

Importance and benefit of IPM
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Change from the forest to the monoculture



A wide-angle photograph of a cornfield. The foreground and middle ground are filled with rows of green corn plants, some showing developing tassels. The field extends to a flat horizon line. In the background, there are several large, leafless trees and a range of low, hazy mountains under a pale, overcast sky. A blue oval with a white border is overlaid on the bottom left of the image, containing the word "monoculture" in black text.

monoculture



sesame



maize



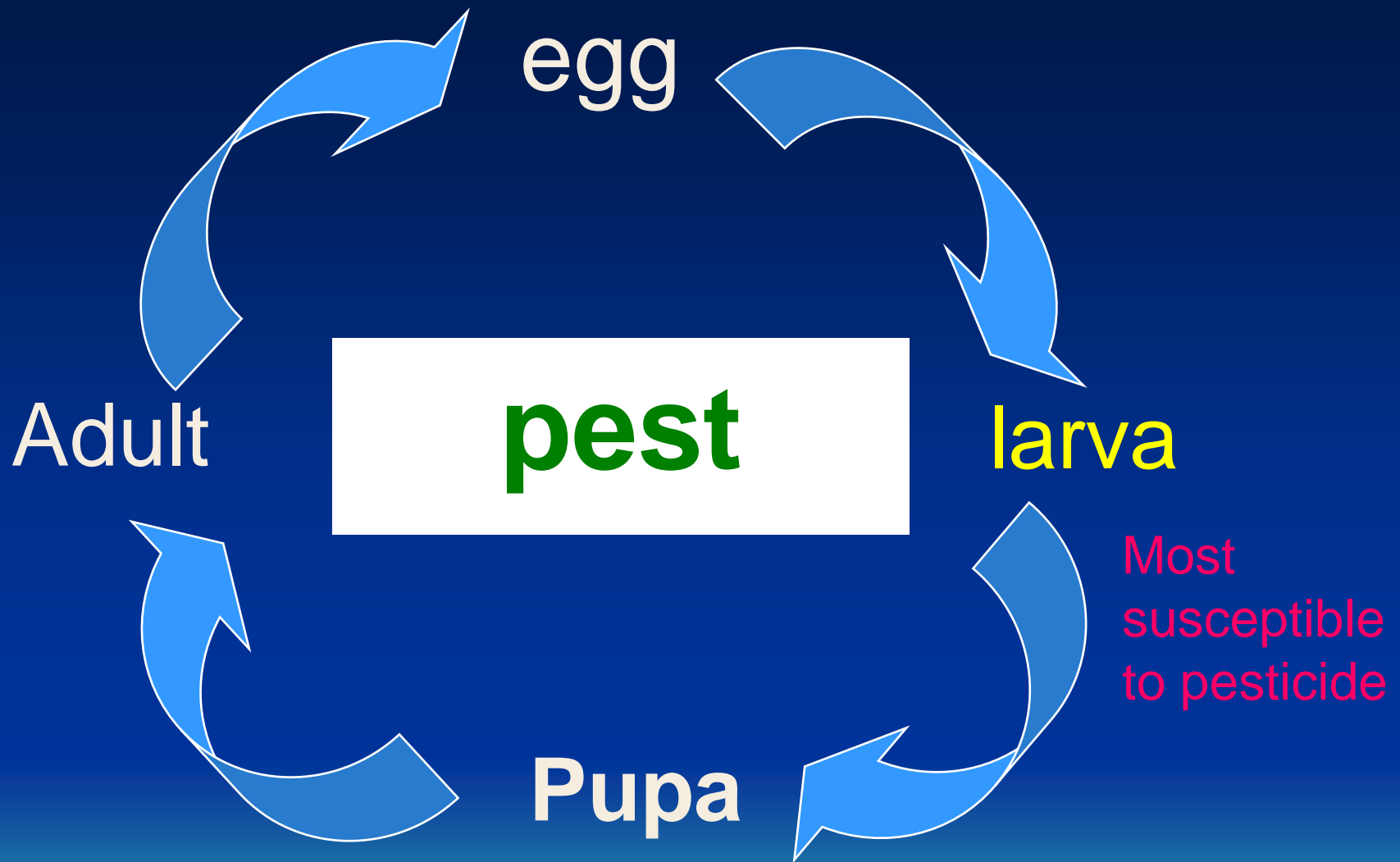
cassava

WHY? IPM is needed

Integrated Pest Management

What we have done in IPM?





