17. GUINEA-FOWL

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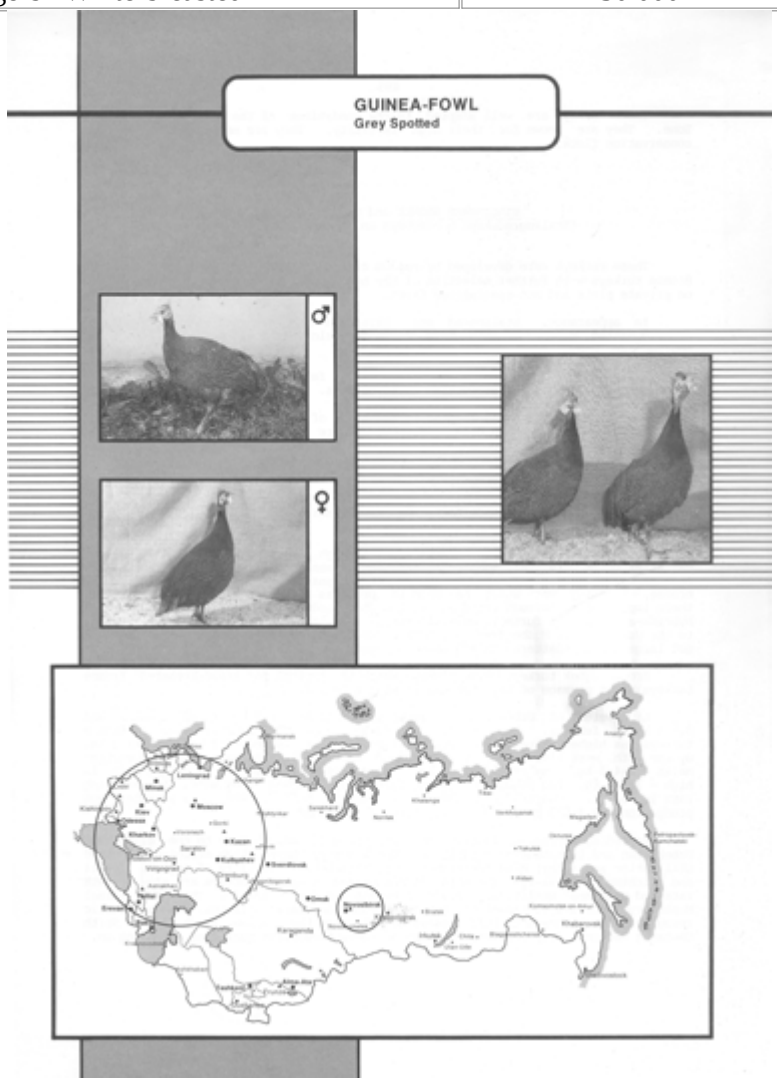
Guinea-fowl were first imported to Russia as ornamental birds in the 18th century. They have been used for egg and meat production only since 1945. In that year 300 grey-spotted and blue (lilac) birds were imported from Hungary; these were the initial material for the formation of local breeds. Present-day breeds and numbers are shown in Table 17.1.

Table 17.1 TYPES OF GUINEA-FOWL IN THE SOVIET UNION

	Numbers of adults
Grey Spotted	3 000
Blue	1 000
Cream	400
Siberian White	20 000
Zagorsk White-breasted	50 000

