EUROPEAN JOURNAL OF LIFE SAFETY AND STABILITY (EJLSS)
ISSN 2660-9630
www.ejlss.indexedresearch.org Volume 13, 2022 ||

Physiological Features of African Ostriches

Babayeva Shakhlo
SamVMI Assistant, Tursunova Nargiza, Bakhtiyorov Hamdambek

Begmurodov Ogabek
SamVMI Student's English group, Samarkand Veterinary Medicine Institute

Abstract: *This article examines the external features of African ostriches, the skills of their maintenance and the technology of cultivation in order to increase their productivity and achieve high economic efficiency in Uzbekistan - as used in many sectors of agriculture.*

Keywords: *African ostrich, external - physiological characteristics, increased productivity, body weight.*

Date of Submission: 04-12-2021 ***Date of Acceptance: 03-1-2022***

Of the entire subclass of ratites for farming on farms, only African ostriches, Australian emus and South American rheas are of interest.

The African ostrich is the largest bird in the world. Males are almost always larger than females, have black feathers, a red beak and red stripes on the tarsus, while females are gray-brown in color and have a black beak. In small ostriches, the beak has a yellow-brown color, by 4-5 months the beak darkens and becomes black in females, and in males it remains pale brown up to 7-8 months, after which it becomes yellow-pink, and then pale pink color as the bird matures. By 1.5 years, the male beak turns pink. The beak of a sexually mature male is reddish, during mating, the color becomes saturated, and in winter it can turn pale, which is associated with the secretion of the testes hormone.

It can be assumed that black is the basic color for ostriches, since if the female is castrated, her plumage will turn black. Ostrich breeders determined that the redder the beak and the more active the male, the better it is suitable for breeding, while in castrated males the beak turns pale, acquires a pale pink or pinkish yellowish color.

The most impressive part of the skeleton is the chest. The porous bone, about 4 cm thick, protects the rib cage from collisions with obstacles and from kicks from other ostriches, although not always successfully. Unlike other birds, ostriches do not have pectoral flight muscles. The bones of ostriches are porous and light, so fractures are almost impossible to treat, and it is best to kill a wounded bird.

Ostriches have a spongy and very thin skull, therefore, in order to avoid injury or death of the bird, it is forbidden to grab ostriches by the head, especially ostriches, or to beat them on the skull. When building aviaries, it is necessary to take into account that the ostrich's head cannot get stuck in the fence, since the bird starts to twitch and this can end with the displacement of the skull bones. Roofs and ceilings should be high enough so that the bird does not bump its head against them in a fight or

in panic. The crown of the head in some subspecies of ostriches is naked, while in other subspecies it is covered with a feather.

A third of the ostrich's height is occupied by the neck, consisting of 19 vertebrae, which gives it good elasticity and allows the bird to freely view a vast territory and eat food from the trees, available only to elephants and giraffes. The Eyeball of an ostrich weighs 60 g. Ostriches have excellent vision - they see at a distance of 3 km due to the length of the neck and large eyes.

In addition to eyelids and thick eyelashes, ostriches, like reptiles, have a translucent blue-gray blinking membrane that helps protect the eyes from litter and sand.

The sacrum in the ostrich is represented by the cruciform vertebra, and the fused pubic bones serve to support the gastrointestinal tract.

Ostriches have a weak sense of smell and taste, but hearing is well developed. The wide auditory opening detects even the faintest sounds, which contributes to the perfection of the protection system.

The ostrich's skull is porous and forms a very thin protection of the brain, which in an adult has the size of a small chicken egg and weighs only 30-40 g. The ostrich's brain has a grayish color and is covered with a network of thin blood vessels.

Ostriches do not have a goiter, but the stomach, like all birds, is two-chambered: the anterior glandular stomach (proventriculus) and the posterior one muscular (ventricular). In the glandular stomach, food is processed by enzymes (pH 2.8). In the gizzard there are gravel and other solid objects (up to 1.5 kg), which contribute to the grinding of food and its further entry into the intestines. The thickness of the walls of the gizzard of an ostrich reaches 92 mm. It consists of smooth muscle and is covered with highly wrinkled epithelium. The food mass, crushed in this part of the stomach, moves further into the small intestine, which contains numerous glands that secrete intestinal juice. The lining of the small intestine contains numerous intestinal villi that facilitate the absorption of nutrients.

