

POLTAVA CLAY (Poltavskaya glinistaya)

This is an indigenous chicken breed of the Ukrainian forest-steppe region. Its origin is unclear. It is believed that it was produced by crossing local hens with Buff Orpingtons. A great genetic similarity was found in the polymorphism of protein loci of eggs of Poltava Clay and Rhode Island Reds.

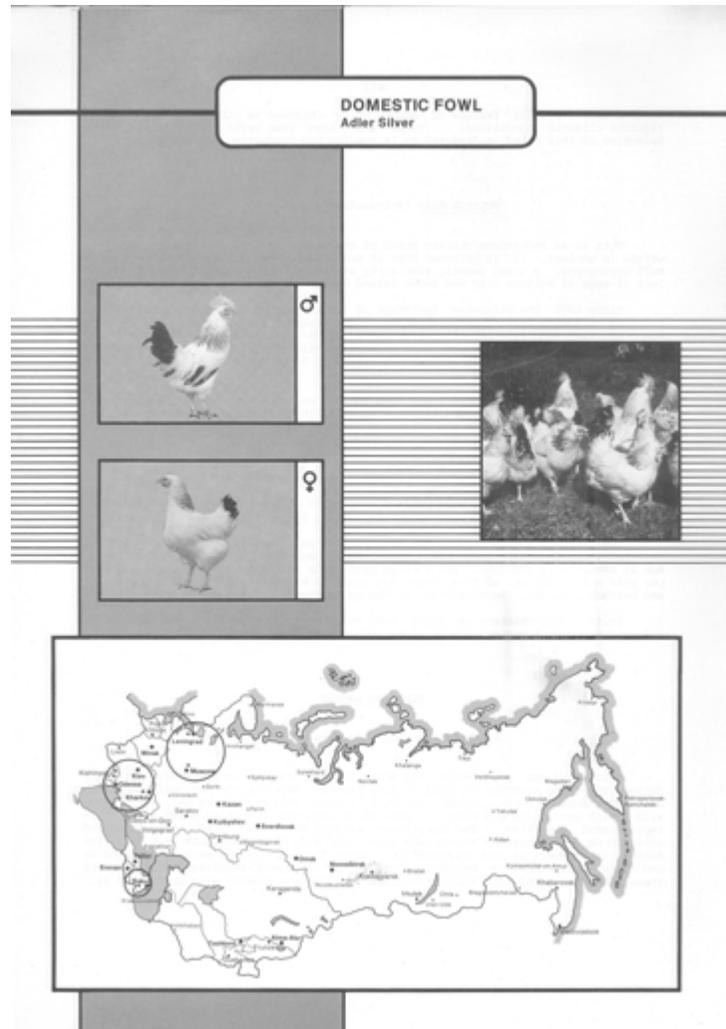
Since 1951 the Ukrainian Institute of Poultry Breeding has been engaged in breeding work with Poltava Clay chickens on the basis of mass selection to increase egg production and live weight. Five inbred lines specialized for egg production were started in 1966; they were bred by mating half sibs. The average production reached 190-209 eggs per year with an egg weight of 54-58 g. Production of champions reached 316 eggs per year. The combining ability of birds from these new lines was tested in the cross with White Leghorns. The production of two- or three-line interbreed hybrids was 236-240 eggs per year with an egg weight of 53-54 g.

Poltava Clay chickens are widely distributed in the Ukraine on farms not specializing in poultry and as private property of the rural population. In recent years their stock has decreased from 747 000 in 1974 to 626 000 in 1980.

Poltava Clay chickens have buff plumage with black tips to flight and tail feathers. Ear-lobes are red; the comb is pink and shanks are yellow.

The breed is raised for egg and meat production. The live weight of 8-week-old pullets is 0.8 kg and of cockerels 0.9 kg; adult hens weigh 2.2 kg and cocks 2.6 kg. Age at maturity is 170 days. The average production of Poltava hens is 170-190 eggs per year with a weight of 56 g. The egg shell is brown. Fertility of eggs is 95% and hatchability 88%. Survival rate of the young stock is 92% and of adults 95%.