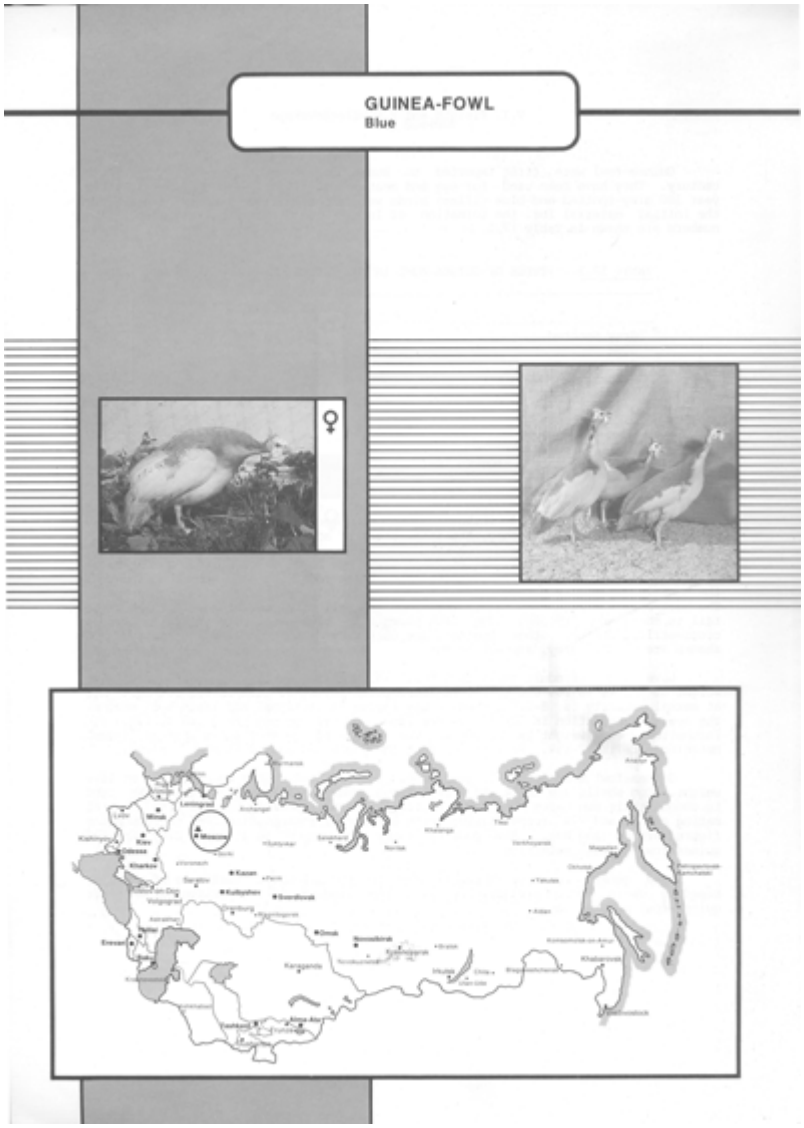


GREY SPOTTED or SILVER SPOTTED (Sero-krapchataya or serebristo-krapchataya)

This breed originally formed the bulk of all guinea-fowl in the country. At present, due to breeding and introduction of new breed groups, their proportion has decreased significantly. Today, the total stock of adults is about 3000.

The body is long, oval, set horizontally; the head is elongated, almost bare, with blue and white bony growths on it; the rings round the ears are round and red; the beak is dark pink. The neck is curved, scarcely feathered on its upper part. The back slopes towards the tail. The wings are well developed, round in shape. The tail is short and drooping. The neck plumage is blue-grey. The primaries have a cross-striped design; other feathers are dark grey with round whitish spots. The shanks are of dark grey, asphalt colour. Live weight of adult males is 1.5-1.6 kg, females 1.6-1.7 kg. At 70 days live weight of chicks is 800-850 g; feed consumption per kg of gain is 3.2-3.4 kg. Age at sexual maturity is 8-8.5 months. Egg laying is seasonal and lasts 5-6 months. The average production is 80-90 eggs per layer and 86% of eggs laid are suitable for incubation; egg weight is 45-46 g. The colour of egg shells is spotted cream. Hatching rate is 52-55%. Survival rate of the young and adults is high: 95-99%.

