

NOTICE OF THE NAMING AND RELEASE OF 'KING-RED' RUSSIAN-OLIVE
FOR USE IN RESOURCE CONSERVATION PLANTINGS

The USDA-Soil Conservation Service, the New Mexico State Highway Department, the New Mexico Agricultural Experiment Station, and the Colorado Agricultural Experiment Station announce the naming and release of 'King-Red' Russian-olive (Elaeagnus angustifolia var. orientalis Dipp.) for commercial production and sale of seed and plants.

Origin: Seed of 'King-Red' was collected in Afghanistan in 1957 by Dr. A. C. Hildreth, USDA, Agricultural Research Service, Cheyenne Horticultural Field Station. Plants were distributed in 1962 by the Cheyenne Station to plant materials centers in Manhattan, Kansas; Los Lunas, New Mexico; and Bismarck, North Dakota. The accession number assigned to this material was WY-292. The seven plants received by the Los Lunas PMC have been used as a seed source to provide plants for additional trials. Most of the seedlings have been produced from seed collected from one tree designated as WY-292A. Seed from this tree had the largest fruits.

Description: The most striking feature of this variety is its large and colorful drupe-like ellipsoid shaped fruits. They ripen between July and October, are 3/4 to 1-inch long, and are reddish brown to burgundy in color. This is quite different from common Russian-olive (E. angustifolia L.) whose fruits are usually less than 1/2-inch long and are yellowish to brown at maturity. Another difference is an occasional 'King-Red' plant will be nearly thornless.

Mature plants attain heights of 25 to 35 feet on good sites. Leaves are alternate 1 to 3 inches long, oblong-lanceolate to linear-lanceolate, silvery-scurfy beneath, and green or somewhat scurfy above. The young branches are silvery and scurfy but are brownish when older. Flowers are fragrant, pale yellow or silvery, axillary, and scattered on the branches in clusters of one to three.

Insects and diseases have not been a problem on 'King-Red'. It is apparently as drought resistant as common Russian-olive and tolerates considerable amount of salinity or alkalinity.

Performance: This variety has performed as well in a windbreak as any other Russian-olive accession at the Los Lunas PMC. Its emergence and final stands under sprinkler irrigation have been satisfactory. Survival of 'King-Red' plants held in pots has been nearly 100 percent. This is much better than obtained from many other woody plant species under similar conditions.

'King-Red' was placed in at least 81 different plantings for field testing in Colorado and New Mexico between 1968 and 1976. Bare-root plants were used in 40 of these; potted plants were used in the others. Half or more of the plants of this variety survived in 40 percent of the plantings. 'King-Fed' had the highest average survival of all woody

plant accessions evaluated. Its performance was outstanding considering the sites on which the plantings were made. Many of the failures were due to such factors as trampling, inadequate moisture, or unsuitable sites. The performance of 'King-Red' Russian-olive is usually outstanding on sites where it is known to be adapted.

Area of Adaptation: The full range of adaptation of this introduced species is unknown. 'King-Red' Russian-olive is adapted to much of New Mexico and Colorado at elevations of 3,500 to 7,000 feet. It will grow in a variety of different soils. Supplemental water is needed on the drier sites unless a high water table supplies the needed water. This variety has winterkilled after a few years at Manhattan, Kansas; and Bismarck, North Dakota. However, it survived minus 25° F. at Los Lunas.

Uses: 'King-Red' can be used in shelterbelt or windbreak plantings. Its silvery leaves, brown stems, and decorative fruits make it colorful for landscaping. It can also be used as a trimmed formal hedge. Fruits are edible by many species of birds. It provides cover for many kinds of wildlife and is used by bees in the production of honey.

Propagation: 'King-Red' is a seed propagated variety. Vegetative propagation is possible, but may be less desirable for conservation plantings because such a practice might narrow the gene base.

Trees of this variety are generally at least 5 years old before they produce seed. Trees with the largest fruits usually produce the fewest seeds. Stratification or other treatment, such as passing through the digestive system of birds, increases the germination of the naturally dormant seed. Seed is usually depulped prior to planting, but stands can be obtained without this practice. Fall or winter planting of the seed is easier than stratifying it for a month or more in moist sand, at 32° F. Most of the seedlings will emerge by late April if the seed is planted before February and soil moisture and temperature remain favorable.

One or two-year-old bare-root plants can be used for making plantings under favorable conditions. Potted plants have been more successful than bare-root stock on dry difficult sites.

Source of seed and plants: Breeder seed will be maintained by the Los Lunas Plant Materials Center. Limited numbers of live plants will be available for establishing seed source nurseries. Seed and plants for these uses will be available from the Los Lunas PMC through resource conservation districts and New Mexico Crop Improvement Association. Seed will be on hand for the initial commercial production of plants.

Approved by:

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Date February 2, 1978

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