Poltava Clay chickens are being bred for higher egg production and egg weight and are used in autosexing crosses with birds having light Columbian plumage.



MEAT-EGG BREEDS

ADLER SILVER (Adlerskaya serebristaya)

This breed was produced in the Adler poultry complex in Krasnodar territory during 1951-65 by crossing chickens of five breeds. Males of the Pervomai breed were mated with Russian White females and the F₁ crosses were bred inter se. F₂ progeny with a high production and viability were mated with New Hampshire males in order to improve meat qualities. The three-breed crosses were bred inter se. Offspring selected on appearance and growth rate were mated with White Plymouth Rock cocks for further improvement of meat conformation. These four-way crosses were bred inter se and their offspring were selected according to "standard" requirements. Some of these hens were mated with Yurlov cocks and the five-way crosses were bred inter se.

In creating this breed the main breeding method was selection of the young stock on live weight at 60 days of age, rate of feathering, meat conformation. In each generation, when selecting birds for the nucleus

stock, preference was given to specimens with the Columbian plumage pattern.

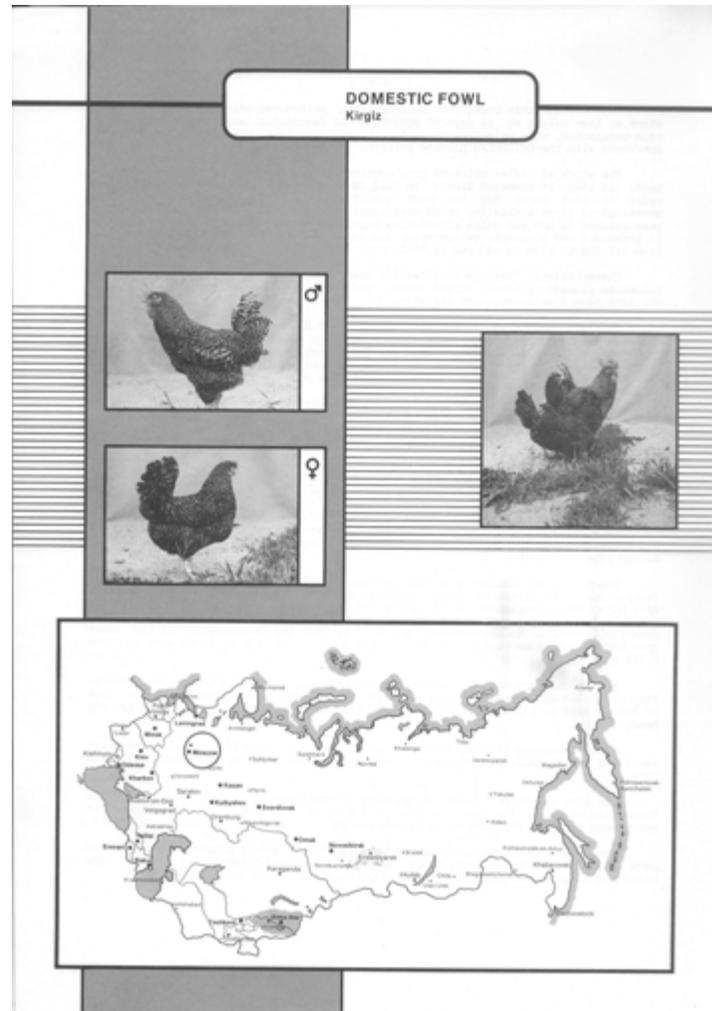
The stock of Adler chickens grew constantly and by 1961 it had reached 4600 head; in 1962 it numbered 8100. In 1962 20 pens of similar birds were formed in order to test cocks for the meat qualities of their offspring.

Promising genealogical lines within the breed were identified by 1965. The total stock in that year reached 46 000 and sales of hatching eggs rose to 500 000. The breed is raised in Krasnodar and Stavropol territories and in Azerbaijan. Its population increased from 110 000 in 1975 to 603 000 by 1980.

