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Genetic Control Insect - Gene Drive Technology (Mosquitoes and Grasshoppers)

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Genetic control measures (GPM) include releasing modified insect repellent versions to interact with wild insects in the target area. Proposed for the use of various applications for public health, agriculture and conservation, great progress has been made with insects.

They are:
Mechanical methods of pest control.
Chemical methods of pest control.
Traditional methods of pest control.
Biological methods of pest control.
Fog and heat treatment methods for pest control.
Pest control methods.

Many pests in the agro-ecosystem are considered to be the world's largest pests that cause significant economic damage. For example, the pink bollworm is Pectinophora gossypiella. (Saunders), a cotton expert, originated in Asia and spread to the Americas, Australasia and Africa in the 20th century (Naranjo et al., 2002).

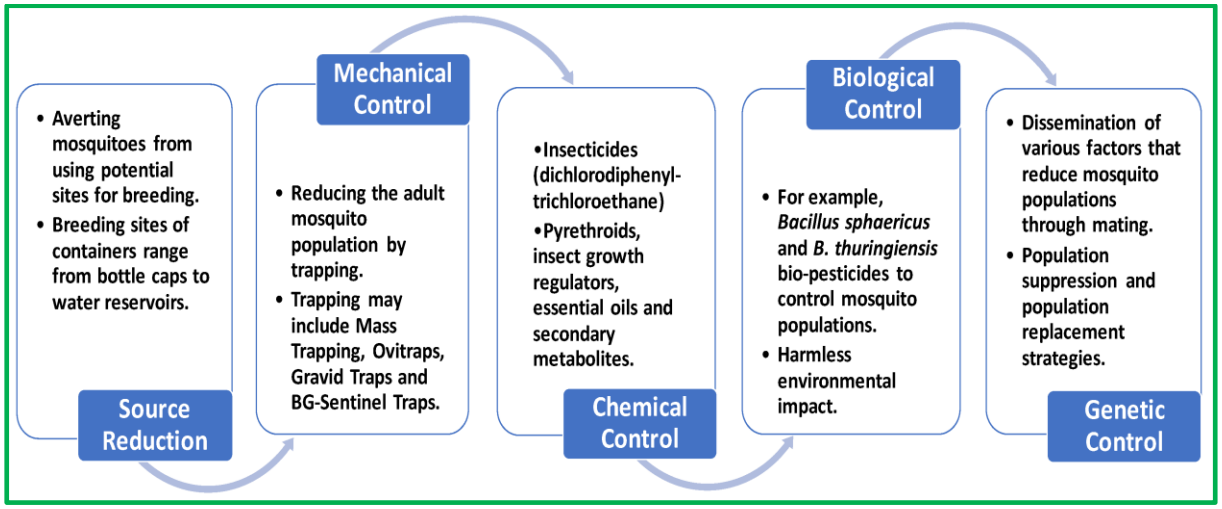
Common methods of control, especially chemical pesticides, have often failed to prevent serious damage caused by insects, and advances in biology (rather than chemistry) have been used to provide new methods of control. Another alternative to the diamondback moth is Bt bio pesticide by spray method (Furlong et al., 2013).

Genetically modified (GM) pesticides produce this Bt toxin to protect the plant from targeted pests. For example, Bt cotton protects Lepidoptera, including the pink bollworm (Carrière et al., 2003).

There is most common method control of insects

1. Sterile insect methods
2. Agricultural pest management
3. Integrating pest management methods
4. Intrinsic resistance dilution
5. Gene editing

Integrated pest management (IPM), also known as Integrated Pest Control (IPC), it is an integrated approach that integrates pest control methods into a business. According to the Economic Cohesion Act (EIL), IPM aims to reduce pests. The Food and Agriculture Organization of the United Nations defines IPM as "a comprehensive approach to pest management and the integration of appropriate measures to prevent improvement of pest control, pesticides and other beneficial effects and to reduce or increase the risk of growth". Little impact and promotion of pest management methods for agro-ecosystems.



Gene drive technology:- Gene drive technologies (GDTs) promote the rapid spread of a specific gene between a numbers of non-human genes. Potential applications for GDT include pest control, invasive species and agricultural pests.

Genetic engineering is a natural process and genetic engineering technology that distributes a specific set of genes to all people by altering the chances of a particular allele being passed on to offspring (instead of 50% Mendelian chance).

