ones live in flocks, mostly on the edge of wooded lakes and creeks. While the color of canaries grown in cages is completely yellow, the wild ones are gray-green. Sound in the wild canary is stronger and more impressive. There are 3 types of canaries commonly produced. These are "Song canaries", "Color canaries" and "Form canaries". Nowadays they are often produced for their beautiful color and sound. This article gives brief information about canaries and to provide resources to enthusiasts who want to do produce has been prepared.

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Introduction

The cage canary birds (*Serinus canarius*) are domesticated form of the wild canary. They are small and delicate songbird species, and popular their beauty color and voice. They originated from Canary Islands, in the Atlantic Ocean. They were first brought to Europe by Spanish sailors due to the beauty of their voice in 1478. They became popular among the nobles and attracted the attention of high sales prices and so production activities started in a short time. The first color changes studies were made in Flanders, and also sound studies in Germany, France, Netherlands and Spain. The industrial hatcheries were first established in Flanders, Germany and Northern Italy. Thus, professional canary production started in England, Germany, France, Netherlands and Italy. Today, they are produced by enthusiasts all over the world for its sound and color (Arnaiz-Villena et al., 2019). Various competitions are organized to choose the best canary for sound and color. There are many canary shows all over the world. The world fair (COM - Confederation Ornitologique Mondiale) is held annually in Europe, attracts thousands of growers and approximately up to 20.000

birds come together for this contest (Anonymous, 2019a).

Nowadays they are often produced for their beautiful color and sound. But in the past, it was also produced in coal mines for a different purpose. Carbon monoxide gas accumulates before the explosions in coal mines. Canaries are visibly demonstrated signs of distress in the presence of even small quantities of carbon monoxide gas. So, the miners have been used the canary as stimulants animal for a long time and they saved many miners' lives in from the 1890s through the 1980s (Anonymous, 2019b).

Morphological Features

The wild canaries are lived in flocks. They prefer mostly wooded lakes and creeks, areas with small fruit trees and the slightly open soil. The domestic canary has range of bright colors including orange, white, red, and yellow. But the most common color is yellow (Figure 1). The wild ones are gray-green. The back of the wild is gray with gray stripes and the belly is yellowish green. Colors are compatible with wildlife (McLeod, 2019) (Figure 2).

Scientific Classification*

Kingdom	:	<i>Animalia</i>
Phylum	:	<i>Chordata</i>
Class	:	<i>Aves</i>
Order	:	<i>Passeriformes</i>
Family	:	<i>Fringillidae</i>
Subfamily	:	<i>Carduelinae</i>
Genus	:	<i>Serinus</i>
Species	:	<i>S. canaria</i>
Subspecies	:	<i>S. c. domestica</i>

*Anonymous (2019a)



Figure 1. Domestic canary



Figure 2. Wild canary



Figure 3. Wild canary



Figure 4. Domestic canary



Figure 5. Male and female bird



Figure 6. Female canary ready to incubate

The physiques of the cage canaries are different from wild one. Wild canaries are smaller and finer (Figure 3), but domestics are big (Unyayar, 2019) (Figure 4).

Canaries usually have a small and long body with colorful and bright feathers. They have a small cone-shaped beak with small and round eyes (Anonymous, 2018). Their length is 11-18 cm, weight 12-30 grams and lifetime 5-9 years (Coutteel, 2019). The males are slightly brighter, larger and more boisterous than females (Brag, 2016) (Figure 5).

Some Important Information About Canary*

Body temperature	:	41°C (105.8°F)
Water consumption	:	200-300 ml/kg BW/day
Food consumption	:	up to 30% BW/day
Heart rate resting	:	265-325 bpm
Restraint	:	400-600 bpm
Heart rate resting	:	265-325 bpm
Restraint	:	400-600 bpm
Respiratory rate resting	:	60-80 breaths/minute
Restraint	:	80-120 breaths/minute
Environmental temperature	:	greater than 15°C (59°F)
Environmental humidity	:	60-80%

*Coutteel (2019)