Characteristic features of the Adler breed are: both meat and egg production, Columbian plumage pattern, single comb, red ear-lobes and yellow shanks. These chickens have a well-developed skeleton.

The live weight of 49-day-old pullets is 0.83 kg and of cockerels 1.0 kg; adult hens weigh 2.7-2.8 and cocks 3.8-4.2 kg. Age at sexual maturity is 180 days. The average production is 160-180 eggs per year; egg weight is 60 g. The egg-shell colour is brown. Fertility of eggs is 90% and hatchability 75-80%. Survival rate of the young up to 56 days of age is 95% and of adults 83%.

At present, Adler Silver chickens are not used in broiler production because they cannot compete with White Plymouth Rocks. They can be used for creation of new synthetic lines as a female parent line in broiler crosses.



KIRGIZ (Kirgizskaya)

This breed was produced in the Kirgiz Research Institute of Animal Husbandry and Veterinary Science during 1948-68 by crossing Leghorns, New Hampshires, White and Barred Plymouth Rocks.

The main direction of breeding was family selection with progeny testing of cocks. During the first ten years emphasis on selection for egg production resulted in a high concentration of the A allele (0.905) in the egg white globulin locus. Later, selection was for growth rate. The population of Kirgiz chickens became genetically similar to meat-and-egg breeds. By 1979 the concentration of the above gene had decreased to 0.842 and that of the A allele at the G₃ locus went up from 0.092 to 0.126.

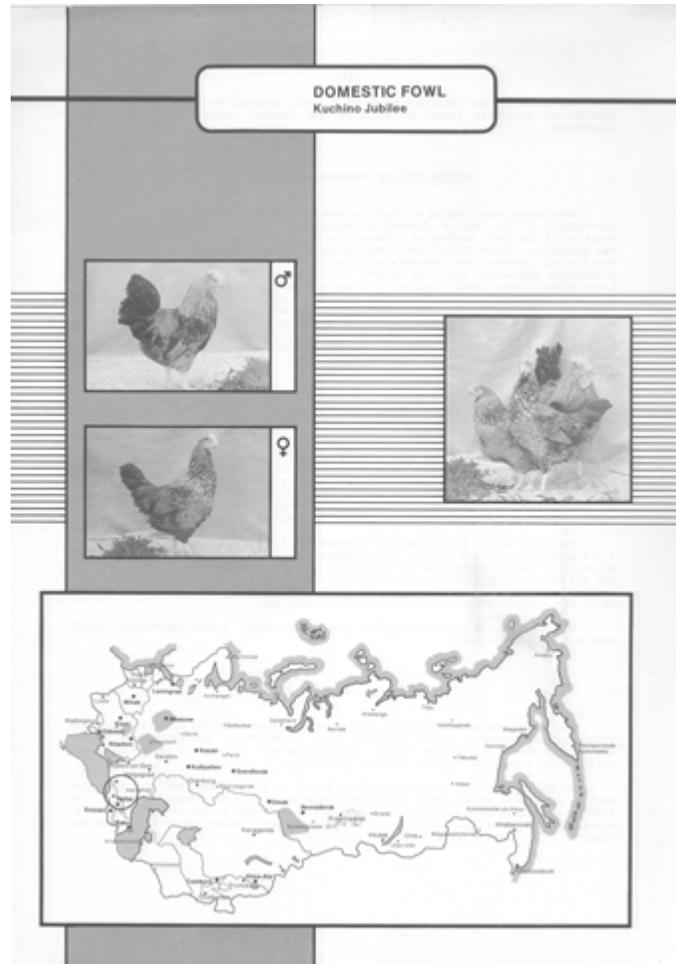
Kirgiz chickens are well adapted to the strongly continental, hot dry climate. They are found in non-specialized farms in Kazakhstan. Their stock increased from 17 000 in 1964 to 132 000 in 1975. In 1980 the number of Kirgiz chickens was 122 000 head.

