

# GENETICS: WISCONSIN FAST PLANTS



## **S13.1 Wisconsin Fast Plants Standard Brassica rapa Seed**

Brassica rapa (Wisconsin Fast Plants®), Stock Seed Name: Standard (improved Basic, Rbr) - Standard for form and performance; flowers in 13 to 17 days; variable for expression of purple pigment in stems.

**Main Uses:** Life cycles, environmental science, botany, comparative morphology, physiology.

**Genetic Designation:** Rbr

Wisconsin Fast Plants® (scientific name: Brassica rapa) are rapid-cycling brassicas. They are members of the crucifer family of plants, closely related to cabbage, turnips, broccoli and other cruciferous vegetables. Fast Plants® today require little more attention than continuous fluorescent light, water, and fertilizer.

Teachers & Learners find the excitement of growing a real, living plant is irresistible. Fast Plants® change visibly every single day, right in front of your eyes. In two short weeks, the tiny seeds will sprout, grow, and bloom. In just over a month, learners can plant seeds, tend plants, pollinate flowers, and harvest new seeds.



## **S13.15 Wisconsin Fast Plants Purple Stem, Hairy (High Anthocyanin Expression, Hairy), Seeds**

Brassica rapa (Wisconsin Fast Plants®), Stock Seed Name: Purple Stem Hairy (High Anthocyanin Expression, Hairy) - Dominant expression of purple pigment in stems (also in petioles and bud tips); also selected for higher than usual number of leaf hairs; a quantitative trait.

**Main Uses:** Genetic studies of purple pigment (anthocyanin) production and expression in crosses with Non-Purple Stem mutant (anl); study inheritance of leaf hairs.

**Genetic Designation:** ANL, Hir (5-8)

Dominant expression of purple pigment in stems (also in petioles and bud tips); also selected for higher than usual number of leaf hairs; a quantitative trait.



## **S13.2 Wisconsin Fast Plants Rosette-Dwarf (Rosette), Seeds**

Brassica rapa (Wisconsin Fast Plants), Rosette-Dwarf Seed -Recessive gene; gibberellin-deficient mutant; compact due to shortened internodes; attains normal height after application of 100-ppm gibberellic acid; flowers in 18 days.

**Main Uses:** Genetics, Physiology.

**Genetic Designation:** ros



### **S13.3 Wisconsin Fast Plants Yellow-Green Leaf (Yellow-Green), Seeds**

*Brassica rapa* (Wisconsin Fast Plants®), Yellow-Green Leaf Seed -Recessive; leaves yellow-green; purple pigment in stems.

**Main Uses:** Genetics, Photosynthesis study.

**Genetic Designation:** Ygr



### **S13.5 Wisconsin Fast Plants Non-Purple Stem, Hairless (Anthocyaninless, Hairless), Seeds**

Wisconsin Fast Plants® Non-Purple Stem, Hairless (Anthocyaninless, Hairless) - Recessive gene blocks the expression of purple pigment; also selected for few or no leaf hairs, thought to be recessive.

**Main uses:** Genetic studies of purple pigment (anthocyanin) production and expression in crosses with Non-Purple Stem mutant (anl); study inheritance of leaf hairs.

**Genetic Designation:** (anl), Hir (5-8).



### **S13.6 Wisconsin Fast Plants Non-Purple Stem, Yellow-Green Leaf (Anthocyaninless, Yellow-Green), Seeds**

Wisconsin Fast Plants® Non-Purple Stem, Yellow-Green Leaf (Anthocyaninless, Yellow-Green) - Double recessive mutant, with yellow-green leaves; no purple pigment expressed in plant.

**Main Uses:** Genetics, Photosynthesis.

**Genetic Designation:** anl, ygr



### **S13.7 Wisconsin Fast Plants F1 Non-Purple Stem, Hairless (F1 Anthocyaninless, Hairless), Seeds**

*Brassica rapa* (Wisconsin Fast Plants®), F1 Hairless Non-Purple Stem - (F1 Anthocyaninless, Hairless) - F1 seed from cross of Non-Purple Stem, Hairless [anl, Hir (0-1)] × Purple Stem, Hairy [ANL, Hir (5-8)]; F1 has dark leaves and purple in stems; leaf hairs intermediate.

**Main Uses:** Monohybrid genetics; quantitative genetics.

**Genetic Designation:** anl/ANL, Hir (0-1), Hir (5-8)



### **S13.8 Wisconsin Fast Plants F1 Non-Purple Stem, Yellow-Green Leaf (F1 Anthocyaninless, Yellow-Green), Seeds**

*Brassica rapa* (Wisconsin Fast Plants), F1 Non-Purple Stem Yellow-Green Leaf - F1 seed from cross of Non-Purple Stem, Yellow-Green Leaf (anl/ygr) × Purple Stem (ANL/YGR); F1 has dark green leaves and purple pigment.

**Main Uses:** Dihybrid genetics.

**Genetic Designation:** anl/ANL, ygr/YGR.



## Wisconsin Fast Plants® F1 and F2 Stocks

- Representatives available for monohybrid and dihybrid genetics
- Saves Time!
- Variety of mutant selections for a broader understanding of inheritance

### Don't have time to carry a cross from the parental generation?

We've got you covered with both F1 and F2 generations of Wisconsin Fast Plants® seed. F1 generation seed will express dominant traits (purple stems, dark green leaves, standard height) and can be used to produce the F2 seed that will show the typical monohybrid (3:1) or dihybrid (9:3:3:1) phenotypic ratios. F2 seed will express the appropriate phenotypic ratios.

**The result:** More genetic concepts learned in less time!