Plant breeders use PGR by evaluating plants for traits of interest, selecting the best, and crossing them to adapted varieties.

PGR are crucial for adapting crops to changing climates, combating new strains of diseases and insects, and developing healthier foods:

- Evolving threats from insects and diseases
- Declining land and water availability
- Increased demand from a growing human population
- Changing temperatures and rainfall patterns

Plant breeders use PGR to develop improved varieties that are:

- Insect Resistant
  - Wheat varieties resistant to the Russian wheat aphid incorporate resistance genes from a variety developed in Turkmenistan.

- Higher Yielding
  - Sunflowers with higher seed yield have been developed from several U.S. wild sunflower species. Traits that enabled production of higher yielding hybrid cultivars were obtained from wild sunflowers.

- Disease Resistant
  - Resistance to a devastating fungal disease (late blight of tomato) was found in a wild tomato relative collected in Peru. This trait has been used in several commercial varieties.

- More Nutritious
  - Crop wild relative *Malus sieversii* is used in breeding red fleshed apples. These apples offer improved nutrition and provide a pink blush to hard ciders.