Breeding

Reproductive cycles are seasonal. In nature, canaries mate as the sun grows longer, from the beginning of spring to the end of summer. For those in the cage, it is best to choose wives at the end of winter. For this reason, it is necessary to consider their behavior, weight, age, health. Females mature sexually at 6 months and males at 9 months. They are efficient at these ages, but it is usually better to wait until they are at least 1 year old. Canaries need to be well feeding and healthy to grow safely. They usually shed to feather three months before the breeding cycle. Male canaries start singing when they are about 3 month old age. Sound in the wild canary is stronger and more impressive. First three days of being in heat, they usually mate during the breeding season. After the successfully mate, female canary is start building a nest and lying eggs (Anonymous, 2018). Female is usually laying an egg a day. If you want the chicks to hatch together, remove first egg from the nest and replace it with dummy egg. Than you remove other lying eggs until she is done lying. The removed eggs can be saved on wood shavings or cotton until you returned them to the nest. Female produces totally 4-7 eggs that color is generally blue-gray with black speckle but sometimes it may be white in a period (Figure 6). After the eggs are put back into the nest, the female will stay on them. And eggs are hatch on the 13th or 14th day. The chicks are born blind and featherless. They are beginning to feather at about two and a half to three weeks and eating seed at about six weeks. After the chicks start eating independent of the mother, female can be nesting and lying again (Anonymous, 2019c).

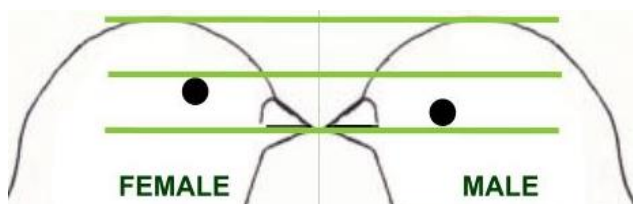


Figure 7. Male and female eyes

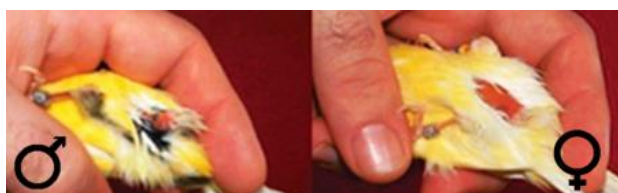


Figure 8. Anal area of male and female canary



American Singer



Belgium Waterslager



German Roller



Spanish Timbrado

Figure 9. Song canaries



Figure 10. Color canaries



Figure 11. Form canaries

The Sex Determination of Canary

There are several ways to sex determination of canaries:

- The color of male canaries is brighter than the female canary (Figure 5).
- The male canaries singing songs an intensity and loudness that female never produce.
- The eyes of the females are higher than the male one (Figure 7).
- The male anal area is protruding during the breeding season, while female is rounded (Figure 8).

Nutrition

Canaries are sensitive animals about the food. It is important to select nutrients according to the season (reproduction and molting time). Canaries feed on ready food, such as mixture of canary seed. In addition, vegetables, greens (Curly, lettuce, black cabbage, purslane, spinach, chicory, cress, carrot, chard, etc.), fruits (apples, peaches, bananas, oranges, karpuv etc.) mineral and vitamin are should be given. All foods should be good and fresh, not stinking. Sleazy and corrupt foods will disturb the bird's health as well as affect the singing (Anonymous, 2019d).

Canary Types

There are more than 200 canary breeds in the world. They are generally divided into three main groups. These are "Song canaries", "Color canaries" and "Form canaries". Song canaries are produced for the beauty of their voice. Such as, American Singer, Belgium Waterslager, German Roller, Spanish Timbrado (Anonymous, 2019a) (Figure 9).

Color canaries are classified in two categories. The colors are a result of genes that control the melanin and lipochrome (Figure 10). Melanin birds are dark colored birds, such as wild canary. Green, blue, pastel, brown, isabel, agate, opal, topaz, ino, and satinette canaries are all melanin. The lipochrome birds are clear bird without any melanin (pigments) in the plumage. The yellow, white, red ground, and mosaic canaries are all clear, lipochrome mutations (Olszewski, 2014). Some color canaries are produced for changeable color when fed with color foods. Color feeding should begin at about 6 to 8 weeks of age before the canary starts molting (Sandmeier, 2013).

Form canaries are produced for their shape and posture. For example; frill, type, shape, crested and feather pattern (Sandmeier, 2013) (Figure 11).

Turkish canaries

Bosphorus canaries: The Bosphorus canaries are a kind of historical canary that is still extinct. A canary is domesticated from wild species. It came from the Caucasus and was developed in Istanbul (Sahbaz, 2019).

Istanbulin: It is known that the Ottoman Empire had a canary race that became famous with the name of "Istanbulin". Canaries grown in palaces and birdhouses were sent as gifts by the Ottoman Sultans. Slim tall, small-headed, very beautiful singing, dark yellow color of this canary genus has long been extinct (Sahbaz, 2019; Gun, 2010).

Conclusion

Canaries are the birds which people loves and produce for their voice and color. They are widely produced by enthusiasts around the world. However, there is not enough information and studies about canaries scientifically. To continue the generation of canaries, scientific studies need to be increased and supported.

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