Introduction to Farmer Field School (FFS)

Farmer Field School : FFS

- A participatory learning process
- Farmer is the center of learning, learning by doing.
- Based on farmers' experience, farmers 'need farmer practice.
- Environmental factors
- Social concerning
- Economy etc.

Topics

- What is FFS
- Why FFS is needed
- How to do FFS
- How beneficial of FFS

Farmer field School

- FFS = farmer use field as school.
- FFS is one of the technology transferring method.
- FFS don‘t need class room, no teacher, no text book.
- FFS need field.

  need farmer.

  need facilitator.

  need farmer participation.

FFS real meaning

- Farmers use field as school
- Need field

- **School ,classroom, teacher are not necessary**

- Need shade nearest the field

- Farmer and facilitator are all learners

Objective

- Farmer’s learning
- Farmer’s adoption
- Farmer’s practice
- Technology transfer by practice, prove, test ,experiment
- Empower farmer decision making
- Improve thinking process

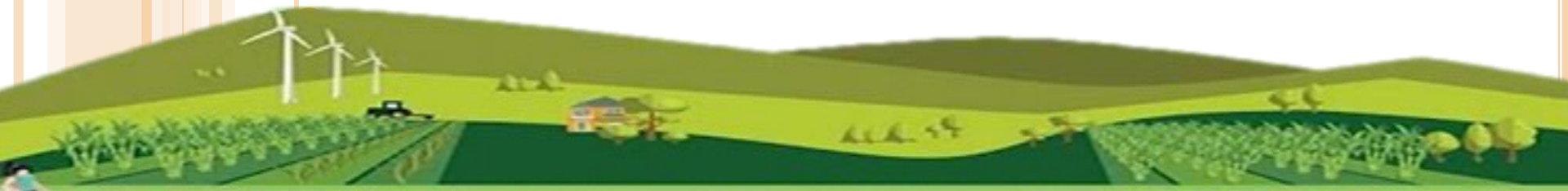
Lecture and participatory learning

Lecture	Participatory learning
1. Information from speakers	1. research and study
2. Remember	2. think, discuss and experiment
3. Individual	3. group learning
4. Learn from lecturer participant	4.Learn and share among
5. One way communication together	5. Two ways, learn

Lecturer are facilitator are the learner, learning together with Farmer

Problems of technology

- Many technology or research are in the shelter
- Cannot practice
- Too difficult for farmer's practice
- Not based on farmer's problems
- Too complicated
- Come in package



Technology transfer

- Farmer’s knowing not learning
- Do not change farmer’s adoption
- Do not change farmer’s practice Result
- The problem still exist

Brown Plant Hopper (BPH)

BPH heavy infestation in 1992

BPH infestation in 2020

IPM is the facts that can be explained

- Pest population concerning many factors ex. host plant, fertilization, variety, weather, etc.
- Those factors are related to each others in ecology.
- Ecological factors are related to farmers practice…
- The change of pest population are also caused by farmers practice.
- IPM practice is involved pest population reduction to the balance.
- How to bring IPM to farmers practice is most importance.

From IPM to IPM Farmer Field School

- IPM are known as Integrated Pest Management since 1982
- Farmers also know IPM in term of concept
- Farmers still use only one method in IPM…. pesticides, herb , microbial…etc.
- IPM need practical work to reach the concept
- IPM not for farmers but have to do by farmers

IPM Farmer Field School

- Food and Agricultural Organization of the United Nations (FAO)
- Use FFS for IPM implementation to farmer ’s practice.
- Success story in Indonesia, Philippines and others
- Introduce to Thailand since 1992
- 1 st school is rice IPM FFS in Manorom district, Chainat province
- 1998 (6 year later) FFS first spreaded through the country

IPM implement to farmer trough FFS

- Change opinion, practice
- Compete with the pesticides
- Slowly results but sustainable
- Start with the open mind farmer, or infested fields.
- With their needed (organic ,safety)
- With the farmer group or farmer association
- Learning activities (Through participatory approach)

