

Hoop Houses are the NOT the same as Greenhouses, since they are designed and constructed for an entirely different purpose on Ontario farms

Greenhouses (GH)



Hoop Houses (HH)



Definitions	Structure used to <u>cultivate</u> or <u>grow</u> floral, vegetable or other horticultural produce in a climatically controlled environment & made primarily of translucent building material, usually plastic or glass (<i>Pelham ZBL</i>)	Structure used to <u>protect</u> perennial plants, shrubs, trees & keep them dormant in an uncontrolled environment, made of small, bent steel tube framing, grower-installed & manually-pounded steel tubing in ground, covered with one layer plastic sheeting (<i>PGGG definition</i>)
Purpose	Designed to <u>encourage growth</u> of annual plants, or perennial plants, shrubs & trees in an optimum environment of light, humidity, nutrients & insect control. Require engineered, stamped building plans	Designed to <u>discourage growth</u> of perennial plants, shrubs, trees & keep them <u>dormant</u> while protecting them from winter cold injury, drying out, wind, nibbling animals and other pests. Have never had any engineering plans
Cost	\$25–\$50/ft ² (\$270–\$540/m ²) contractor installed (materials, labour & climate control equipment)	\$1.25/ft ² (\$13.50/m ²), grower installed (materials & labour)...4 man-days to install one; 2 man-days to dismantle

Installation	<u>Contractor-installed</u> with specialized equipment, knowledge & training	<u>Grower-installed</u> with simple equipment, knowledge & training
Connectivity	<u>Connected</u> at eavestroughs so rain & snow is collected; structures can be > 1,000,000 ft ² in floor area (100,000 m ²)	<u>Not connected</u> , so rain & snow is shed; HH are ≈ 10 ft (3 m) apart lengthwise & rarely are > 10,000 ft ² (1,000 m ²) in ground area
Frames & Footings	<u>Structural</u> , 3–5 in. (75–125 mm) round or rectangular steel posts anchored in the ground <u>below frost</u> on concrete piers & often have internal trusses and/or welded/bolted components.	<u>Non-structural</u> , 2 in. (50 mm) round steel tubing bent into hoops, bolted to 2.6 ft (80 cm) pipes manually-pounded vertically in ground, no concrete piers; <u>not below frost</u> so will shift up & down
Dimensions	Width: Narrow GH connected to others Length: 100s of feet long Wall height: 10–30 ⁺ ft (3–10 ⁺ m) Peak height: 15–40 ⁺ ft (4–12 ⁺ m)	Width: Up to ≈ 21 ft (6.4 m) Length: Up to ≈ 500 ft (152 m), limited by effectiveness of natural ventilation from doors at either end of HH Wall height: Up to ≈ 3 ft (1 m) Peak height: Up to ≈ 8 ft (2.4 m)
Use Period	One to four seasons each year	Two seasons, late fall to early spring, depending on crop & weather conditions
Inside Air Temperature	20°C, or higher	Follows, but usually slightly above outside air temperature.
Cladding	Double layer, UV-treated, clear plastic (to <u>encourage</u> growth) lasts ≈ 5 years. Polycarbonate, acrylic, glass glazing too	Single layer, non-UV-treated, single use, 75% white plastic (to <u>discourage</u> plant growth) lasting 2-6 months
Floor	Concrete, or cloth on compacted stone	Fabric on topsoil or compacted stone
Services	Electrical, heat, cooling, CO ₂ , internet, control systems & irrigation	Very simple, or no services at all
Inside Climate Management	Mechanically-controlled using many variables; indoor & outdoor air temps, humidity, light intensity, wind speed & direction, CO ₂ , electric assimilation lighting or photo periodic lighting	Manually-controlled by opening doors either end of HH & by slitting open the single layer of plastic in spring to prevent ‘cooking’ of plant material before the plastic is ultimately removed for the year
Workers	Every day inside, low human occupancy	Seldom inside, ≈ 3 X/week to inspect
Exemption From RST	GH building materials qualify for exemption from Retail Sales Tax (2006)	HH building materials qualify for exemption from Retail Sales Tax (2006) if only used for dormant crops, not heated, not for growing plants, sealed up for winter, not fan-ventilated & not assessed property taxes
Property Tax	<u>Always</u> assessed by any Municipality	<u>Never</u> assessed by any Municipality
Building Permit	<u>Always</u> required by any Municipality	<u>Never</u> required by any Municipality