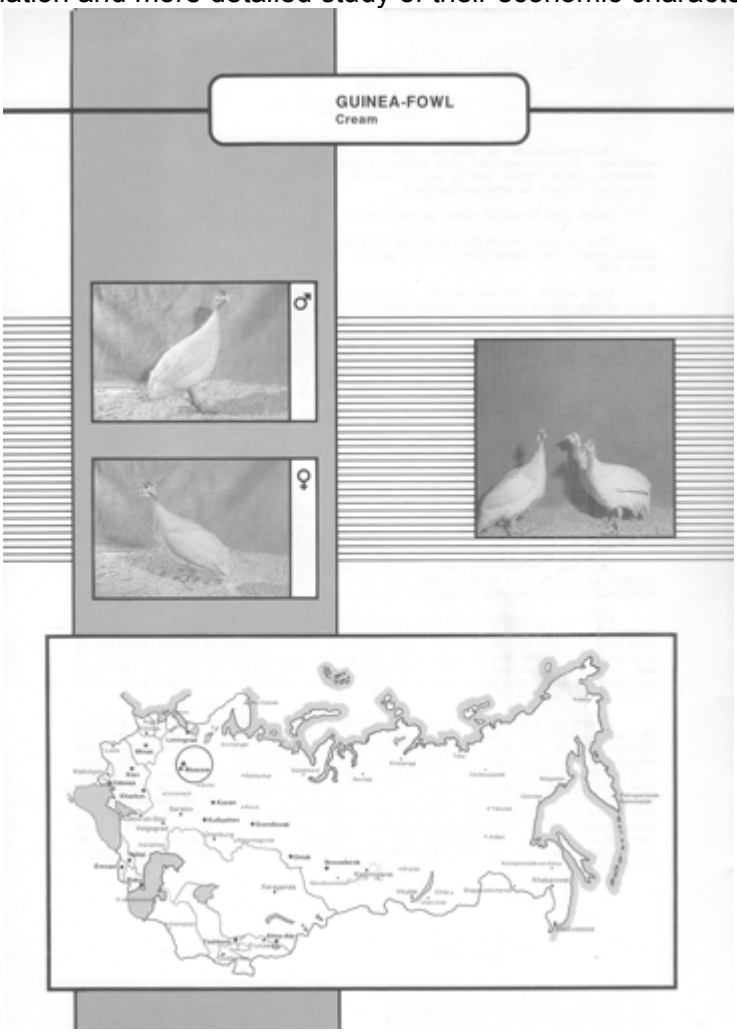
Guinea-fowl meat is highly palatable. The yield of edible meat is 52% of live weight. Egg shells are thick and very strong. When kept in a group the cocks tend to choose their own harem of hens. Fertility and hatchability of eggs with natural mating are 76 and 72% respectively; with artificial insemination the corresponding figures are 90 and 80%. Some poultry farms are engaged in breeding Grey Spotted guinea-fowl by mass selection. As a genetic resource they are kept in the All-Union Institute of Poultry Breeding where their productivity is being studied in comparison with other guinea-fowl populations.



BLUE (Golubaya)

This population originated from the Grey Spotted guinea-fowl by a colour mutation. Blue guinea-fowl also differ slightly from the Grey Spotted in production characteristics. There are no significant differences in conformation. (This colour is termed 'lilac' in western Europe.)
Today, the stock of these guinea-fowl is only about 1000 adults.
Blue guinea-fowl differ from the Grey Spotted mainly in plumage colour which is bluish grey. The shanks and skin are paler. The plumage can vary from light blue to dark blue.
Live weight and egg weight are lower, though only slightly, than in Grey Spotted and White-breasted guinea-fowl. Egg production is about 80 eggs per production cycle. Live weight of the 10-week-old young is 0.75-0.8 kg; that of adults is about 1.55-1.65 kg. Hatching rate is 50-52%.

Biological features of this population are similar to those of Grey Spotted guinea-fowl. Fertility and hatchability of eggs are about 75 and 70% respectively.
The All-Union Poultry Breeding Institute has begun breeding this guinea-fowl population and more detailed study of their economic characters.