IPM Farmer Field School activities

- Long season training (through out the season)
- Many factors have to be proved and learned during the season
- Many occurring situation that shown the important role in IPM are always occurred daily, weekly which need to be proved for better understanding
  - Start before planting to the harvesting
  - Participant are all farmers who have the same problem (25-30)
  - Available, curious to join and learn

Major practical work in IPM field

1. Grow healthy plants - by follow recommendation
2. Regular survey - AESA
3. Use natural – ecology concept/ IPM
4. Farmer is expert- empower farmer decision

6 important process

1.Gathering all data needed - crop calendar
2. Problem identification - causes of problem
3. Find all possible knowledge, technology available to solve the problem
4. Select most suitable method to available factors.
5. Field trial / experiment (all activities in FFS weekly /prove selected methods)
6. Conclusion and recommendation

FFS is tool of learning

participatory learning

ปฏิทินพืช(Crop Calendar)

Problem analysis

Set up learning activities and learning field based on farmer's problem

FFS activities

- Based on problems
- Based on location
- Based on economics
- Based on socials
- Based on community
- Based on specifics problems
- Based on farmers needed

Specify learning activity/ FFS curriculum

- Learn from same factor
- Use different experience and knowledge
- Sharing, discus and make the decision together
- Field trial, experiment, study, research, are needed to prove if any argument
- All data gathering and analyze

- Field trial

IPM learning through FFS

From real situation

Discovery learning

Learning and experiment field

Learning field

Farmer field

IPM-GAP field

weed

Conduct experiment field base on farmer's problem

Herbicide control

IPM (weed control)

Learning on seed management

Different variety

Seed selection n salt solution

Seed germination

Golden snail apple

Learning from land preparation to harvesting

plough

Seed broadcast

seedling

tillering

harvesting

Pre-post test for farmers

- Proving are need

- discovery learning

Learning on pest control herb

Neem extract to control insect pest

Mirobial control

Mass production

Metarhizium

Farmer practice to produce microbial.

