

PI 574631 to 574637-continued

PI 574635 **origin:** United States. **cultivar:** PH5. **pedigree:** Resistant wild Helianthus accessions X HA 89. F1 plants resistant to all 4 North American rust races backcrossed to HA 89. BC1F1 resistant plants backcrossed to HA 89. Self-pollinated resistant BC2F1, BC2F2 and BC2F3 plants. **remarks:** Most plants single-headed and self-compatible. Plant height 1.5m. Seed either black or black with white stripes, 1,000 seed weight of 34g. 87.5% cultivated H. annuus and 12.5% wild Helianthus nuclear genes in HA 89 cytoplasm. BC2F4 generation has dominant resistance genes against each of the four predominant North American rust races with an approximate frequency of 66%. Spring Annual. Breeding Material. Seed.

PI 574636 **origin:** United States. **cultivar:** PH6. **pedigree:** Resistant wild Helianthus accessions X HA 89. F1 plants resistant to all 4 North American rust races backcrossed to HA 89. BC1F1 resistant plant backcrossed to HA 89. Self-pollinated resistant BC2F1, BC2F2 and BC2F3 plants. **remarks:** Most plants single-headed and self-compatible. Plant height 1.5m. Seeds either black or black with white stripes, 1,000 seed weight of 34g. 87.5% cultivated H. annuus and 12.5% wild Helianthus nuclear genes in HA 89 cytoplasm. BC2F4 generation has dominant resistance genes against each of the four predominant North American rust races with an approximate frequency of 66%. Spring Annual. Breeding Material. Seed.

PI 574637 **origin:** United States. **cultivar:** PH7. **pedigree:** Resistant wild Helianthus accessions X HA 89. F1 plants resistant to all 4 North American rust races backcrossed to HA 89. BC1F1 resistant plants backcrossed to HA 89. Self-pollinated resistant BC2F1, BC2F2 and BC2F3 plants. **remarks:** Most plants single-headed and self-compatible. Plant height 1.5m. Seeds either black or black with white stripes, 1,000 seed weight of 34g. 87.5% cultivated H. annuus and 12.5% wild Helianthus nuclear genes in HA 89 cytoplasm. BC2F4 has dominant resistance genes against each of the four predominant North American rust races with an approximate frequency of 66%. Spring Annual. Breeding Material. Seed.

PI 574638 to 574641. Helianthus annuus L. ASTERACEAE Sunflower

**Donated by:** Jan, C.C., USDA-ARS, Northern Crop Science Laboratory, Fargo, North Dakota 58105-5677, United States. Received December 03, 1993.