

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

and

AGRICULTURAL RESEARCH CENTER  
Washington State University  
Pullman, WA 99164

and

IDAHO AGRICULTURAL EXPERIMENT STATION  
University of Idaho  
Moscow, Idaho 83844

and

NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION  
North Dakota State University  
Fargo, ND 58105

#### NOTICE OF RELEASE OF 'SHASTA' LENTIL

The Agricultural Research Service of the United States Department of Agriculture announces the release and naming of a large yellow cotyledon lentil (*Lens culinaris* Medik.), 'SHASTA'. SHASTA was developed by the U.S. Department of Agriculture, Grain Legume Genetics and Physiology Research Unit at Pullman, Washington in cooperation with Washington State University Agricultural Research Center, University of Idaho Agricultural Experiment Station and North Dakota State University Agricultural Experiment Station. SHASTA, selection LC7601114YZ, originated as an F<sub>5</sub> selection from the cross of LC960027/3/PI345635/'Palouse'/'Brewer' (cross number X93L001) made by F.J. Muehlbauer (retired USDA-ARS Research Geneticist) in 1995. LC960027 is a single plant selection from the cultivar, Palouse. Palouse is a large-seeded yellow cotyledon cultivar derived from the cross, 'Laird'/'Precoz' and developed by F.J. Muehlbauer. PI 345635 is a plant introduction accession with yellow cotyledons and a green seed coat. 'Brewer' is large-seeded yellow cotyledon cultivar developed by F.J. Muehlbauer. SHASTA was selected in the field in 1997 as selection number LC7601114YZ.

SHASTA was yield tested in eastern Washington and northern Idaho for a total of 11 site-years from 1998 to 2007. When averaged over site years, SHASTA produced 1404 kg/ha. Seed size of SHASTA is slightly larger than 'Richlea' and averages 5.7 grams per 100 seeds. The seed coat of SHASTA lacks tannin in contrast to other lentil cultivars

resulting in the seeds having bright yellow coloration due to the cotyledon color showing through the relatively clear seed coat. The absence of seedcoat pigmentation gives this cultivar a unique characteristic with value in niche markets and is the primary reason for the release of **SHASTA**.

**SHASTA** flowers an average of 57 days after planting and matures in 103 days. Therefore, crop development is very similar to that of other lentil market classes and is similar in maturity to other zero-tannin breeding lines. It has an upright plant habit with an average vine length of 38 cm (15 inches) at peak flowering and 34 cm (14 inches) at maturity. **SHASTA** is branched at the base and remains somewhat upright at maturity with a plant height index (ratio of canopy height at maturity to total vine length) of 0.89.

Breeder seed will be maintained by the Washington State Crop Improvement Association. Foundation seed will be available from the Washington State Crop Improvement Association, Washington State University, Pullman, WA, 99164 and North Dakota Foundation Seedstocks, P.O. Box 5051, Fargo, ND 58105.

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. Plant variety protection will not be pursued for this cultivar.

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

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Director, Agricultural Research Center  
Washington State University

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Date

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Director, Idaho Agricultural Experiment Station  
University of Idaho

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Date

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Director, North Dakota Agricultural Experiment Station  
North Dakota State University

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Date

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

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Date