Kirgiz meat-egg chickens have a cone-shaped body of medium size, pinkish-red ear-lobes and a small single comb. Plumage resembles that of the Barred Plymouth Rock.

The live weight of 9-week-old chickens in the breeding nucleus is 1.25 kg; the foundation males of the line weighed 1.4-1.6 kg at this age. The live weight of adult hens is 2.3-2.5 kg and of cocks 3.0-3.5 kg.

Hens reach sexual maturity at 180 days of age. Annual production is 160-170 eggs weighing 56-58 g. Fertility of eggs is 90-95% and hatchability 78-82%. The breed has a high viability: mortality of young is not above 3-5%, adults 5%.

The breed has an important value as a basic material for selection of highly specialized synthetic lines of egg-type and broiler crosses in Kirgizia and Kazakhstan.



KUCHINO JUBILEE (Kuchinskaya yubileinaya)

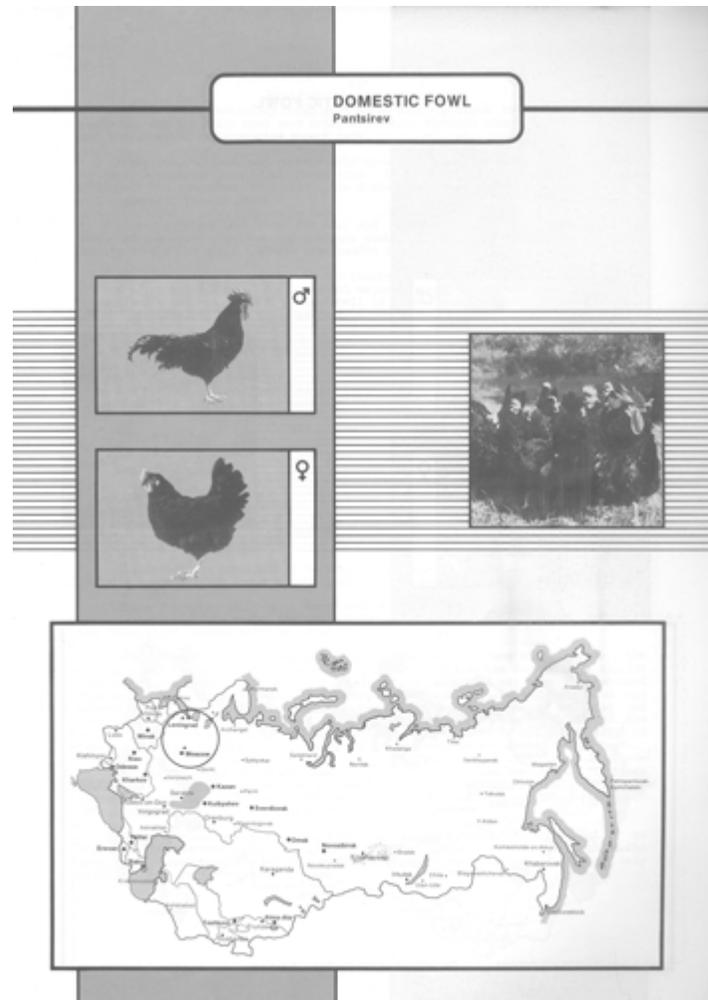
This breed was created at Kuchino breeding farm in Moscow region under the supervision of the Moscow Academy of Agriculture and the Institute of General Genetics of the USSR Academy of Sciences, by crossing five breeds - Russian White, New Hampshire, Rhode Island Red, Australorp and White Plymouth Rock. Inter se breeding of crosses was combined with selection for a number of traits - egg production, egg weight and live weight. Later, part of the stock was crossed with Livny cocks (from a local population of egg-and-meat chickens of the Orlov region); the resulting stock was divided into 16 individual pens, and was bred and selected as "standard" chickens. Since 1962 family selection was carried out with differentiation of lines by egg production, egg weight and growth rate. The most effective was selection for growth rate up to 60 days of age: live weight of cockerels increased from 624 to 1074 g, that of pullets from 557 to 928 g. When reared on high-protein rations (23.4% crude protein), average live weight of 90-day-old cockerels reached 2052 and that of hens 1545 g. The number of Kuchino Jubilee chickens increased from 9300 in 1974 to 53 000 in 1980. The breeding stock in Kuchino farm went up to 13 000, and sales of hatching eggs to 320 000. The breed is found in Moscow and

Voronezh regions, Krasnodar and Altai territories and in the Ukraine and Georgia.