The genetic engineering program was developed in the early 1960's to control pests. These early theories were based on genetic engineering and are called selfish genes, or selfish genes that transcend DNA sequences between generations by sexual intercourse (Burt, 2003; Craig et al., 1960). Genetic driving finds a variety of mechanisms involving transmission, as well as meiotic driving to disperse genetic drives of various types (Burt, 2003). Homing endonuclease genes are another type of genetic drive that involves a special endonuclease sequence of visual effects that occurs only once per host genome (Burt, 2003).

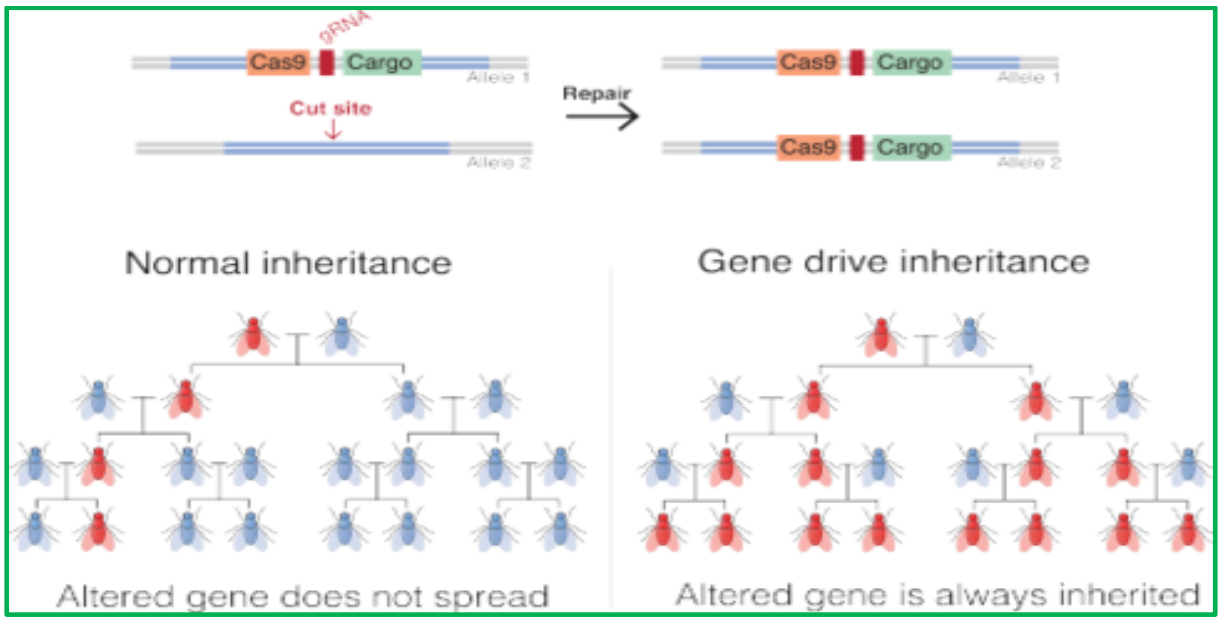
Gene drive work:- The seed drive has three main elements: the seed you want to share; Cas9 enzyme that cuts DNA; and CRISPR, a precise DNA sequence that identifies where the enzyme was cut. The genetic code of these three genes is embedded in the animal's DNA and represents the change you want to make in both chromosomes.

Croissant says genetic engineering violates the law of inheritance. In normal genes, each gene has 50% of the transmission from parent to offspring. Again drivers turn 50% chance into almost 100% guarantee.

When an animal carries a gene driver package as an uninfected animal, its offspring receive a copy of the DNA from the parent: the natural version and the gene driver version. When the sperm first encounters the egg and chromosomes from the other parent, CRISPR is activated in the genetic DNA. It takes copies of genes from the reverse chromosome and directs Cas9-dependent DNase to cut the copies before embryonic development begins.

Applications include pest control (especially against mosquitoes that transmit malaria, dengue, and tick-borne diseases), disease control, or pesticides or pesticides.

As with any potent force, genetic drives can be misused in a variety of ways or cause unintended consequences. For example, genetic mutations that are intended to affect only the local community may spread to all species of animals. Genetic drives used to eliminate the number of invasive species in non-native areas may have an impact on the total number of species, even in their native habitat. Any accidental resettlement of species of people in their habitats, by migration, environmental disturbances (storms, floods, etc.)



Gene drive technology work

Conclusion

Genetic control methods include releasing modified versions of insect species to interact with wildlife in the target area. Many pests in the agro-ecosystem are considered to be the world's largest pests that cause significant economic damage. The genetic code of all species of organisms that produce the same offspring. Some traits are randomly transmitted from parents to the next generation. However, the gene drive sets a different type of inheritance that ensures that a particular trait remains in the next generation. Scientists build their genes using a variety of cellular tools.

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