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University of Connecticut Plant Introductions[®]

Sidney Waxman

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***Larix laricina* 'Newport Beauty'**. An extremely dwarf form of eastern larch having an annual growth of 9 cm. This selection has grown to a height of 36 cm and a width of 69 cm in 10 years. Its shape is a low mound with branches reaching to the ground.

***Larix laricina* 'Deborah Waxman'**. In sharp contrast to 'Newport Beauty', 'Deborah Waxman' is an upright dwarf that has a more rapid rate of growth. It has attained a height of 1.5 m and a width of 1 m in 10 years. 'Deborah Waxman' a very attractive upright dense shrub.

***Pinus strobus* 'Sea Urchin'**. 'Sea Urchin' is a truly miniature shrub. It has very small needles, 3 cm long. After 10 years of growth it has developed into a low mound with a height of only 35 cm and a width of 55 cm. The foliage has a bluish-green appearance.

***Pinus strobus* 'UConn'**. This selection is relatively fast growing compared to other dwarf evergreens and is currently producing approximately 39 cm of stem growth annually. It has grown to a height of 3 m and has a diameter of 2.6 m in 12 years. It is the largest of the dwarf plants named. With time its form changes from pyramidal to flat-topped.

***Pinus strobus* 'Soft Touch'**. 'Soft Touch' is a dense mound. The needles are relatively short and thin and have a slight twist. It has grown 0.6 m high and 1.2 m across in 8 years.

***Pinus strobus* 'Paul Waxman'**. This cultivar was selected from a population of seedlings obtained from a witches'-broom plant in 1963. This dwarf specimen is unusual because it is more than twice as broad as tall. This low-growing broad mound is densely branched and has a fine texture. It measured, after 22 years, 1.5 m across and only 60 cm high. Its annual growth rate in width is approximately 5 cm.

***Pinus strobus* ‘Old Softie’.** A witches’-broom seedling that has grows 10 to 15 cm annually and, at the age of 27 years is 1.2 m high and 2.2 m wide. It has a soft green texture and is densely foliated and with cloud-like branching.

***Pinus strobus* ‘Sarah Rachel’.** This plant was selected from a group of dwarf witches’-broom seedlings. Its major attribute is its form. While most dwarfs are broader than tall ‘Sarah Rachel’ is taller than broad. Annual growth of ‘Sarah Rachel’ is approximately 13 cm.

***Pinus strobus* ‘Goldie’.** Another witches’-broom seedling. Its major attribute is its bright golden-yellow foliage. It is a dwarf shrub with dense branching. Its golden-yellow foliage is attractive and remains so throughout the growing season. It grows approximately 25 cm annually. After 12 years of growth it has reached a height of 1.6 m and width of 1.6 m. Propagation is by grafting.

***Pinus strobus* ‘Shaggy Dog’.** ‘Shaggy Dog’ is a low slightly elongated dwarf shrub with dense branching. This selection is unique because of its unusual branching habit. A slight bend (30°) downwards at the base of each shoot causes the branches to hang down on layers like the hair on a shaggy dog. Its needles are 5 cm long. Its annual growth is approximately 15.5 cm. It has attained a height of 1 m and a length of 2 m after 13 years from seed.

***Tsuga canadensis* ‘Howard Waxman’.** A hemlock selection with a dense multi-layered shrub form. Its branches are thick and form many depressions at various levels. After 15 years, ‘Howard Waxman’ is 120 cm wide and 70 cm high.

***Tsuga canadensis* ‘Florence’.** A low broad shrub that is almost 3 times as wide as high. It consists of many circular pockets of growth at various levels. These pockets are depressions formed by broad fan-shaped branches that radiate in all directions. The overall effect is a broad multi-layered shrub whose branch tips spread outward with a slight downward curve. After 20 years growth ‘Florence’ has grown 2 m wide and 70 cm high.

***Tsuga canadensis* ‘Cotton Candy’.** ‘Cotton Candy’ originated as a witches’-broom seedling whose growth rate is approximately 18 cm annually. Its form could be described as a truncated pyramid. It has grown to a height of 2.25 m and a width of 2.5 m in 18 years. It is symmetrical and very densely foliated by layered branches that radiate uniformly outward. ‘Cotton Candy’ is a rugged plant with thick branching. Because it is widest at its base, its lower branches are not likely to die off because of shading by the upper branches.

***Pinus strobus* ‘Connecticut Slate’.** This introduction originated not as a seedling, but as a graft taken from a witches’-broom plant found hanging high above a river near Putnam, Connecticut. It was selected for its unique color and for its unusual growth habit. Its foliage is a bright grayish-blue, and contrasts sharply with other white pines. Its form is indeed variable having densely tufted branches, which arise at chance locations. By no means is it symmetrical. After 11 years it has grown 1.3 m high and 1.8 m wide.

***Sciadopitys verticillata* ‘Cynthia Waxman’.** This umbrella pine selection has been evaluated over the years to determine if it would retain its narrow pyramidal form. Its strongest characteristics are, in addition to its shape, its dark green color and its very dense foliage. This selection retains its good color throughout the

winter months. Its glossy needles are curved and are dark green. Another feature is its branch and needle configuration. Most umbrella pines are somewhat loosely branched with both their stems and needles visible. 'Cynthia Waxman' has shorter stems and is more densely branched. As a result, you see a solid barrier of needles while the stems are hidden. Its annual growth rate is approximately 9 to 10 cm compared to other umbrella pines nearby whose growth rates are 11 to 14 cm. At 22 years it is 3 m tall and 1.5 m wide at the base in contrast to a tree close by and planted at the same time, which is 15.5 ft tall and 11 ft wide at the base. Overall, 'Cynthia Waxman' is a slow-growing umbrella pine with glossy dark green foliage and is perfectly pyramidal

***Pinus densiflora* 'Vibrant'**. A witches'-broom seedling that is a low irregular mound 60 m tall and 2.5 m wide. Its foliage is very bright yellow-green and its needles are 2 cm long. Its annual growth is approximately 5 cm. 'Vibrant' offers a bright contrast when planted among other conifers.

Commercially Available Organic Mulches as a Weed Barrier for Container Production[®]

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INTRODUCTION

For many Canadian nurseries, weed control can be a very time-consuming and costly process. Unlike the United States of America, Canada has limited access to effective chemical herbicides (Chong, 2003; Chong et al., 1989; Chong, 2003). Herbicide phytotoxicity and surface water and ground water contamination issues have renewed interest in nonchemical methods such as weed barriers (Mervosh, 1999). Growers are constantly striving to find nonchemical methods of weed control that reduce the frequency of hand weeding in our container nurseries (Calkins, et al. 1996; Chong, 2003; Chong et al., 1989; Mervosh and Abbey. 1999; Mathers, 2003). Over the past decade, mulch has increased in popularity for weed suppression in the landscape industry (Borland, 1990). Organic mulches such as wood chips and bark are attractive and effective methods of weed suppression when applied properly (Mervosh, 1999). Studies have shown that hardwood chips and pine bark mulches are effective weed barriers in container production (Calkins, et al. 1996; Mervosh and Abbey. 1999). Our research was initiated to determine the efficacy of various organic weed control barriers that are available for Ontario growers. Costs of application, materials, and supplemental hand weeding also plays an important role in selecting the most appropriate weed-control strategy.