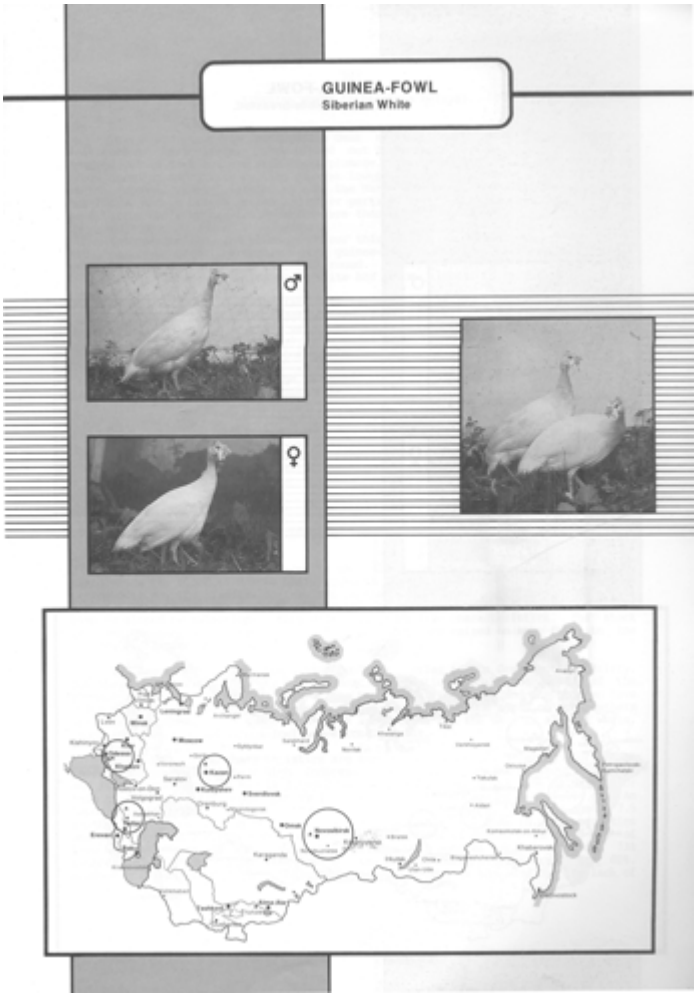


CREAM (Kremovaya)

Abroad, they are known as White guinea-fowl. This variety occurred by mutation from the Grey Spotted. The stock of Cream guinea-fowl in the USSR is small - only about 400 adults; they are descendants of 4 specimens (2 males and 2 females) brought to the All-Union Poultry Breeding Institute from France in 1969.
In their conformation they are very similar to Grey Spotted guinea-fowl. The plumage is white, shot with cream. The round spots on the feathers are lighter and distinct. The shanks are yellow and the skin pale.
In their productivity Cream guinea-fowl are little inferior to the Grey Spotted. Live weight of adults is 1.6 kg; egg production is 80-90 and 85% of eggs laid are suitable for incubation. Egg weight is 44-45 g. Age of sexual maturity is 8 months. Hatching rate of eggs in natural mating and artificial insemination

is 55 and 65-75% respectively. In the latter case fertility of eggs is 90% and hatchability 80%. The birds have a high viability; survival rate of the young stock is 95% and of adults 97-99%.

Biological features of Cream guinea-fowl concern mainly the carcass quality. The carcass of the Cream variety has a better appearance than that of the Grey Spotted because of the white skin and light plumage. In crosses with other varieties, whether as male or female parents, they give highly productive offspring. Live weight of 70-day hybrid chicks (Cream males, White-breasted females) is 920 g; feed consumption per kg of gain is 3.1 kg. Fertility and hatchability of the crosses are very similar to the Grey Spotted. The figures are 75 and 72% in natural mating and 90 and 79% in artificial insemination. Breeding work with the Cream guinea-fowl, when resumed, can significantly increase their productivity, thereby encouraging their wider use in pure breeding and in crossing. As a genetic resource, Cream guinea-fowl are kept in the experimental farm of the All-Union Poultry Breeding Institute.



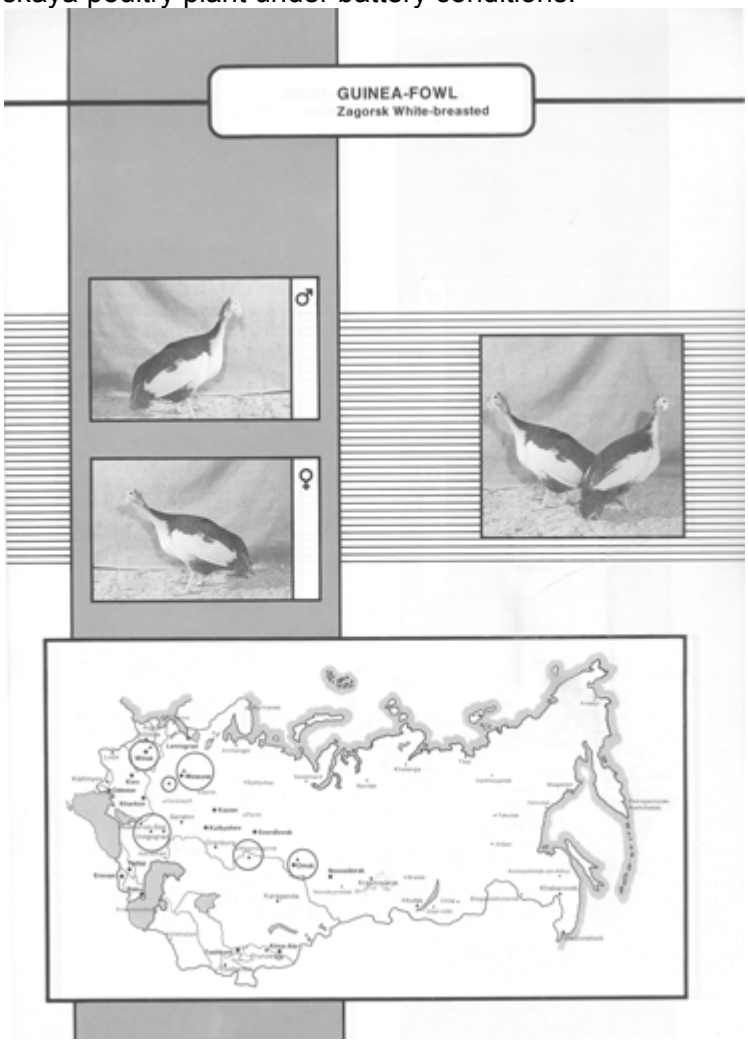
SIBERIAN WHITE (Sibirskaya belaya)