It takes a long time for the feed to pass through the digestive system supplied with the circular muscles, which leads to its maximum and quality digestion and absorption.

The relatively long cecum (each of its two segments is 50-100 cm long) has an internal spiral fold of the mucous membrane, which facilitates mixing of the contents and stimulates fermentation processes. The large intestine is 10-12 meters long. In addition to the absorption of water, here, as in the cecum, there is an intensive fermentation of the food mass - the decomposition of fiber due to the rich bacterial microflora and the emergence of volatile fatty acids and especially acetic acid, which supplies about 76% of all metabolic energy used to meet the vital needs of the body ... The total average length of the gastrointestinal tract of adult ostriches weighing from 105 to 131 kg, living in natural conditions, together with more than a meter esophagus and two cecum, is about 24 m. The length of the gastrointestinal tract (without the esophagus) in young ostriches is 1090 cm with a body weight of 7 kg. The longest part of the gastrointestinal tract is the large intestine, accounting for about 50% of its entire length. The digestive tract ends in a cloaca with three openings. Urine and feces are excreted separately. The large intestine passes into the first cavity (caprodeum), and urine through the genital duct enters the second cavity (urodeum). The final cavity of the cloaca (proctodeum) is an extensible member (in the male), 30-40 cm long, and the clitoris 2-3 cm long in the female. The temperature inside the cloaca is 39-40 degrees. The digestive tract ends in a cloaca with three openings. Urine and feces are excreted separately. The large intestine passes into the first cavity (caprodeum), and urine through the genital duct enters the second cavity (urodeum). The final cavity of the cloaca (proctodeum) is an extensible member (in the male), 30-40 cm long, and the clitoris 2-3 cm long in the female. The temperature inside the

cloaca is 39-40 degrees. The digestive tract ends in a cloaca with three openings. Urine and feces are excreted separately. The large intestine passes into the first cavity (caprodeum), and urine through the genital duct enters the second cavity (urodeum). The final cavity of the cloaca (proctodeum) is an extensible member (in the male), 30-40 cm long, and the clitoris 2-3 cm long in the female. The temperature inside the cloaca is 39-40 degrees.

The reproductive system of the male African ostrich The reproductive system of the male consists of two testes. The penis is formed by the wall of the cloaca and does not include the urethra. The male has two intrauterine testicles located next to the kidneys. During the mating season, the testes increase by 200-300%. Outside of the reproductive period, sperm is not produced.

The female reproductive system, like all birds, consists of the left ovary and the left oviduct. The oviduct (fallopian tube) consists of 1) a funnel (infundibullum), where the yolk ball enters from the ovary and fertilization occurs; 2) protein department (magnum), where protein is formed; 3) the isthmus (istmus), where the supra-shell and shell membranes of the egg are formed; 4) the uterus (uterus), where the shell is formed; 5) Vagina. The opening leading from the vagina to the cloaca is on its left side. By the time the female ostrich hatches, there are about 200,000 eggs in her ovary. When the female matures, the eggs begin to develop actively and in the ovary you can see many follicles of different sizes, as well as eggs in the process of formation. Follicular development and ovulation are regulated by hormones. The temperature inside the cloaca is 39-40 ° C.

Ostriches do not have a gallbladder, and the liver has two lobes and is bluish brown in color and has a rough internal structure. Located on the chest, Behind and on either side of the heart.

Red-brown buds, 30 cm long and 7 cm wide. They consist of three lobes, have a granular structure and are located along the spine. Unlike other birds (one hole), the ostrich has three kidney ports for a valve that pushes venous blood forcefully from the back of the body through the capillary system of the kidneys.

Two light pink lungs are located on the back and communicate with five air sacs. The normal respiratory rate is 7-12 movements per minute.

The heart weighing 600-700 g is covered with yellowish fatty tissue, smooth, without spots. The structure of the heart and main blood vessels in the ostrich is the same as in other species of birds. The number of heart beats in an adult ostrich is 28 to 36 per minute, while in young birds it is 60 to 164. Red blood cells have elliptical nuclei.

The ostrich does not have a goiter, but a human hand can easily fit into its sac-like esophagus.