Learning from practice

practicing

BPH dead by *Beauveria bassiana*

Learning activities

Farmers' participation by facilitators

Farmers' learning

Learning about chemical pesticide and hazard

BPH after spray by insecticide

BPH nymph

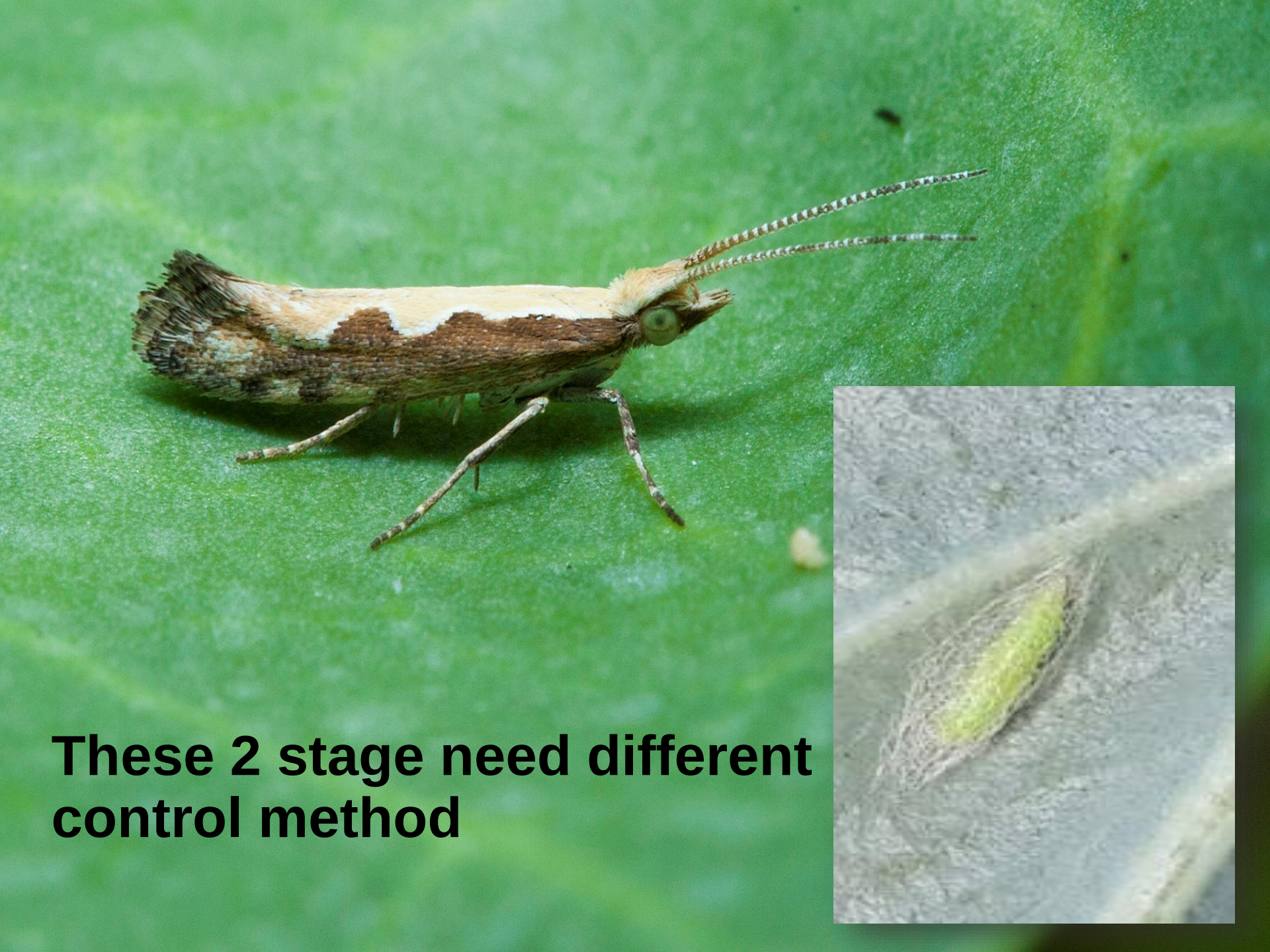
BPH long wings

ovipositor inject rice tissue to lay the eggs.