This breed group was produced in Omsk region by scientists from the Siberian Institute of Agriculture. They picked out from the Siberian population of Grey Spotted guinea-fowl mutants with light plumage. The breed group was created through close breeding and strict culling of weak low-productive specimens. In recent years it has become widely distributed in the Mari Autonomous Republic, in Stavropol territory, and in Crimea region and other parts of the Russian Federation. The stock of Siberian White guinea-fowl numbers more than 20 000 adults.

In conformation and plumage colour this variety is almost indistinguishable from the Cream breed. Probably, both guinea-fowl varieties carry the same mutant gene, but on a different genetic background. However, in the process of controlled breeding the plumage of the Siberian White has become lighter in colour.

Productivity of the Siberian White is superior to that of the Grey Spotted. Egg production averages 85-90 eggs but can reach 100 per cycle. Hatching rate is 53-54% (natural mating). Live weight of adults is approximately the same as in Zagorsk White-breasted guinea-fowl, i.e. 1.6-1.7 kg. Body

weight of the 10-week-old young is 0.85-0.95 kg and feed consumption is 3.2-3.4 kg per kg of gain.
Because of the white plumage and skin, their carcasses have a better appearance than those of the Grey Spotted. The breed is well adapted to the climatic conditions of Siberia. At the same time they are adaptable to conditions in the southern regions of the county. Fertility and hatchability of eggs in natural mating and artificial insemination are 75 and 90%, and 72 and 80%, respectively.
At present, pedigree breeding of Siberian White guinea-fowl is carried out at the Volzhskaya poultry plant under battery conditions.



ZAGORSK WHITE-BREASTED (Zagorskaya belogrudaya)

This breed group was produced in the All-Union Poultry Breeding Institute by transfusing the blood of Moscow White cocks to Grey Spotted guinea-fowl. Over a long period of time, the transfusion resulted in specimens with white pigmentation of the breast. They formed the foundation material for this breed group. Three lines have been developed by selection; they differ in production characteristics. The stock of these guinea-fowl is about 50 000

adults. They are raised on many farms in the Russian Federation and Ukraine.

The Zagorsk White-breasted guinea-fowl are similar to the Grey Spotted variety, but they are distinguished by better meat conformation and by the colour of the plumage and skin. The breast, part of the body under the wings and the abdomen have white plumage, resembling that of Moscow White fowl. The round spots on the feathers are barely visible. The shanks and beak are yellow and the skin is almost white. Zagorsk White-breasted guinea-fowl are strongly built.

Their production characteristics are very good. The lines selected for growth rate of the young stock have high indices: live weight of chicks is about 1 000 g, and feed consumption per kg is 3.1-3.2 kg. Egg production in the line selected for this trait is 115-120 eggs per cycle and their average weight is 45-46 g. An important biological feature of these guinea-fowl is the early breeding age - 7.5 months. The colour of egg shell, skin and shanks is lighter than in other varieties and this improves the appearance of the carcass. Yield of edible meat is 56-57% of live weight. Fertility and hatchability of eggs with natural mating are 76 and 73% respectively; in artificial insemination the corresponding figures are 90 and 80%. A wider utilization of Zagorsk White-breasted guinea-fowl is hampered by the lack of breeding farms specializing in their large-scale multiplication. Breeding work is going on in the All-Union Poultry Breeding Institute. Selection is based on cage keeping of the birds and new lines and crosses are being developed.

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