The wings of an ostrich are represented by two toes with a small claw (1.5 cm in adults). All feathers are located on the main finger, while the second is practically not involved in anything. Although the wings of the ostrich are atrophied, they are used to protect the body from impacts, are used for thermoregulation, digging nests, etc. The ostrich does not have a coccygeal gland to lubricate the plumage with fat. Although it is present in the embryo, during the development of the embryo, the iron atrophies.

The ostrich is the fastest running bird that does not hide its head in the sand (contrary to belief), but runs away in case of danger and can run for up to 4 hours at a speed of 60 km / h without stopping, while the maximum running speed can reach 70 km / h and maintained for 20-30 minutes.

The ostrich is the only two-toed bird in the world. Of the original four fingers, only the "third" and "fourth" have survived. The third finger is small, located at the back, and serves to reduce speed and maintain balance while running. The fourth thumb has a wide, elastic, calloused thickening at the bottom in the form of a fleecy pillow, which ends in a claw up to 7 cm long.It is worth noting that such a two-toed one is most likely associated with the fact that ostriches live in open areas, in

deserts, semi-deserts, plains and savannah, while emu, rhea and cassowaries live mainly in dense forests, foothills and mountains, where the relief is not so even and uniform, so during evolution they have retained three toes. Legs are the best protection for the ostrich. In addition to running, the ostrich can defend itself with its legs. With a kick of 30kg / cm2, an ostrich is able to break the skull of a lion, Breeding ostriches is facilitated by the fact that they are happy to eat alfalfa, clover, bran and grain feed, which feed chickens and livestock. Although an ostrich drinks about 10-12 liters of water per day, it can go without water for a long time due to the nasal glands, which secrete a concentrated saline solution.

Ostriches have a hierarchy of dominant males and live in large herds of about a hundred individuals, divided into several families. The family of ostriches usually consists of 2 males and 3-5 females, although the ratio of males to females can be either 1: 1 or 1: 8 per family, depending on the sex ratio in the herd, as well as on the maturity and activity of the males. As a rule, the larger the herd, the safer each individual feels.

The female lays eggs regardless of mating with the male, so not all eggs are fertilized. Although in Africa on farms the female lays 80-100 eggs per year (in the wild about 20), in Russia, under the influence of climate and temperature conditions, the biorhythm of ostriches changes, and the number of eggs decreases to 40 per year, which is equivalent to 1-2 eggs per week during the breeding season, which runs from April to October.

In Uzbekistan, practice shows that from March-April to the end of October, females with a balanced diet give about 20 eggs.

In ostriches in nature, the male makes a nest, collecting up to 20 eggs in the nest and incubating them with the female for 42 days. In the heat, ostriches can often leave the nests for a short time, without leaving them far, since the eggs are incubated at a temperature of 36.4-36.6 ° C, which is very close to the temperature of the sand on a hot day. The eggshell, up to 3 mm thick, protects them from all predators, except for the white vulture, which throws a stone at an egg or throws an egg from a height on stones.

After hatching of the chicks, the parents take care and train the ostriches, which stay with them for about 6 months, after which they unite in one flock with other adolescents. Although at a year and a half the ostrich is not much different in growth from an adult, they mature much more slowly: females begin to rush at 2.5-3 years, and males mature by 4-5 years.

List of used literature:

1. PQ-4576 of the Republic of Uzbekistan "On additional measures of state support for animal husbandry" January 29, 2020.
2. Babaeva Sh.A. "Influence of" Panaroot-98 "on the clinical and physiological state of straws" materials of the scientific-practical conference of students, undergraduates and youth on February 2, 2021, pages 8-10.
3. Brusnitsky, A.A. Problems and opportunities of the first stage of water resources development in Ukraine / A.A. Brusnitsky // Industrial ostrich breeding: mater. 2nd Medjdunar. conf. (Dnepropetrovsk, July 6-8, 2006). - Dnepropetrovsk: "Corporation Agro-Soyuz", 2006. - p. 8-11.
4. Arykov A.A. "Ostrich breeding - a new branch of agriculture" Poultry 2003 No. 3 pp. 77-85.
5. Kulikov L.V. Breeding ostriches is a profitable business // Poultry 1998 №4 pp. 40-41.