



Wisconsin Fast Plants™

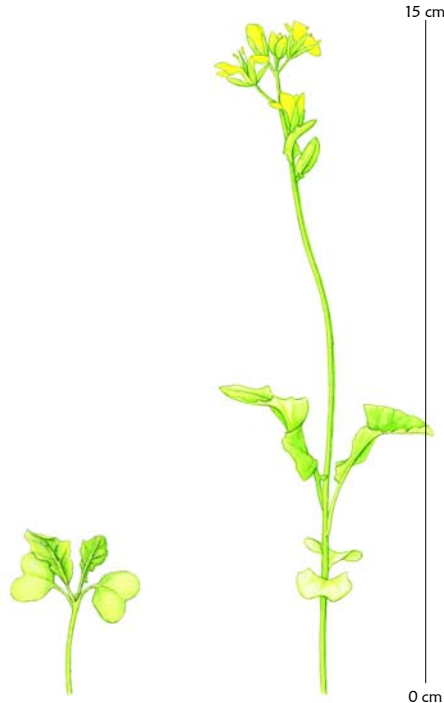
Seed Stock Profile

Non-Purple Stem, Yellow-Green Leaf

Two single, recessive traits:
anl/anl and *ygr/ygr*

This stock has two recessive mutant traits: non-purple stem and yellow-green leaf. The plants do not express any purple pigment (anthocyanin), and the plants appear a clear, yellow-green color. By comparison, Standard Wisconsin Fast Plants™ are a deeper, more intense green, with purple undertones on the hypocotyls, stems, leaf tips, and hydathodes.

Both phenotypes are conditioned by a single, recessive gene (*anl* and *ygr*). In the homozygous, recessive condition (*anl/anl, ygr/ygr*), the plants appear to be a clear, yellow-green color.



7-day-old plant
Non-Purple,
Yellow-Green
(*anl/anl, ygr/ygr*)

15-day-old plant
Non-Purple,
Yellow-Green
(*anl/anl, ygr/ygr*)

Growing Tips

- 24-hour fluorescent light, water, and fertilizer are essential for Wisconsin Fast Plants™. Refer to *Growing Instructions* for more details.
- Prior experience growing Standard Wisconsin Fast Plants™ is useful for comparison with Non-Purple Stem, Yellow-Green Leaf plants.

Length of life cycle: 35-45 days
Days to flowering: 15
Average plant height at day 15: 15 cm

Plant Color and Seed Production

Objective: To explore the effect of yellow-green leaf color on seed production in Wisconsin Fast Plants™

Time Required: 40-45 days (Most days require little or no activity.)

Extra Seed Needed: Seeds of Standard Wisconsin Fast Plants™

Procedure:

1. Predict if the yellow-green leaf color has an effect on seed production.
2. Think about what you are going to measure.
Ideas: number of seeds per plant, size of seeds, color of seeds, germination rates of seeds.
3. Plant several seeds of Wisconsin Fast Plants™ (both Non-Purple Stem, Yellow-Green Leaf and Standard) following the *Growing Instructions*. Tend the plants throughout their life cycle. Pollinate on days 15-17, then terminate any unpollinated buds that appear after day 17.
4. When the plants are brown and crispy, harvest the seeds (days 35-45).
5. Observe the seeds, and record the appropriate measurements.
6. How did the seeds produced by Non-Purple Stem, Yellow-Green plants compare to Standard plants? Describe your observations.



CAROLINA®

Wisconsin Fast Plants™ Seed Stocks Available:
Standard • Purple Stem, Hairy • Non-Purple Stem, Hairless
Non-purple Stem, Yellow-Green Leaf • Yellow-Green Leaf • Petite
Rosette-Dwarf • Tall Plant • Variegated • F₁ and F₂ Genetic Stocks

To order Wisconsin Fast Plants™ materials and seeds:
Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215 1-800-334-5551
Ordering info: www.carolina.com/fastplants Activity ideas: www.fastplants.org