Kuchino Jubilee chickens are of meat-and-egg type, very beautiful in plumage colour and conformation. Adult hens have dark buff plumage, with scattered black spots, and with "calico" hackles. The down is grey and quills are light in colour. Cocks have red plumage with golden hackles and saddle; tail and breast are black. On the wings there is a black bar with a green sheen. Ear-lobes are red; comb is single and small. Shanks are yellow. Brooding instinct is weak.

The live weight of 8-week-old chickens is 1.2 kg; that of adult hens is 2.7-3.0 and of cocks 3.5-4.0 kg. Age of maturity is 180 days. Annual egg production averages 200 eggs averaging 59 g. Egg shell is light brown. Fertility of eggs is 95% and hatchability 77-87%. Survival rate of chicks is 98.7% and of adults 95%. Kuchino Jubilee chickens have high meat quality: breast muscles of chicks contain 25.3% of protein. They feather quickly at an early age.

Selection of the Kuchino Jubilee breed is directed toward increasing growth rate and egg production.



PANTSIREV (Pantsirevskaya)

This breed was created during 1947-61 at Pantsirev breeding state farm in the Volga area by crossing White Leghorns, Rhode Island Reds, New Hampshires, Black Australorps and White Plymouth Rocks. The purpose was to create a native breed of dual-purpose type with high egg and meat production.

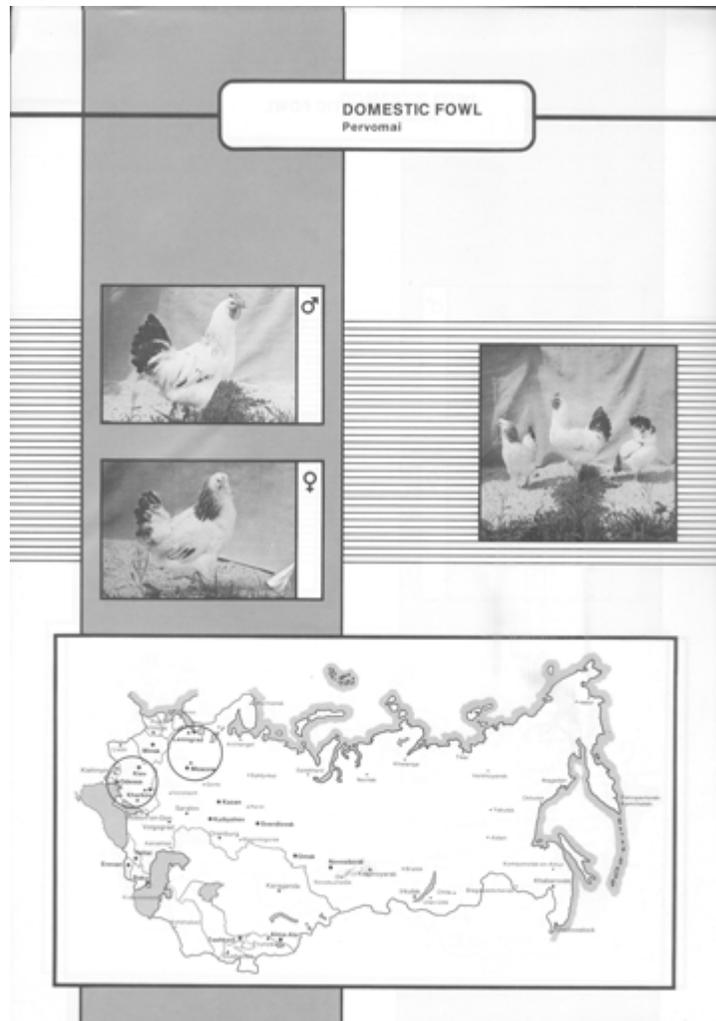
In the first phase Leghorn hens were mated to Rhode Island and New Hampshire cocks. In another group Rhode Island hens were mated with New Hampshire cocks. In 1948 the crossbred hens were mated to New Hampshire, Rhode Island or Leghorn cocks. After 1951 the three-way crosses were bred inter se with selection of hens which had black or white plumage and a high egg production.

