

## Maintaining Our Yield

### Plant Chart

Plant 1


$$G + E = P$$

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Plant 2


\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Plant 3


\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Plant 4


\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Plant 5


\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

Choose the two plants with the highest P value to cross.

#### Reflection

1. Are there any plants with the desirable traits (have all 10 alleles)?
2. How does chance play a role in the simulation? In plant breeding?

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## Maintaining Our Yield

### F1 generation

Plant 1

$$G + E = P$$

1 2 3 4 5


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

Plant 2

1 2 3 4 5


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

Plant 3

1 2 3 4 5


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

Plant 4

1 2 3 4 5


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

Plant 5

1 2 3 4 5


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

### Reflection

1. Did you find a plant with the 10 alleles for the favorable traits?
2. If not, what is your next step?

## Maintaining Our Yield

### F2 Generation

Plant 1

$$G + E = P$$

1 2 3 4 5


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

Plant 2

1 2 3 4 5


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

Plant 3

1 2 3 4 5


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

Plant 4

1 2 3 4 5


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

Plant 5

1 2 3 4 5


$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$