

REDCHIEF LENTIL

'REDCHIEF' lentil (*Lens culinaris* Medic.) (Reg. No. 2) was developed by the USDA-ARS, in cooperation with the Agriculture Research Center, Washington State University, Pullman, Wash. and the Agriculture Experiment Station, University of Idaho, Moscow, Idaho and released in 1980.

Redchief originated as an F₅ selection (RC 511) from a bulk population from a cross between PI 181886, an accession with large seeds and yellow cotyledons and PI 329171, an accession with small-seeds and red cotyledons. After the initial cross, progenies were advanced from F₁ to F₄ by bulking.

Selections were made in the F₅ for upright plant habit, large seeds, and red cotyledons. Redchief produced seed yields significantly larger than the other selections and commercial checks in yield trials from 1974 to 1976 at several locations in the Palouse region of eastern Washington and northern Idaho. In trials from 1976 to 1982, Redchief consistently yielded about 15% more than 'Chilean', the commercial cultivar that dominates production in the region. No serious disease or insect problems were observed on Redchief or on the other cultivars in field trials or commercial plantings.

Redchief is characterized by semi-upright stems that are about 32 to 42 cm long with leaves that have large leaflets. Plants are profusely branched and have strong root systems. Flowers are white with blue to pale-blue to pale-purple veins in the throat of the standard. Single, double, or triple flowers are borne on peduncles that originate from stem axes. Pods contain one or two seeds. Flowering and maturity dates are comparable to Chilean. Seeds are beige and are consistently 5.5 to 6.5 mm in diameter and 2.0 to 2.2 mm thick. One hundred seeds weigh about 6.5 g. Redchief has red cotyledons whereas the cotyledons of other commercial lentils produced in the Palouse region are yellow. The purpose of a red cotyledon lentil is to provide the industry with a cultivar that is bright red when decorticated (seedcoats removed) and suitable for packaging.

Redchief breeder seed stock will be maintained by the Washington State Crop Improvement Association, Pullman. Breeder seed and other seed stocks will be provided by Washington State Crop Improvement Assoc., P. O. Box 617, Yakima, WA 98901 under the supervision of the Washington Agric. Exp. Stn. and the USDA, Pullman, WA 99164.

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Reference and Notes

1. Research agronomist (retired), and research geneticist, USDA-ARS, respectively, Pullman, WA 99164. Registration by Crop Sci. Soc. of Am. Contribution from cooperative investigations of USDA-ARS and the College of Agric. Res. Ctr., Washington State Univ., Pullman, WA 99164. Scientific Paper no. 6453. Accepted 8 Apr. 1983.