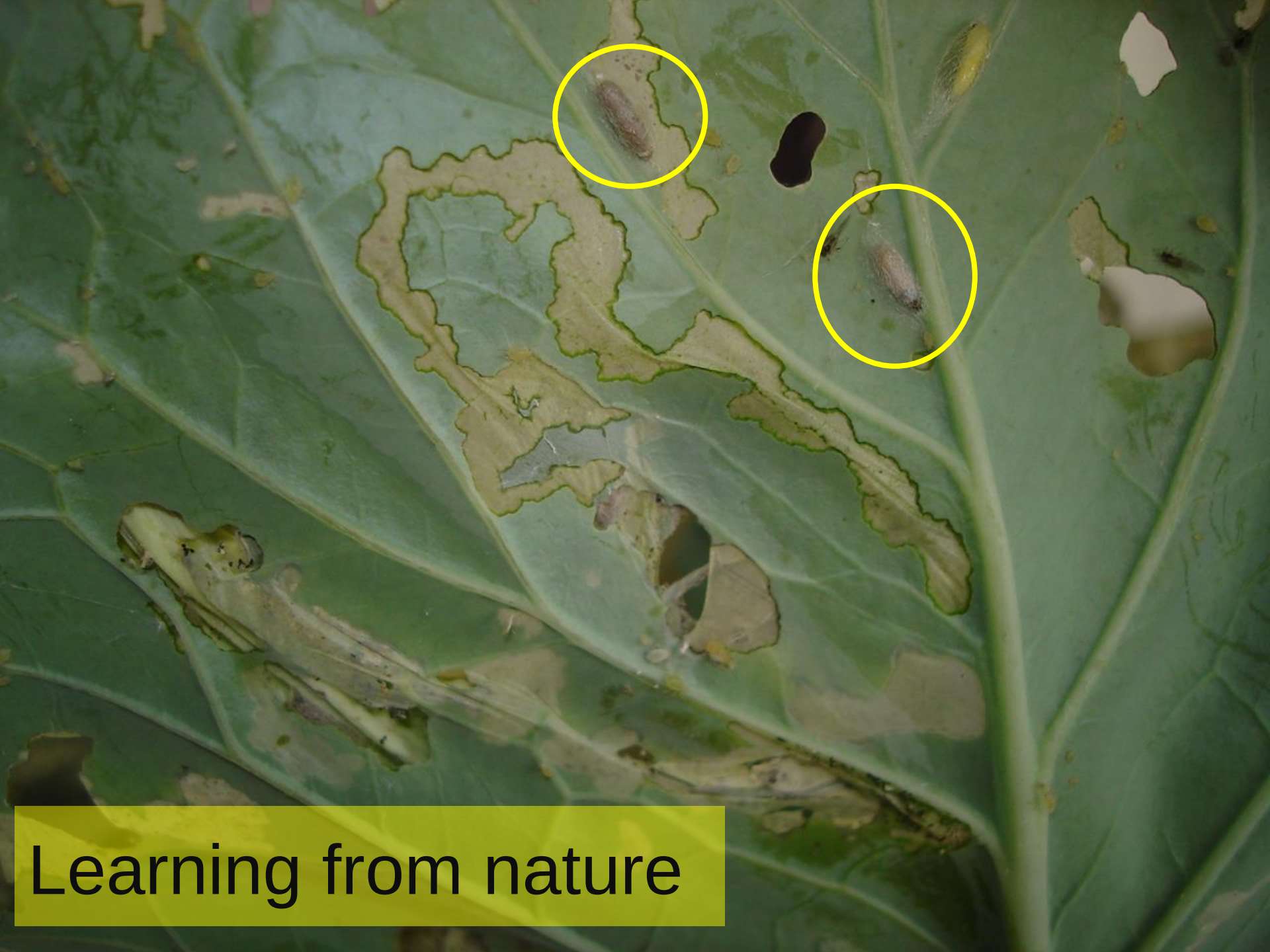
BPH eggs inside rice tissue

BPH short wings

Flea beetle is the pest

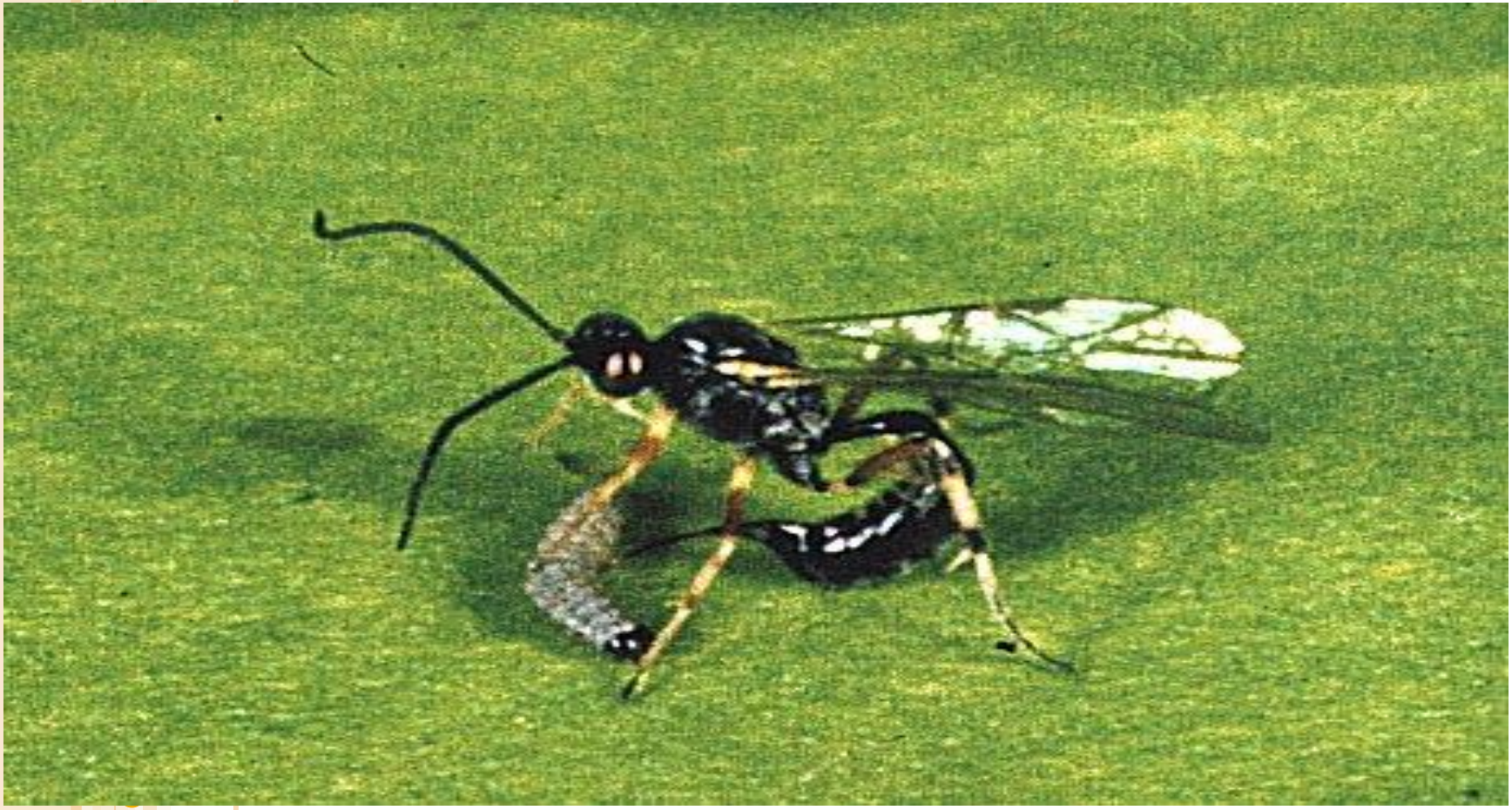


These 2 stage need different control method


Learning from nature

Ds monitoring and evaluation

Diadegma semiclausum (DBM larval parasitoid)



Learning from Field by FFS

- Learn the real field present situation

Green mealybug

Mealybug infest cassava

mealybug were destroyed by lacewings


ogical Control Group


ogical Control Group


Biological Control Group


ological Control Group


Biological Control Group


Biological Control Group


Biological Control Group


Biological Control Group


Biological Control Group


Biological Control Group

These 2 insects have to use different insecticides

- Present situation

Survey : from planting to harvesting

Field survey

Visual count

Farmer are learning ecosystem in FFS


HONDA

Experience learning

M&E

Fine Field survey

Collect the agronomic data and field survey

Field survey

Survey and agro - eco – system - analysis

Student club learning the agro-ecosystem

Agro- Eco - System Analysis (AESA)