In 1954 Black Australorp cocks were mated with the black hens in the crossbred population and the white hens were mated with White Plymouth Rocks. Further breeding work was directed to increasing growth rate. Pantsirev chickens used to be widely spread in the Volga area. They are famous for their adaptability to local conditions. In 1974 the stock numbered 278 000 but by 1980 it had gone down to 22 000. Low dual-purpose production appeared to be the main reason for this decrease.

Pantsirev black hens used for meat and egg production have a deep and broad body, red-and-white ear-lobes and a single comb. Shanks are black-and-white. Cocks usually have a few white feathers near saddle and tail. The live weight of the 8-week-old chickens is 0.91 kg; that of adult hens is 2.4 and of cocks 3.2 kg. Age at sexual maturity is 175 days. The average annual production is 180 eggs of 57 g. Egg shell is cream-coloured. Fertility of eggs is 95% and hatchability 85%. Survival rate of the young is 86%. The population of Pantsirev hens with white plumage is for egg and meat production. They have a small head with a single comb and compact body. Ear-lobes are red-and-white.

The live weight of 8-week-old chickens is 0.93 kg; that of adult hens 2.5 and of cocks 3.0 kg. Age at sexual maturity is 170 days. The average annual production is 190 eggs of 58 g. Egg shell is light cream. Fertility of eggs is 95% and hatchability is 80%. Survival rate of the young is 95% and of adults 96%.

Selection of Pantsirev chickens is aimed at improving egg production and egg weight.



PERVOMAI (Pervomaiskaya)

This breed was developed at Pervomai state farm in the Ukraine (1935-41) and at Pachelma state farm in Penza region (1942-63) from a three-breed cross.

White Wyandotte cocks were mated with Rhode Island hens and a crossbred cock was selected which was mated with Yurlov hens. Three lines were formed by breeding the three-breed crosses inter se using half-sib mating.

During World War II the population decreased to 48 hens and 6 cocks; the nucleus stock included only 10 hens and 4 cocks. In 1947 the Pervomai population increased to 180 and in 1948 to 670 birds. Line selection was then discontinued because of the adverse effect of inbreeding on viability, hatchability and egg production. The main breeding methods became large-scale crossing of lines and infusion of fresh blood of males from other farms. The year 1956 marked the resumption of line selection, breeding males being evaluated on the growth rate of their offspring. By 1962 the population of the Pervomai breed reached 56 000 head.

During the whole period of breed formation, selection was carried out for high growth rate, high egg production and early maturity. Annual production of hens increased from 135 to 195 eggs, weighing 56-57 g. Hatchability increased from 66 to 78%. Egg production of champions reached 256-270 eggs.

The main disadvantage of this breed is too low a production and inability to compete with modern highly specialized egg-meat lines. For that reason the population of Pervomai chickens began to drop sharply and in 1975-80 it numbered only 2100-2500 head.

Pervomai chickens are bred for egg and meat production. They have light Columbian plumage colour, yellow shanks, red ear-lobes and a rose comb. Their conformation is marked by short legs indicating compactness.

The live weight of 8-week-old pullets is 0.88, and that of cockerels is 0.98 kg. The live weight of hens is 2.5 and of cocks 3.5 kg. Age at sexual maturity is 170 days. The average annual production is 180-190 eggs weighing 55-56 g. Egg shell is brown. Fertility of eggs is 95% and hatchability 85%. Survival rate of the young up to 56 days of age is 98% and of adults it is 95%.

Selection of Pervomai chickens is aimed at increasing egg production and egg weight.