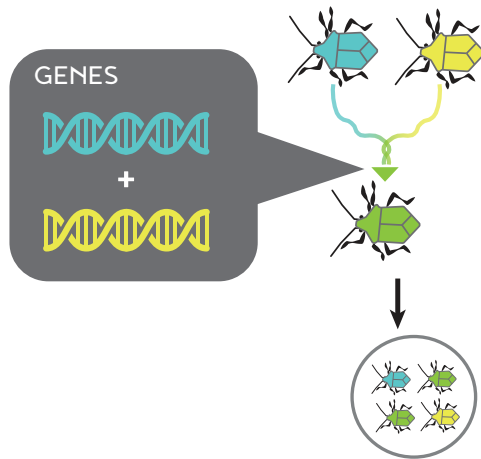


# WHAT IS GENE DRIVE?

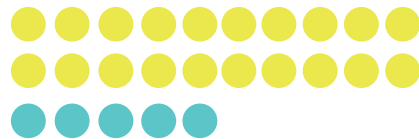
**Gene drive** is a method that enhances the inheritance of a modified [or preferred] trait in a specific species. The **goal** of the genetic modification may be to replace or reduce a pest population or to increase the prevalence of desirable traits in a beneficial species like silkworms or honey bees.

 = 2 blue genes (modified)     = 2 yellow genes     = 1 yellow gene + 1 blue gene

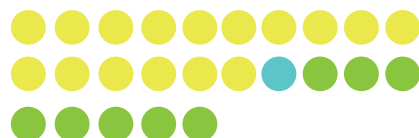
## NORMAL INHERITANCE



Insects in Wild Population

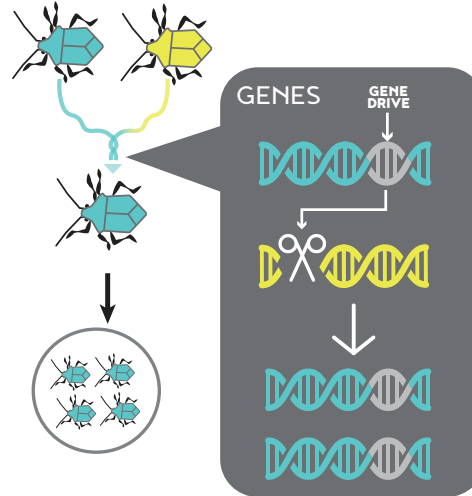


New Insects Introduced

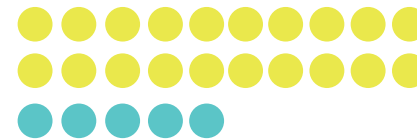


Insect populations over many generations

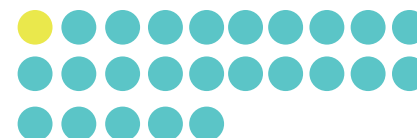
## GENE DRIVE INHERITANCE



Insects in Wild Population



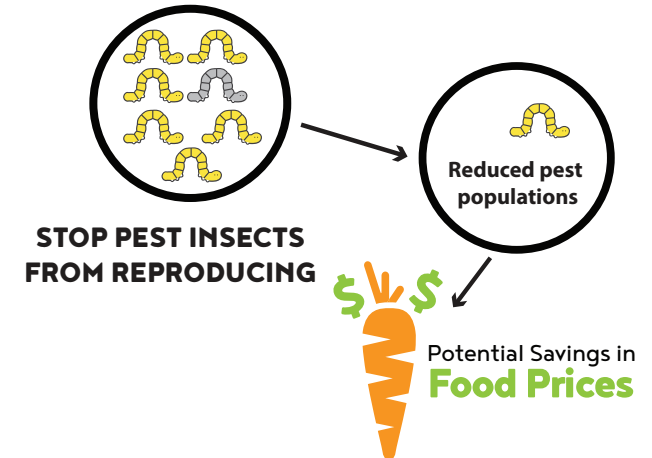
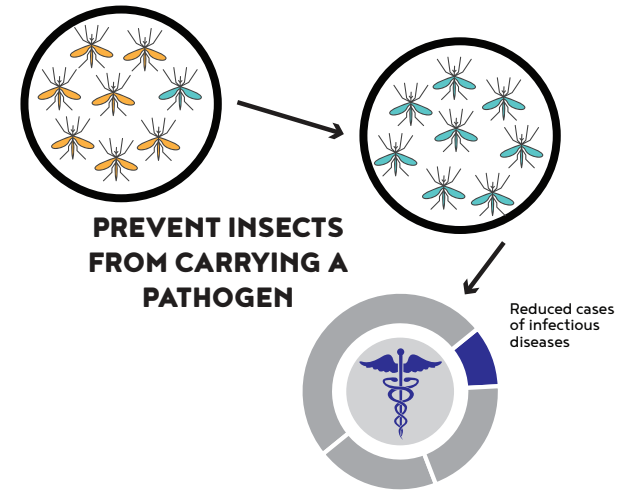
Gene Drive Insects Introduced



Insect populations over many generations

## APPLICATIONS

Gene drive could be used to:



The Entomological Society of America is the largest organization in the world serving the needs of entomologists and other insect scientists. ESA stands as a resource for policymakers and the general public who seek to understand the importance and diversity of earth's most diverse lifeform—insects. Learn more at [www.entsoc.org](http://www.entsoc.org).