กลุ่มที่ 5
หนอนกระทู้ผัก
หนอน
แมลงปีกแข็ง
กบ
แมลงศัตรูหนีบ

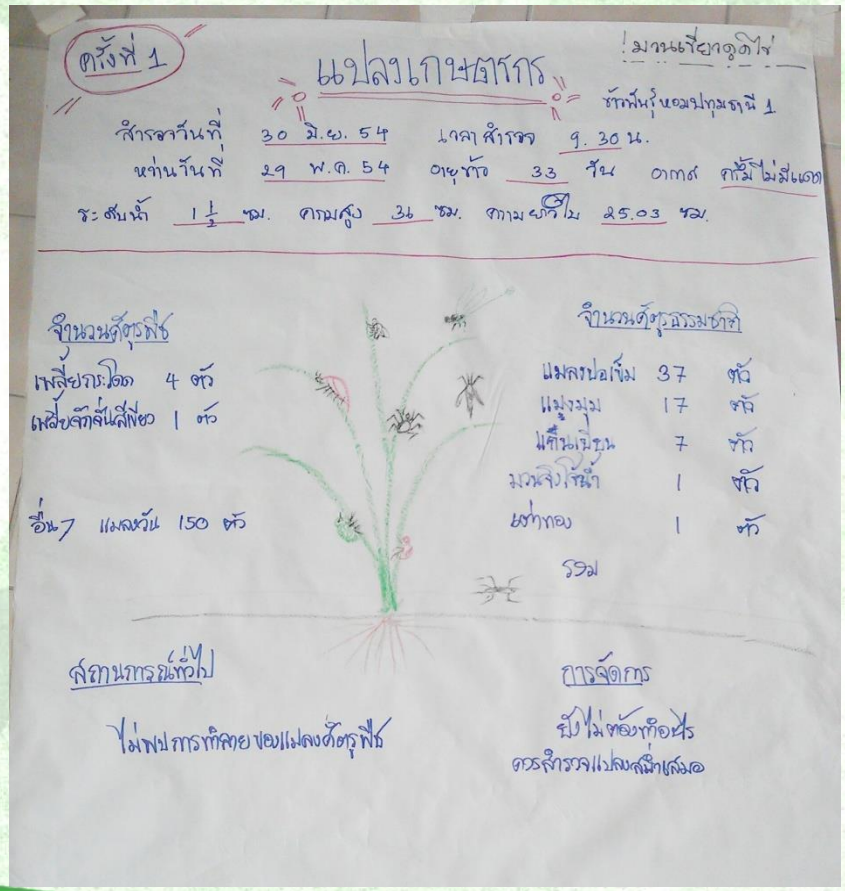
- All existing factors concerning

- Ecological analysis for decision making

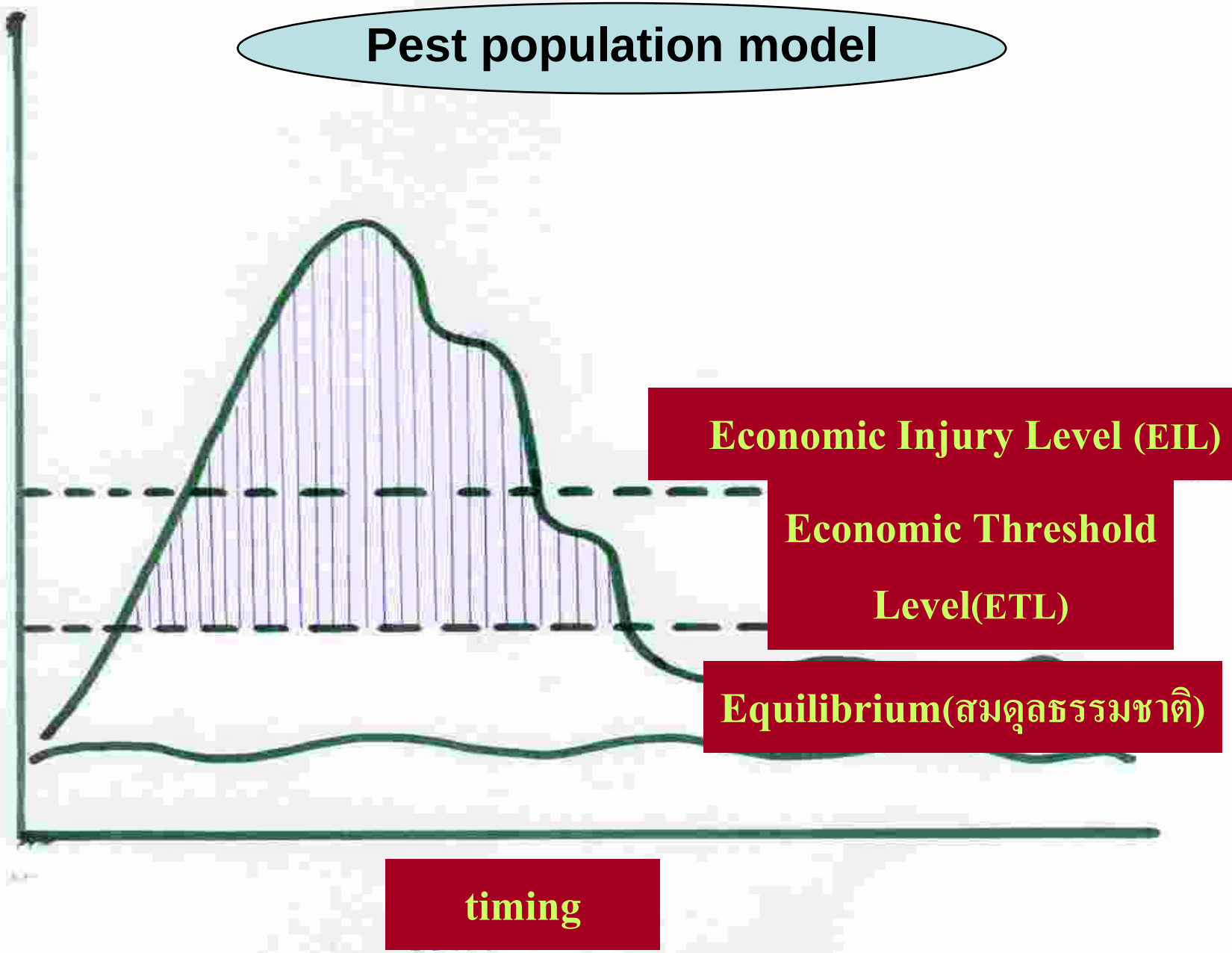
Farmer’s presentation & discussion

Farmer’s presentation & discussion

Agro –eco- system analysis for decision making



Pest population model



Harvesting

Sampling and harvesting

Check and compare quanlity and quantity

Total cost

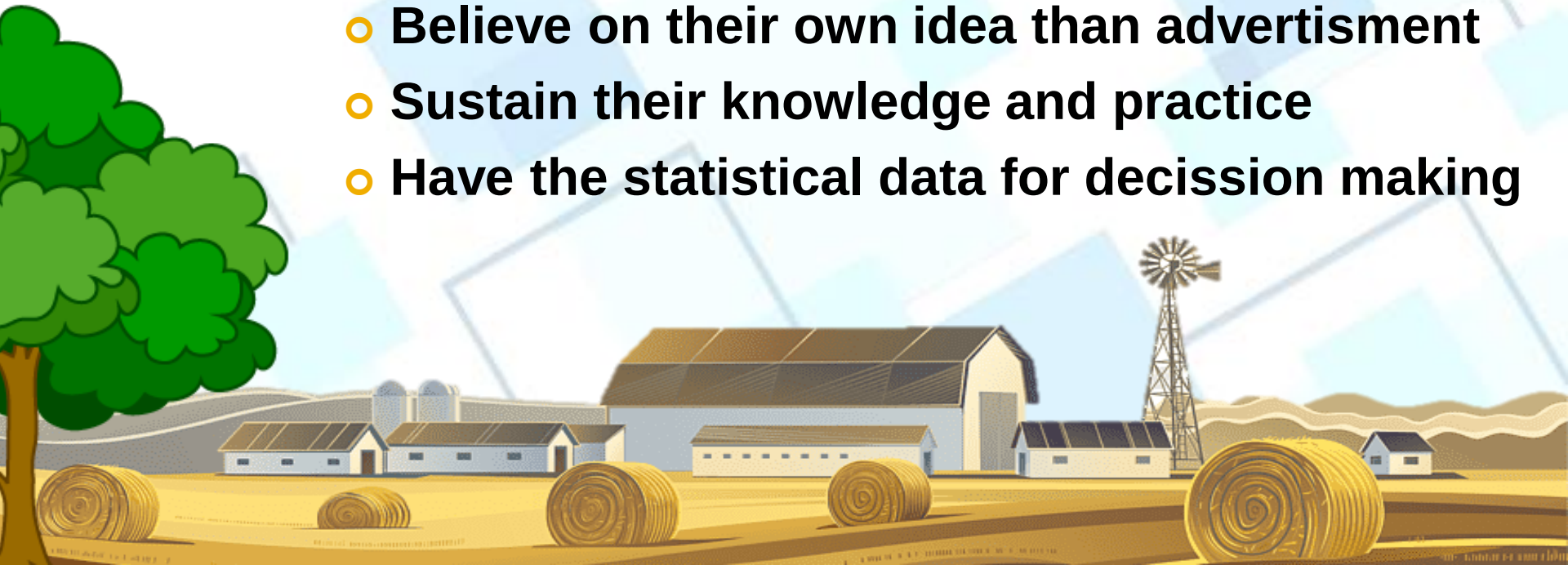
รายการ	cost	
	Learning field	
	Farmer field area 1,600 m2	IPM field area1,600 m2
1. ค่าเช่าแปลง	-	-
