## Donkey utilisation in Bulgaria

by

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#### **Abstract**

Donkeys are traditional inhabitants of rural Bulgaria. Their numbers have changed over the years with the socio-economic development of the country and in direct relation to their use for various kinds of work. The largest number of donkeys recorded was during the period 1975–1990, a period characterised by the collectivisation of agricultural production. During that time Bulgarian farmers used donkeys on their small plots (0.2-0.5 ha) which were usually planted with tobacco, vegetables and grapes. Donkeys are especially valuable in the rural areas where the average age of the population is over 60. At present these people cultivate fields of 0.5–1.0 ha arable land, planted with grapes, vegetables, potatoes, tobacco, maize and sunflowers. The 1995 statistical data showed a larger concentration of donkevs in the areas where these crops are a priority.

Variation in harnesses, carts, pack saddles and tools used with donkeys is related to their multipurpose application during the socialist years. Presently, donkey transport is used over short distances with various loads, such as grain, grass, wood, building materials and agricultural products. People are transported in light carts equipped with tyres. Implements used with donkeys are modified smaller versions of traditional implements and of those used with tractors. Different kinds of plows.

weeders and rippers are used to prepare the soil and for weed control. Donkeys continue to make a significant power contribution in Bulgaria.

### **Donkey numbers**

Changes in the number of donkeys in Bulgaria has been determined by the social and economic development of the country. Donkey numbers, compared to horses and the total number of all species of work animals (including horses, donkeys, mules, oxen and water buffaloes), during the period from 1900–1995 are shown in Table 1. At the beginning of the century donkeys numbered 7% of the total number of work animals and 22% of the number of work horses.

By 1939, immediately before the Second World War, the number of donkeys had increased, as had the number of horses. After that period, when the total number of work animals was decreasing with the start of the socialist system of agricultural production, donkey numbers continued to increase. The period following 1960 was characterised by mass collectivisation of agricultural production. which gave rise to small-scale agricultural production at the household level for which donkeys were suitable power sources. Many householders were old and found the donkey to be their 'best assistant'.

Table 1: Dynamics of donkey numbers in Bulgaria 1900-1995 (numbers in thousands)

Year	1900	1939	1952	1960	1975	1985	1990	1995
Work animals	1430	1395	1235	906	520	505	476	426
Horses	495	614	471	334	137	118	119	133
Donkeys	107	169	197	242	317	349	329	276
Donkeys as % of all work animals	7	12	16	27	61	69	69	65
Donkeys as % of horses	22	28	42	72	231	295	276	207

Source: Statistics, 1952-1995

In the period after 1985 the number of donkeys decreased. This period was characterised by political and economic changes in Bulgaria that resulted in the redistribution of land. The reasons for the reduction in donkey numbers include an increase in the number of horses and the increased export of donkeys for meat.

The local donkey is of the Mediterranean type, reaching 100–120 cm in height (Hadzidimitrov, 1953). In parallel with the development of horse studs, donkey breeding units were organised where jacks of the Martina Franca and Cyprus breeds were raised. Donkeys of the Cyprus breed reach up to 140 cm in height and the Martina Franca donkeys 150 cm. The main objective of this activity was the improvement of the local donkey and thereby the quality of the locally produced mules (Popov, 1953; Karaivanov, 1957).

#### Regional distribution of donkeys

The distribution and use of donkeys is closely related to the nature of the terrain and the crops produced. In the mountainous and semi-mountainous regions of Bulgaria donkeys pull carts or carry packs. In the plains, donkeys are driven and are used in land cultivation. Donkeys are mainly used on areas of 0.2-0.5 ha. Usually these are vegetable gardens, tobacco fields and vineyards or fields under industrial crops. Donkeys are the preferred work animals in the villages because they can survive hard work and unfavourable conditions. Donkeys are also used in harvesting. At the present time of economic crisis donkeys are often used for the transport of goods between villages. Donkeys are very good for helping shepherds. Seeing a donkey among a flock of sheep or a donkey carrying the shepherd's belongings, or indeed the shepherd himself, is a common scene.

On a regional basis the larger the area of arable crops cultivated the higher is the number of donkeys. On large areas donkeys are used together with machines, particularly during the harvest. The economic collapse being suffered by Bulgaria at the present time is the reason guaranteeing the future use of work animals in agriculture.

# Common implements used with donkeys in land cultivation in Bulgaria

The variation in harnesses, carts, pack saddles and tools used with donkeys is related to their multipurpose application on the small, privately-run agricultural operations. Different

means of carrying loads have been designed according to the nature of the loads. Donkey transport is especially used for short distances with loads such as grain, grass, wood, building materials and agricultural products. People are transported in light carts equipped with tyres. Implements are normally modifications of the traditional ones and of those used with tractors. Different kinds of plows and rippers are used to prepare the soil. In the mountainous and semi-mountainous regions, especially on the tobacco fields, pack saddles are used for carrying people and loads.

Harnesses are essential for draft animals. The Bulgarian harness comprises a collar placed on the donkey's neck and a strap system (back strap, crupper and breeching). Donkey harnesses are similar to horse harnesses but smaller. The collar consists of two adjustable wooden hames coupled with a leather cushion stuffed with straw which fits on the shoulders. When the donkey is harnessed both cart shafts can be fastened to the hames with straps. An alternative system of fixation is illustrated in Photo 1. Leather loops attached to either side of the collar go around the shafts of the cart, and are then held in place by a high wooden hoop that passes over the donkey's neck. Harnesses are often decorated.

Pack saddles are usually made of wood and have various clips, rings and straps for attaching the load. Where the terrain is steep the pack saddle has to be fitted with horizontal breast and breeching straps to keep it in position.

The normal four-wheeled donkey cart (or wagon) is very solid and of long-lasting construction. The cart has two parts linked with a mobile connector and a carrying box. The width from wheel to wheel is 115-120 cm. Carts can have many functions. The adjustable connector makes possible the elongation or shortening of the cart. With bulky loads (hay, green forage, wood) the box can be removed thus increasing the cart's capacity. Carts can be adapted for a single donkey or a team by changing the single shaft for a double one. Wooden wheels are replaced by tyred wheels for work on the roads, which increases the speed and decreases the required draft. The size of the load depends on the terrain and the size of the donkey. Cart loads of 500-800 kg are normal with

Plows are used in the autumn and spring for soil preparation and in the cultivation of vineyards,



Photo 1: A large Bulgarian donkey pulling a traditional four-wheel wagon. The collar is attached to the shafts with leather straps held in place by a wooden harness hoop.

maize, sunflowers and some industrial crops. The normal furrow depth with donkey plows is 15–25 cm and the furrow width 20–25 cm.

Harrows are used for breaking up big furrows after plowing, as well as for levelling the field under preparation. This is effected by the frame's weight and its metal teeth positioned check-wise which causes fine breaking up of the soil and additional rooting out of weeds. Disk harrows are usually too heavy for donkeys. In some regions harrows are made of spiny plants and are used for breaking up the soil and covering the seeds. Weeders are used for superficial soil cultivation (cutting the weed roots). Soil is not turned over as it is during plowing. Weeders have two front double-bladed tines and a third in the middle and behind them. Positioned in this order the three tines cover an entire furrow track of maize, sunflowers, garden beans and other plants. Potato

harvesters are constructed by modifying the cultivators.

#### Conclusions

The use of donkeys for power is a traditional practice in Bulgaria. Donkeys meet the needs of those cultivating small household plots as well as those using tractors in large-scale agricultural production. Overall, donkeys continue to make a significant power contribution in Bulgaria.

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