
Olympic was tested as selection W416-02 for 5 years near Prosser where it showed desirable agronomic characteristics, high yield potential and averaged 12% alpha acid content and 5% beta acid content. An average of 60% of the original alpha acid content remained in dried compressed hops following six months storage at room temperature. Selection W416-02 was evaluated for three years near Toppenish and Granger, Wash.; Corvallis, Ore.; and Wilder, Idaho. Cone samples harvested at the above locations had over 11% alpha acid content. A 4-ha commercial planting was established near Toppenish in 1980 and 1981. The 1981 production from the combined trial was 1120 kg/ha of hops with an average 15.5% alpha acid content. The 1982 production was 2780 kg/ha with an average 13.4% alpha acid content. At this production level Olympic produced 370 kg/ha of alpha acids. The apparent production potential of Olympic is 17% greater than the 1982 Washington hop production average. Olympic has consistently shown higher alpha acid content than Brewer’s Gold and ‘Bullion’ and superior alpha acid storage stability. Brewing evaluations of Olympic have been favorable.

Olympic has excellent spring regrowth and withstands frost. The numerous shoots are easy to train and they hold fast to the string. The foliation is medium and the laterals are medium in length giving a columnar to clavate growth form. Young leaves are light green and later marked with small yellow flecks. Some sterile male blooms are produced late in the season. Olympic is medium in maturity and it produces small, tight, compact cones that are evenly distributed on the upper half of the plant. The bracts are green and obovate; the bracteoles are yellow to light green and lanceolate. The hops are easily picked and cleaned. They settle less in the drying kiln than other cultivars and Olympic has little shatter and breakage of the hops during drying. Although small, the dense hops are heavy and have averaged 175 to 250 mg each. The lupulin is yellow and lupulin content is 20 to 25% of cone weight. The alpha acid homolog composition averages 60% humulone, 50% cohumulone, and 10% adhumulone. Oil content averages 1.5% of the dried hops. The composition of the major essential oils averages 72% myrcene, 6.7% caryophyllene and 6.5% humulene. Olympic is moderately resistant to hop downy mildew incited by *Pseudoperonospora humuli* Miy. et Tak., G.W. Wils. It is free of Prunus necrotic Ringspot Virus and Apple Mosaic Virus, but carries Hop Mosaic Virus and Apple Mosaic Virus, but carries Hop Mosaic Virus and American Hop Latent Virus (C.B. Skotland, Plant Pathologist, WSU, IAREC, Prosser, WA 99350). Although Olympic is susceptible to two-spotted spider mites and hop aphids, its moderately sparse foliation facilitates efficient coverage with acaricides and insecticides.

Planting stock of Olympic will be available through the Washington Hop Commission, 504 N. Naches Ave., Suite 5, Yakima, WA 98901. Olympic will be maintained by the Irrigated Agric. Res. and Ext. Ctr., Prosser, WA 99350, and by the USDA Northwest Plant Germplasm Repository, 35447 Peoria Road, Corvallis, OR 97331.

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References and Notes


REGISTRATION OF CROP CULTIVARS

REGISTRATION OF HYPY PYRETHRUM

‘HYPY’ pyrethrum (*Chrysanthemum cinerariaefolium* Vis) (Reg. no. 1) was developed and released by the University of Tasmania, Australia. It was tested under the experimental designation H80014.

Hypy is a clone selected from the population maintained under recurrent phenotypic selection for high pyrethrins content.

Hypy was selected in 1980 at the Horticultural Research Centre (HRC) because it contained 2.16% pyrethrins in the dry matter of the flowers; the average in the population at that stage being 1.44%.

Hypy was subsequently propagated vegetatively and 15 plants were established in the field and another 24 plants were grown in growth cabinets 3 weeks before onset of flowering at day/night temperature differential of 15/2, 20/12, 25/12 and 30/12°C for 10/14 h to simulate different growth conditions. The flower samples were collected at the proper stage (when three-quarters of the disc florets have opened, as the pyrethrins at this stage reach the maximum level) from both the field and growth cabinet grown plants and all the analyses, totaling 20, gave pyrethrins above 2.00%. In 1982-1983 Hypy was agronomically evaluated in a yield trial at three locations along with 15 other selected clones and two seed populations, BP (base population) and SP (selected population).

Hypy outyielded all the entries at all the three locations not only in pyrethrins (%) but also in the yield of flowers and pyrethrins per hectare (kg/ha). The average increase over BP and SP was, respectively, 57 and 38% in pyrethrins (%), 65 and 50% in flower yield, and 159 and 108% in pyrethrins yield. The clones, which represent an improvement over the seed populations, were also no better either individually or collectively over Hypy. Hypy outyielded the clones in pyrethrins (%), flower yield and pyrethrins yield by 26, 25, and 57%, respectively. Most of the clones and the seed populations lodged to varying degrees while Hypy demonstrated a very high degree of lodging resistance at all the test sites.

Lodging resistance with erect growing habit make this clone ideally suited for mechanical harvesting under Tasmanian conditions.

Hypy is, however, an asynchronous flowering clone, but that is not a serious disadvantage. Even at immature and over-mature stages when the pyrethrins are not generally at the peak level, Hypy recorded 1.83 and 1.74% pyrethrins, respectively. These levels were much higher than the maximum that is achievable in the seed populations.

Hypy is a medium-late maturing clone growing to an average height of about 71 cm. Hypy bears average sized flowers on shoots green in colour. The 100-flowers dry weight at the peak pyrethrins production stage is about 20g.

The original breeder stock of Hypy will be maintained by the Department of Agricultural Science, University of Tasmania, Australia. The clonal foundation planting stock has already been released to two commercial interests, who, under an agreement with the University, have the sole rights to this clone. Applications have also been filed to protect this clone in Australia and other overseas countries under the Plant Variety Rights/Patent Acts of the respective countries.

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