THE
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
AND
NORTH DAKOTA
AGRICULTURAL EXPERIMENT STATION
AND
SOUTH DAKOTA
AGRICULTURAL EXPERIMENT STATION
AND
MINNESOTA
AGRICULTURAL EXPERIMENT STATION

Notice to Nurserymen of the naming and release of 'McDermand' ussurian pear.

McDermand ussurian pear, Pyrus ussuriensis Maxim, is a seed propagated cultivar recommended for use in multi-row farmstead and single row field windbreaks, wildlife habitat, and recreation, urban, industrial development and transportation corridor plantinga. The vigorous, dense growth makes it useful for shelterbelts and screening. The attractive flowers and yellow-orange autumn color enhance its aesthetic value.

Ussurian pear, also known as Harbin pear or Manchurian pear, is a hardy, medium sized tree 24 to 40 feet (7.3-12.2 m) tall, native to northeast Asia. Twigs are yellowish-brown, glabrous: leaves orbicular ovate to ovate, acuminate, rounded or subcordate at base, 2 to 4 inches (5-10 cm) long, serrate, glabrous, dark yellowish-green above and lighter beneath: petiole, .5 to 2 inches (2-5 cm) long: flowers white, 1.2 to 1.4 inches (3-3.5 cm) in diameter, petals obovate, occur in May: fruit subglobose, short-stalked, greenish-yellow, 1.2 to 1.6 inches (3-4 cm) in diameter, flesh is hard and not considered edible, ripening in September.

Accession ND-14, PI-478004, was collected by John McDermand, Soil Conservation Service, Bismarck, North Dakota, on the Agriculture Canada, Agriculture Research Station, Morden, Manitoba, Canada, in 1954. The Research Station received the seed from Dr. N.E. Hansen, Horticulture Department, Agriculture Experiment Station, Brookings, South Dakota, in the 1930s. The original seed collection was made by Dr. Hansen near Harbin, Manchuria, in 1924.

The USDA, Soil Conservation Service has evaluated the adaptation and performance of McDermand ussurian pear at the Plant Materials Centers at Bismarck, North Dakota; Manhattan, Kansas: Elsberry, Missouri: and East Lansing, Michigan.

Field evaluation studies were conducted cooperatively with the Soil Conservation Service and North Dakota Game and Fish Department, Bismarck, North Dakota: North Dakota Forest Service, Bottineau, North Dakota: Morton County Parks Department, Mandan, North Dakota: North Dakota State University Experiment Station, Dickinson, North Dakota; South Dakota State University, Central Research Station, Highmore, South Dakota: USDI, Fish and Wildlife Service, Lake Andes National Wildlife Refuge, Lake Andes, South Dakota; US Forest Service, Buffalo Gap National Grasslands, Cottonwood, South Dakota; University of Minnesota, West Central Experiment Station, Morris, Minnesota: University of Minnesota, Northwest Experiment Station, Crookston, Minnesota: and the Minnesota Department of Natural Resources, Rochester, Minnesota.

Field plantings in actual use situations were conducted in cooperation with state and federal agencies and conservation district cooperators.

McDermand ussurian pear has performed well on most soil types except heavy, poorly drained, and high lime soils. It has performed very well on sandy soils with good to excellent weed control and 25 inches (64 cm) of precipitation. The northern limit for the area of adaptation appears to be hardiness zone 3A and performs well southward to hardiness zone 6B. The most limiting factors to survival and growth rates are weed control, animal damage, and soil moisture.

Observations at some North Dakota test locations have shown damage from the bacterial disease fireblight, Erwinia amylovora (Wescott 1950). Susceptibility to the disease appears to be related to stress caused by drought followed by severe winter conditions. The disease can be fatal to seedlings and saplings up to 4 years of age. Older trees exhibit slight symptoms of the disease but are able to overcome it with little adverse effect.

The result of these studies and others in adjacent states indicate that McDermand ussurian pear is adapted to North Dakota, South Dakota, Minnesota, Nebraska, Kansas, Missouri, Iowa, Illinois, Michigan, Wisconsin, Indiana, and Ohio. Its performance outside of this area has not been adequately tested.

The USDA, Soil Conservation Service, Plant Materials Center, P. O. Box 1458, Bismarck, North Dakota 58502, will maintain breeders seed and foundation seed of McDermand ussurian pear. Certified seed (source identified and selected class) will be available from growers approved by the North Dakota, South Dakota, and Minnesota State Certified Seed Departments.

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