

The Russian Wild Olive

(*Elaeagnus angustifolia*)

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The Russian wild olive, as the name indicates, is a native of Russia found growing under natural conditions in southern Europe and western Asia. It has been planted to a considerable extent in China.

The Bureau of Plant Introduction, United States Department of Agriculture, Washington, D. C., describes it as seen in China, as a fair sized tree in good situations. It is, perhaps, the most useful tree in Chinese Turkestan. It makes excellent hedges when properly handled, that are almost impenetrable by man or beast. As a wind-break, it is unexcelled. Growing as it does in the driest deserts, it is used extensively to protect the cultivated crops of the oases against the desert winds. It has been noticed that crops growing close up to a row of Russian wild olive trees are not impoverished to any extent. (The masses of fibrous roots are covered with nitrogenous nodules.) For this reason, the natives of central Asia prefer this tree to any other sort for wind-break planting. The trees are well adapted to grow in pure sand and even in alkali soils. They exist with very little water, although under such conditions they do not make a luxurious growth. They cannot endure wet soggy soils.

As a sand binder, it is of great value in checking the encroaching desert sands. It is also used to a very great extent along the irrigation ditches where there is much trouble experienced in preventing the soils from washing. Its great masses of fibrous roots prevent the soil to a very great extent from washing. Its wood constitutes in many of the cases the chief supply of fuel. To furnish this wood, the trees are pollarded every four or five years. Pollarding is the term applied to the practice of cutting the tops out of live trees at heights varying from six to twenty feet from the ground so that a new top can be developed. As the Russian wild olive responds very readily to such treatment, the practice is very general wherever the trees are grown.

The wood, when thoroughly dried, possesses fine heating quali-

ties. A bed of live coals when covered with ashes will last throughout the entire night. The fruit of this olive is not edible. However, the dry cast-off leaves are a favorite food of sheep, goats, cattle and donkeys. The flowers, though inconspicuous, are very fragrant and rich in honey. These qualities, combined with its ability to withstand drought and alkali soils, put it in the first list as a desirable tree for the more arid parts of the United States.

In the United States, the Russian wild olive has for a number of years been growing very successfully throughout western Minnesota, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and the Panhandle of Texas, withstanding the severest drought and the most extreme cold, that have been experienced in this time. This is sufficient proof that it is well adapted to our climatic conditions, and inasmuch as it is adapted to growing in a wide range of soils, it is a tree that deserves more consideration for general planting purposes throughout the plains states than it has received in past years.

HABITS AND GROWTH.

The Russian wild olive is a medium sized tree, seldom exceeding fifty feet in height under the most favorable conditions. It reaches its best development in heavy rich soil. However, as previously stated, it adapts itself to a wide range of soils and will even endure considerable alkali. On high dry prairie land its rate of growth is much slower than on moist soils. But it is a persistent grower, and if given a chance, it will make a satisfactory growth under the most adverse conditions. Its rate of growth under favorable conditions compares favorably with the soft maple.

The leaves of the Russian wild olive trees are silvery white, and on this account afford a pleasing variation when planted in mixture with other trees.

ECONOMIC USES.

The economic use of this species is not well known. But it is highly recommended for yard and park planting in mixture with other species. It reaches sufficient size and is altogether suitable for street planting. It can be used to a good advantage in hedges

or for wind-breaks. For hedges, the trees should be planted eighteen inches apart in single rows, and they should be kept trimmed to a uniform height of three and one-half to four feet feet. For wind-breaks, they should be planted from three to six feet apart in rows seven or eight feet apart, and should be permitted to grow without being cut back.

The trees naturally head low and grow rather sprangly. When planted for street or yard trees, the lower limbs should be removed early in their development so that the tree will develop a desirable form for such use.

Very little is known regarding the durability of the wood in contact with the soil. However, it is safe to conclude that the wood must be durable to withstand the treatment that the trees are subject to in China when pollarded for fuel purposes. If it were a perishable wood, fungi would find entrance in the wounds made by cutting off the tops, and produce decay that would finally result in the death of the tree.

METHODS OF PROPAGATION.

The Russian wild olive is propagated either from seed or by cuttings. The trees come into bearing when from six to eight years old, and yield large quantities of seeds that ripen in autumn. When ripe, they are gathered and stored dry or stratified until the following spring. When stored dry, they should be soaked in water of moderate temperature for a day or two before they are planted. If planted without being soaked, the seeds sprout very irregularly; some of them coming up within two or three weeks after they are planted, others lying in the ground for a month or two before they come up, and many remaining dormant until the following season.

The seed should be planted in well prepared seedbeds in rows wide enough apart to allow the required cultivation. The seed should be covered with from one to two inches of soil. The seedlings make a very strong growth, and in favorable seasons reach a height of from two to four feet. At one year old, the plants are a very desirable size for hedge or wind-break planting. For street or yard planting they should be transplanted to the nursery row for one or two years.

When propagated by cuttings, these should be made from wood

of the preceding year's growth, which is cut into desirable lengths varying from eight to twelve inches. These strike root readily in moist soil, and make a growth of from eighteen to thirty inches the first season.