



Plant Genetics

Genetic Corn

Kits & Sets

Why is corn an excellent choice for introducing students to Mendelian inheritance? To start with, Carolina does the crosses and supplies F₂ ears of corn, so you can literally do an instant genetics lab. There are numerous contrasting phenotypes expressed in corn kernels (corn seed). These phenotypes are easy to recognize, and even beginners can score them with confidence.



- The large number of kernels on each corn ear from Carolina gives a close approximation of the theoretical ratio.
- Seed are still in their natural unit, for a convincing demonstration of Mendelian genetics.
- The big visual difference in phenotypes makes recognition and seed-counting easy.
- Ears are lacquer-treated to improve appearance and increase durability.

Carolina BioKits®: Corn Dihybrid Genetics Cross over to better understanding

- Complete kit that introduces dihybrid inheritance
- High-quality corn ears last for years
- Reusable kit elements

With this kit, students learn the basic principles of dihybrid inheritance and independent assortment using corn. Students first observe how traits of kernel color and nutrient composition pass from 1 generation to the next. Then they construct a hypothesis describing the mode of inheritance for each trait. This kit is designed for 30 students working cooperatively in pairs.



Kit includes:
15 Segregating Ears (Purple:Yellow Starchy:Sweet)
15 Corn Cross Cards
15 Transparency Markers
Plastic Storage Container
Teacher's Manual and Reproducible Student Guide

176380 Per kit **\$153.95**

Customer Review

"This is a very useful product—the corn provided a basis for a good lab on dihybrid crosses. I used the kit with an advanced biology class, it was easy to use, and the students learned a lot from the hands-on experience."

High School Biology Teacher

Mendelian Genetics of Corn Kit Learning more about genetics

Intermediate—Easy to perform; requires some background knowledge.

For up to 32 students working in groups of 4. Designed for advanced high school classes or introductory college-level classes, this genetics lab covers all the basics of Mendelian genetics in 1 easy-to-use kit. Topics include segregation and the independent assortment of alleles, dominance, genotype and phenotype, expected ratios, monohybrid and dihybrid crosses, and chi-square.

Kit includes:
8 Segregating Ears (Purple:Yellow)
8 Corn Parental Cross Cards A
8 Segregating Ears (Starchy:Sweet)
16 Transparency Markers
8 Segregating Ears (Purple:Yellow Starchy:Sweet)
8 Corn Parental Cross Cards B
Storage Box
Teacher's Manual

176360 Per kit **\$187.95**



Monohybrid Genetics with Corn Kit

Beginning—Easy to perform; requires little or no prior knowledge.

For up to 32 students working in pairs. This is an introductory genetics activity for a beginning high school or middle school biology course. Students study the inheritance of grain color using ears of corn. Each grain is the F₂ of a cross between a homozygous purple corn and a homozygous yellow corn. Covers the basics of Mendelian genetics including the inheritance of a single pair of alleles, one of which is dominant and the other recessive. Students score phenotypes of the F₂ and compare their data to their predictions.

Kit includes:
16 Segregating Ears (purple:yellow)
2 Teacher Transparencies
32 Transparency Markers
Storage Box
Teacher's Manual

176362 Per kit **\$142.95**



Corn Genetics Set

Demonstrates 1- and 2-factor crosses with aleurone color (*R*) and endosperm character (*Su*).

Set includes:
3 Parent Ears
3 *R* and *Su* Alleles 1:1:1:1
(item #176602)
3 *R* Color Alleles 3:1 (item #176500)
3 *R* Color Alleles 1:1 (item #176502)
3 *R* and *Su* Alleles 9:3:3:1
(item #176600)

176321 Per set **\$124.95**



176321 Corn Genetics Set



Parent Corn Ears

Parent Ears

Ears showing parent phenotypes are available for some of the hybrid ears we list.

- 176400** Purple Starchy Each **\$12.50**
- 176450** Yellow Starchy Each **\$12.50**
- 176460** Yellow Sweet Each **\$12.50**



176400 Purple Starchy



176450 Yellow Starchy



176460 Yellow Sweet

Segregating Corn Ears



R Color Alleles 3:1

- Shows relationship between genotypes and phenotypes
- Perfect for demonstrations
- May be used as a refill for Mendelian Genetics of Corn Kit (item #176360) and Monohybrid Genetics with Corn Kit (item #176362)

What's the fastest way to explain the relationship between genotypes and phenotypes? Use this 1 ear of corn. Purple:Yellow. An F_2 ear resulting from a P_1 generation having the genotypes R/R and r/r .

176500 Per ear **\$10.95**



R and Su Alleles 9:3:3:1

Discovering dihybrids

- Appropriate for teacher demos
- May be used as a refill for Mendelian Genetics of Corn Kit (item #176360)
- For studying dihybrid inheritance

With this corn ear, it's easy to show your students inheritance patterns for organisms that differ in 2 traits. Purple Starchy:Purple Sweet:Yellow Starchy:Yellow Sweet. An F_2 ear resulting from a P_1 generation having the genotypes $R/R Su/Su$ and $r/r su/su$.

176600 Per ear **\$10.95**



R Color Alleles 1:1

Purple:Yellow. The result of testcrossing the F_1 hybrid with the recessive parent ($R/r \times r/r$).

176502 Per ear **\$10.95**



Su Endosperm Alleles 3:1

Starchy:Sweet. An F_2 ear from a cross between a starchy (Su/Su) and a sweet (su/su) parent. The sweet seed are wrinkled and the starchy seed are smooth.

176540 Per ear **\$10.95**



Wx Endosperm Alleles 3:1

Starchy:Waxy. Demonstrates segregation of the recessive endosperm character, waxy. Iodine solution (item #177020) is used to distinguish the phenotypes.

176550 Per ear **\$10.95**



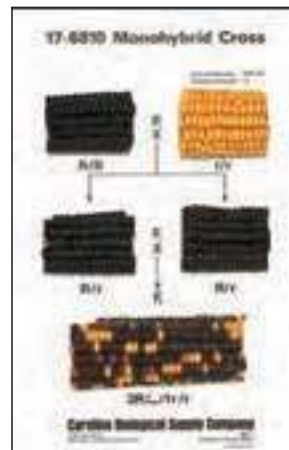
R and Su Alleles 1:1:1:1

Purple Starchy:Purple Sweet:Yellow Starchy:Yellow Sweet. The result of testcrossing the F_1 hybrid with the recessive parent ($R/r Su/su \times r/r su/su$).

176602 Per ear **\$10.95**

Corn Mounts

Corn mounts show diagrammatically the sequence of events that leads to the hybrid ear. Sections showing the phenotypes of each generation are presented and each genotype is printed below the specimen.



176810 Monohybrid Cross

Monohybrid Cross

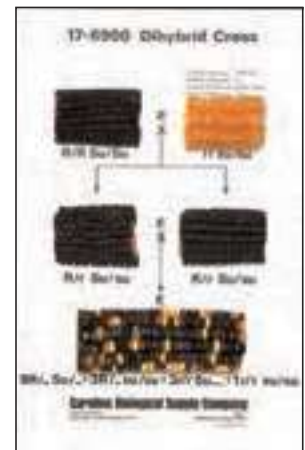
R Alleles. Demonstrates segregation of aleurone color ($R/R \times r/r$).

176810 Each **\$29.95**

Dihybrid Cross

R and Su Alleles. Demonstrates independent segregation of aleurone color and endosperm texture ($R/R Su \times r/r su/su$).

176900 Each **\$29.95**



176900 Dihybrid Cross