Life cycle of insect



Cultural practice



Mechanical control



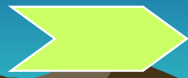
Physical control



Biological control



Chemical control



others

Cultural control





Cultural control

10/1

10

Mechanical



Mechanical



Sanitation





Cultural control



Cultural control





Cultural control





Mechanical



Mechanical





Mechanical





Mechanical

Mechanical



Mechanical control





**Mechanical
control**

Physical Control



Physical Control

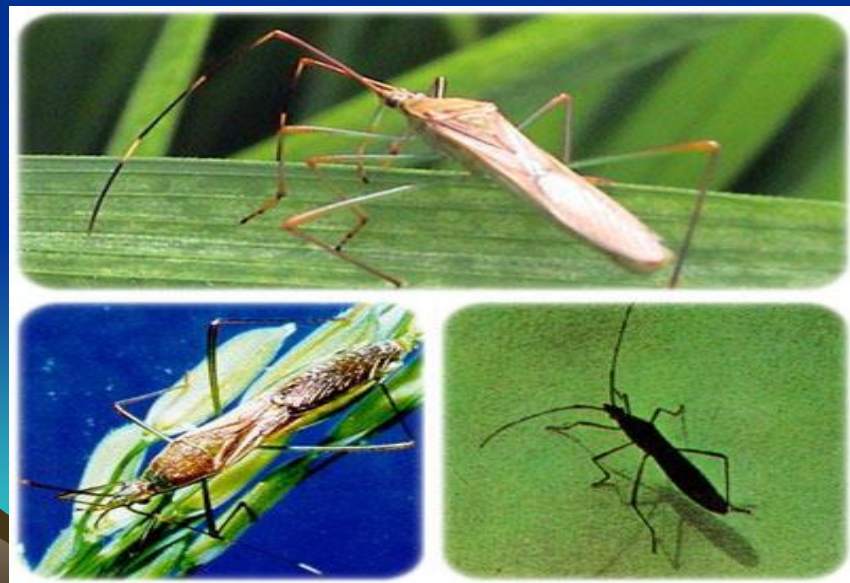


Biological control





ตัวห้ำทำลายศัตรูพืช





Biological control



Biological control



Herb





Herb



Farmer practice



Fermented substance



น้ำหมัก



น้ำหมัก

สมุนไพร

Chemical control



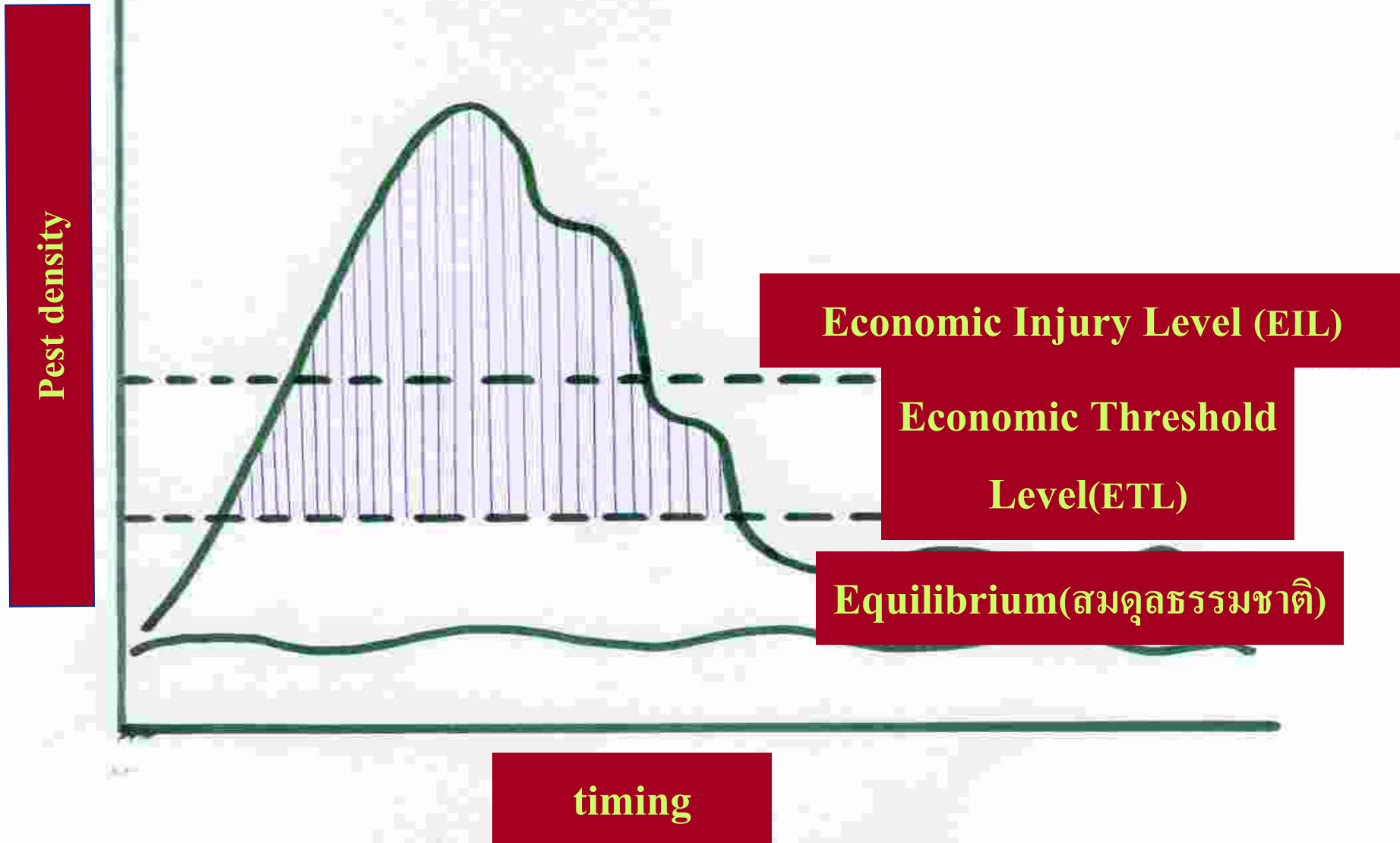
