UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Washington, D.C.

and

AGRICULTURAL RESEARCH CENTER
Washington State University
Pullman, Washington

and

IDAHO AGRICULTURAL EXPERIMENT STATION
University of Idaho
Moscow, Idaho

NOTICE OF RELEASE OF '**MORTON**' WINTER HARDY LENTIL

The Agricultural Research Service of the United States Department of Agriculture, the Washington Agricultural Research Center, and the Idaho Agricultural Experiment Station announce the release and naming of a small-seeded red-cotyledon winter-hardy lentil (*Lens culinaris* Medik.), '**Morton.**' **Morton** was developed by the U.S. Department of Agriculture, Grain Legume Genetics and Physiology Research Unit located at Pullman, Washington, in cooperation with the College of Agriculture, Agricultural Research Center of Washington State University. **Morton,** selection LC9979010, originated as an F_6 selection from the cross of WA8649090/WA8649041 (cross number X92L043) made by F.J. Muehlbauer in 1992. WA8649090 and WA8649041 are germplasm lines developed and released by the U.S. Department of Agriculture Agricultural Research Service and registered in 1991. LC9979010 was developed by the single seed descent breeding method.

Morton was yield tested in eastern Washington and northern Idaho from 1999 to 2002. For the evaluations, **Morton** was compared to the most winter hardy parent, WA8649041, for yield and winter hardiness. When averaged over locations and three years of testing, **Morton** out yielded WA8649041 by 68%. When compared to spring planted lentils, **Morton** planted in the fall out yielded spring planted lentil varieties by 108% and the best yielding spring lentil variety by 73%. This advantage for a winter hardy variety is derived from crop establishment in the fall and early spring growth when evapo-transpiration demand is minimal thus improving water-use-efficiency. Seed size of **Morton** is small and 100 seeds weigh 3.3 grams. Seed coats of **Morton** are beige and the cotyledons are red.

Morton is recommended for fall planting directly into cereal stubble or with minimum tillage that retains most of the previous crop residue on the soil surface. **Morton** emerges in the fall and growth is curtailed by freezing winter temperatures. **Morton** resumes growth as temperatures

rise in late winter and early spring. Flowering commences in late May or early June and the plants and pods usually mature in late July. **Morton** has an upright plant growth habit that averages 31 cm (12.5 inches) tall. It is branched at the base and remains weakly upright at maturity.

Morton was named after Morton Swanson, a long time producer and supporter of the lentil industry in the Palouse region of eastern Washington and northern Idaho and a pioneer in the development and use of equipment for direct seeding into cereal stubble without tillage. The Washington State Crop Improvement Association will maintain breeder seed. Foundation seed will be available from the Washington State Crop Improvement Association, Washington State University, Pullman, Washington, 99164.

Release date for publicity purposes shall be effective on the date of final signature of the release notice.

Genetic material of this release will be deposited in the National Plant Germplasm System where it will be available for research purposes, including development and commercialization of new varieties/cultivars. The Agricultural Research Service of the United States Department of Agriculture will seek a Plant Variety Protection Certificate for **Morton** lentil.

It is requested that appropriate recognition be made if this germplasm contributes to the development of a new breeding line or cultivar.

Ralph P. Cavalieri
Director, Agricultural Research Center
Washington State University

January 12, 2004
Date

Director, Idaho Agricultural Experiment Station
University of Idaho

4/12/04
Date

Administrator, Agricultural Research Service
U.S. Department of Agriculture

5-12-04
Date