

THE UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Washington, DC 20250

and

NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION
North Dakota State University
Fargo, ND 58108

NOTICE OF RELEASE OF TWO RUST RESISTANT CONFECTION SUNFLOWER
GERMPLASMS, HA-R10 and HA-R11


HA-R10 is a BC₃F₃-derived BC₃F₄ maintainer selection from the cross CONFSCLB1*4/HA-R2. CONFSCLB1 is a confection maintainer line released by USDA and the North Dakota Agricultural Experiment Station in 2006. HA-R2 (PI 650753) is an oilseed maintainer line resistant to rust (caused by *Puccinia helianthi* Schw.) and was released by USDA and the North Dakota Agricultural Experiment Station in 1985. The rust resistance gene in HA-R2 was named *R*₅ and mapped to linkage group 2 of Tang's sunflower SSR map. HA-R10 was developed by the backcross and pedigree breeding methods, with selection in each generation for rust resistance. The evaluation of rust resistance and DNA markers linked to the *R*₅ gene on HA-R10 indicates that this line is homozygous for *R*₅. Plant height of HA-R10 was 100 cm compared to 103 cm for CONFSCLB1 in the Fargo, ND, field nursery during the summer of 2012.

HA-R11 is a BC₄F₃-derived BC₄F₄ restorer selection from the cross CONFSCLR5*5/HA-R3. CONFSCLR5 is a confection restorer line released by USDA and the North Dakota Agricultural Experiment Station in 2006. HA-R3 (PI 650754) is an oilseed maintainer line resistant to rust and was released by USDA and the North Dakota Agricultural Experiment Station in 1985. The rust resistance gene in HA-R3 was named *R*₄ and mapped to linkage group 13 of Tang's sunflower SSR map. HA-R11 was developed by the backcross and pedigree breeding methods, with selection in each generation for rust resistance. The evaluation of rust resistance and DNA markers linked to the *R*₄ gene on HA-R11 indicates that this line is homozygous for *R*₄. Plant height of HA-R11 was 89 cm compared to 83 cm for CONFSCLR5 in the Fargo, ND, field nursery during the summer of 2012.

Small quantities of seed of each germplasm will be available from the North Dakota Foundation Seedstocks Project, NDSU Dept. 7670, P.O. Box 6050, Fargo, ND 58108-6050. Seed of these releases will be deposited in the National Plant Germplasm System, where it will be available for research purposes. U.S. Plant Variety Protection will not be requested for HA-R10 and HA-R11.

The release date for these germplasms will be on the date of final signature. It is requested that appropriate recognition be made if these germplasms contribute to the development of a new germplasm, breeding line, or cultivar. These germplasms were developed with support from a North Dakota Specialty Crop Block Grant.


Signatures:



Director, North Dakota Agricultural Experiment Station
North Dakota State University

12/2/13

Date



Deputy Administrator, Crop Production and Protection
Agricultural Research Service, U.S. Department of Agriculture

12/12/13

Date