

origin: United States. **cultivar:** HARBIN. **pedigree:** Sport from a zigzag culm type (PI 70741) previously collected from the Plant Introduction Garden (now Plant Materials Center, USDA-SCS), Brooksville, Florida. **remarks:** Culms and branches yellow. Green stripes random, run length of internodes, depressed forming a rough multi-grooved surface, variable in width and number on each internode. Leaves typical green. Older culms sometime show a rich, red-brown color in sun-exposed areas. Perennial. Cultivar. Plant.

PI 546940 to 546949. *Humulus lupulus* L. CANNABACEAE Hops

Donated by: Haunold, A., Agricultural Research Service -- USDA, Oregon State University, Corvallis, Oregon, United States; and Oregon Agr. Exp. Sta.. **remarks:** Ten Hop Germplasm. Received January 31, 1991.

PI 546940 **origin:** United States. **origin institute:** Agricultural Research Service -- USDA, Oregon State University, Corvallis, Oregon 97331. **cultivar:** GP-18. **pedigree:** 21397 x 64035M (4x Hallertauer m.f. x Zattler Seedling). **other id:** GP-18. **source:** Crop Sci. 31(5):1392 1991. **group:** CSR-HOP. **remarks:** Maturity early. Maximum anthesis July 10. Resistant to hop downy mildew (*Pseudoperonospora humuli*). No *Verticillium* wilt observed. Free of ILAR viruses such as Prunus necrotic ringspot and apple mosaic. Shoots abundant, moderately coarse, erect, vigorous climbers. Produces abundant pollen over 2 week period. Leaves medium-sized, dark green, 3-5 lobed. Lobes moderately deep, pronounced ridges and sharp. Perennial. Breeding Material. Rhizome.

PI 546941 **origin:** United States. **origin institute:** Agricultural Research Service -- USDA, Oregon State University, Corvallis, Oregon 97331. **cultivar:** GP-19. **pedigree:** 21397 x 64035M (4x Hallertauer m.f. x Zattler Seedling). **other id:** GP-19. **source:** Crop Sci. 31(5):1392 1991. **group:** CSR-HOP. **remarks:** Maturity med. early. Maximum anthesis July 15. Resistant to hop downy mildew (*Pseudoperonospora humuli*). No *Verticillium* wilt observed. Free of ILAR viruses such as Prunus necrotic ringspot and apple mosaic. Shoots abundant, moderately coarse, erect, vigorous climbers. Produces abundant pollen over 2 week period. Leaves medium-sized, dark green, 3-5 lobed. Lobes moderately deep, pronounced ridges and sharp. Perennial. Breeding Material. Rhizome.