


Lyis: *Castanea mollissima* Soft Chestnut

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 LyisForestry

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1 Introduction to *Castanea mollissima* (Chinese Chestnut / Soft Chestnut)

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1.1 Description of the Plant

Castanea mollissima marketed in Canada as ****Soft Chestnut**** for its thin, easy to peel shells and tender kernels is a medium sized deciduous tree (1218 m) with a broad crown.

1.2 Historical and Cultural Context

Cultivated in China for over two millennia, the species spread along Silk Road trade

routes and ultimately reached North America in the early 1900 s. Crucially, Chinese chestnut carries ****strong genetic resistance to chestnut blight (*Cryphonectria parasitica*)****, the fungal disease that devastated North Americas native American chestnut. Because of this resistance, **Chinese/Soft chestnuts are presently the only reliable edible chestnut that can be grown at scale in Canada.** They anchor modern blight resistant breeding programs and serve as hardy, productive orchard trees for cold climates.

1.3 Edible, Medicinal, and Useful Properties

1.3 Edible: Nuts are 50 % carbohydrate, 5 % protein, and low fat (< 5%). High in vitamin C and manganese, they have a mildly sweet, chestnut honey flavour.

- Roast whole at 200 °C for 20 min after scoring shells.
- Grind dried kernels into gluten free flour for cakes, crêpes, or thickening stews.
- Simmer peeled nuts in plant milk, purée, and sweeten with maple syrup for chestnut cream.

Medicinal/Utility: In Traditional Chinese Medicine, inner bark teas were used to soothe coughs. Leaves contain tannins suitable for natural dye baths (soft yellowbrown). Timber is rot resistant,

medium density, and excellent for outdoor carpentry, fencing, and furniture.







Ecology: The tree supports pollinators with pollenrich catkins and offers habitat and mast for wildlife such as wild turkeys, squirrels, and deer.

2 Planting Outdoors

1. **Site Selection** Full sun; welldrained loam or sandyloam, pH 5.5-6.5. Avoid heavy clay or waterlogged ground.
2. **Spacing** 8 m between trees ($\approx 150 \text{ m}^2$ per mature crown) for orchard layouts.

3 Pollination

Chinese Chestnut (*Castanea mollissima*) Pollination & Fruiting Guide

Trees Planted	Pollination Reliability	Expected Yield	Years to First Crop
1	 Very poor (0–10%)	Almost none	7–10 years
2	 Moderate (50–60%)	Light crop	7–10 years
3	 Good (75–85%)	Medium crop	7–10 years
4	 Very good (90–95%)	Strong crop	7–10 years
5+	  Excellent (98–99%)	Full crop potential	7–10 years

Notes:

- Chinese chestnuts are **self-incompatible** and mostly **wind-pollinated**, so they require at least **one unrelated tree nearby** to produce nuts.
- Seedlings from diverse sources (like these) are ideal for **cross-pollination and genetic resilience**.
- Trees are **cold-hardy, blight-resistant**, and perfect for long-term nut production in southern Ontario.
- Spacing: **7–10 m apart** for mature trees in an orchard or food forest setting.
- Excellent for **wildlife habitat, shade, and long-term food security**.

4 Ongoing Plant Care

1. **Watering** 20 L weekly during first two summers; mature trees tolerate brief droughts but crop best with 25 mm rain equivalent per week in mid-summer.
2. **Mulching** 8 cm woodchip ring (keep

10 cm clear of trunk) to conserve moisture and suppress weeds.

3. **Fertilisation** Each spring broadcast 150 g balanced organic fertiliser per trunk diameter cm; excess nitrogen reduces flavour.
4. **Pruning** Train central leader for first

4 years; thereafter thin crowded interior branches in winter to boost light and airflow.

5. **Pest/Disease** Monitor for chestnut weevil; collect and heattreat dropped nuts at 49 řC for 30 min, or encourage poultry to glean fallen burs.

5 Harvesting and Storage

- **Harvest Time** Nuts drop free of burs SeptOct; rake daily to deter rodents.
- **Processing** Remove burs with leather gloves; cure nuts 7 days at 1518 řC, 60 % RH to sweeten starches.
- **Storage** Refrigerate in breathable bags 02 řC, 85 % RH up to 3 months; or freeze peeled kernels for yearround use.

6 Propagation

- **Seed** Sow fresh stratified nuts 5 cm deep in seedbeds protected from rodents; 5070 % germination.
- **Grafting** Whipandtongue scion grafts onto 1year seedlings in late spring for named cultivars.

7 Recipes and Uses

Classic Roasted Chestnuts: Score shells, soak 10 min, roast at 200 řC for 20 min, peel while warm.

PressureCooked Chestnuts: Score shells, place on a trivet with 2.5 cm water, cook at **high pressure 10 min**, allow *natural release* 10 min. Peelthe skins slip off easily while hot.

ChestnutPumpkin Soup: Simmer 250 g peeled chestnuts with 500 g pumpkin, 1 L vegetable stock, sage, and salt; blend until velvety.

Chestnut Flour Pancakes: Mix 150 mL chestnut flour, 150 mL light spelt flour, 5 mL baking powder, 1 egg, 250 mL oat milk; griddle until golden.

8 Summary

Blightresistant ****Soft Chestnuts**** thrive where American chestnut cannot, making them ****the premier edible chestnut for Canadian orchards and food forests****. Plant a pair for dependable autumn harvests, wildlife support, and rotresistant timber that will serve generations.