2. ค่าตีนา+ทำเทือก+น้ำมัน	350	350
3. ค่าเมล็ดพันธุ์ข้าว+ค่าหว่าน	460	300
5. ค่าสารกำจัดวัชพืช+ค่าฉีด	380.4	380.4
6. ค่าสารกำจัดแมลง+ค่าฉีด	403.2	0
7. ค่าสารกำจัดเชื้อรา+ค่าฉีด	270.9	82.5
8. ค่าปุ๋ย +ค่าหว่านปุ๋ยครั้งที่ 1	282.7	113.5
9. ค่าปุ๋ย (46-0-0) +ค่าหว่านปุ๋ยครั้งที่ 2	220.5	113.5
10. ค่าปุ๋ย (46-0-0) +ค่าหว่านปุ๋ยครั้งที่ 3	220.5	0
11. ค่าปุ๋ย (46-0-0) +ค่าหว่านปุ๋ยครั้งที่ 4	167	113.5
12. ค่าปุ๋ยเกล็ด (13-0-46)+ค่าฉีด	66.5	0
13. ค่าแคลเซียม + โบรอน +ค่าฉีด	62.4	0
14. ค่าเกี่ยวข้าว	500	500
15. ค่าขนข้าว	150	150
16. ค่าแรงงาน	1,856.25	1,856.25
Total cost	**5390.35 (33,689.69)**	**3,959.65 (24,747.81)**