Trunk injection



Control black head caterpilla



Pest population model



No. of pest

ETL

Naturally occurring biological control

Inoculative release

Inundative release

prevention

eradication

- cultural - trap

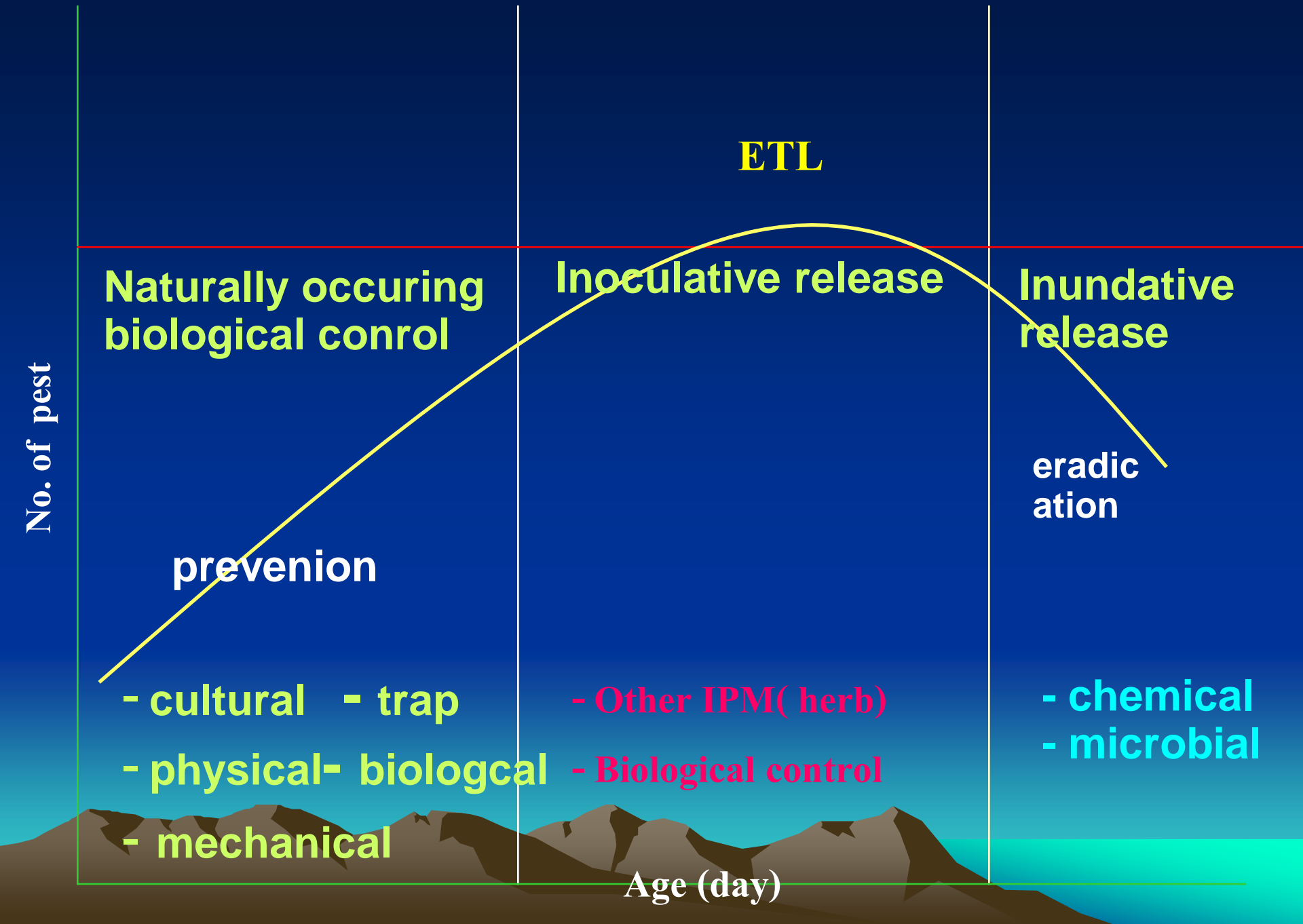
- Other IPM(herb)

- chemical
- microbial

- physical- biological - Biological control

- mechanical

Age (day)



ETL=pest population to take control action, the cost of control equal to the cost of save production or the return income, still give economic result.

EIL=pest destroy crop ,at the level of not give the economic result cost of control more than return income.

Balance of nature= all factors in ecology stay together by harmonize efforts with the optimal situation, stability ,resistance for any change .



Balance on nature

In agro –eco system : there are many components which are related to each other

If there are many plant: there will be man pest

If there are many pest :
they also have many Natural enemies

If nothing disturb the eco-system , all are go along to the balance **Which is the free gift of nature**



Some success of pest control

- Use earwig, *Trichogramma* sp. *Cotesia* sp. to control sugarcane borer .
- Use *Beauveria* to control BPH.
- Use *Trichoderma harzianum* to control plant pathogen.
- Use *Metarrhizium* to control sugarcane root beetle.
- Use red ants to control mango and longan pest.
- Use *Diadegma semiclausum* to control DBM.
- Use *Anagyrus lopezi* and Lacewings to control Mealybug in Cassava
- Etc.