Benefit

Study field	Total cost B/ha	Yield (kg/ha)	sell (B/kg)	income (B/ha)	Net profit (B/ ha)
IPM	3,959 (24,743.75)	746 (4,662.5)	6.4	4,744 (29,650)	785 (4,906.25)
Farmer	5,390 (33,687.5)	800 (5,000)	6.4	5,120 (32,000)	-270 (-1,687.5)

Benefit of farmer field school

- Farmer learn how to solve the problem by themselves or group
- Farmer learn how to learn
- Farmer can start to solve the problem by themselves
- Believe on their own idea than advertisment
- Sustain their knowledge and practice
- Have the statistical data for decission making



Results from IPM FFS

- Understanding on relationship of pest population and related factors
- Produce safely and safety production … better life
- Improve decision making
- Learning more in ecology, learn how to learn
- Change the adoption process and practice
- Change the way of problems solving
- Believe in their own decision
- Creative better thinking with reason

Conclusion

FFS is the most suitable learning process to introduce knowledge especially scientific aspects as IPM to the practical work

FFS not only for IPM

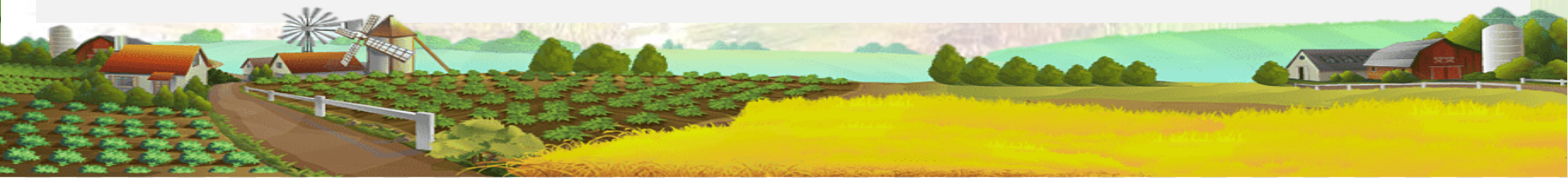
FFS can also used for others aspect that need to be proved by practice

Important note

- Knowledge and understanding on experiment and analysis is needed.
- To confirm the result , may need to learn more than 1 season.

Problem

- Copy FFS
- No problem identification /selection
- No AESA no discussion for decision
- Selection by fashion or social favor no reason
- Stop pesticide, use herb or bio-agent because of anxiety not real reason.



Sawasdee (สวัสดี)