

Séminaire INRA-FiBL-Biovallée
3-4 dec. 2014 - Eurre



& Drôme



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Innovation broker for 35 years

NGO founded in 1979 by Organic farmers and Scientists

Farming system improvement in organic agriculture

- Research and field trials
- Knowledge management and Dissemination
- Expertise in organic farming



*GRAB
Presidents*



Research resources

Fruits, Vegetables, Grapevine

- Staff

15 p. Steerring comittee : farmers, scientists, partners

15 permanents (agronomists, phd, tech.)

10 trainees

- Trials

Southern France

25 on-farm trials

2 experimental farms + 1 pilot farm

2 Laboratories

- Partnership

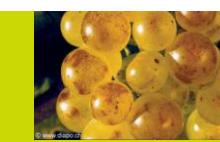
From local groups to european institutions

(FP6, FP7, Cost, CO+...)



From soil to climate

- **Soil fertility management** : organic fertilizers, composts, diagnosis tools, biodegradable mulches ...
- **Adapted cultivars** : low input, tolerant, participative selection
- **Pests and diseases control** : natural pesticides & fungicides, Aromatherapy, copper reduction, nets, agronomic strategies...
- **Environment and functionnal biodiversity** : hedges composition, rows of flowers, ecological reservoir...
- **Farming systems** : agroforestry, semi extensive orchard, water use reduction and climate mitigation
- **Climate adaptation** : water scarcity



GRAB trials in Drôme

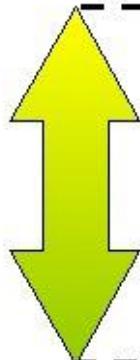
- Alternative to copper / Downy mildew and Apple scab
 - + Cave de Die Jaillance
 - + CoFree (FP7 + FiBL)

- Cultivars susceptibility / Pest & diseases
- Alternative to tillage (within the row)
- Sawfly / Apple
 - + INRA Gotheron, Lycées agricole du Valentin



A multi-level approach

**DIRECT
means,
localised,
short-term**



**Physical methods, fungicides,
pesticides, pheromones**

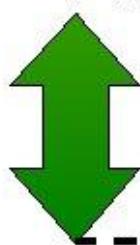
**Biological control :
bacteria, viruses, beneficial arthropods**

**INDIRECT
means,
global,
long-term**

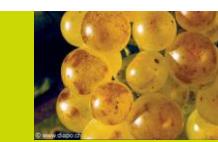


**Conservation of natural antagonists,
functional biodiversity:
flower beds, hedgerows, pastures, fallow**

**Agroeco
SYSTEM**



**Crop rotation, cultivars, soil management,
Agroforestry**



Functionnal agrobiodiversity in GRAB agenda

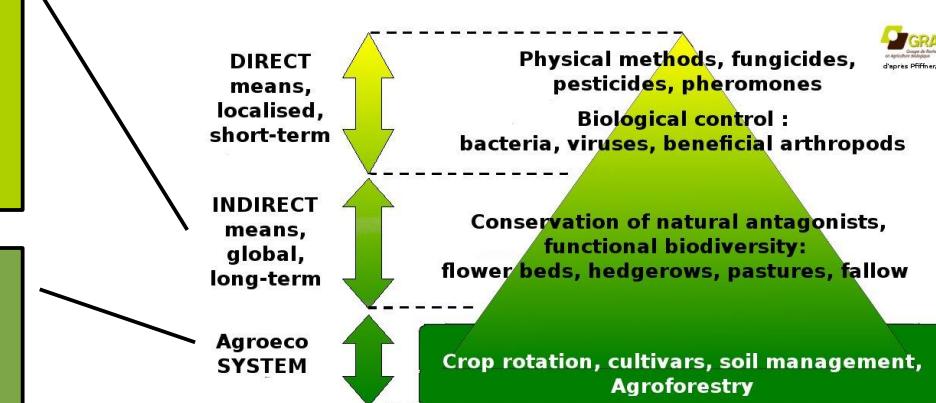
Flower beds

/ aphid, codling moth, mite, carrot fly

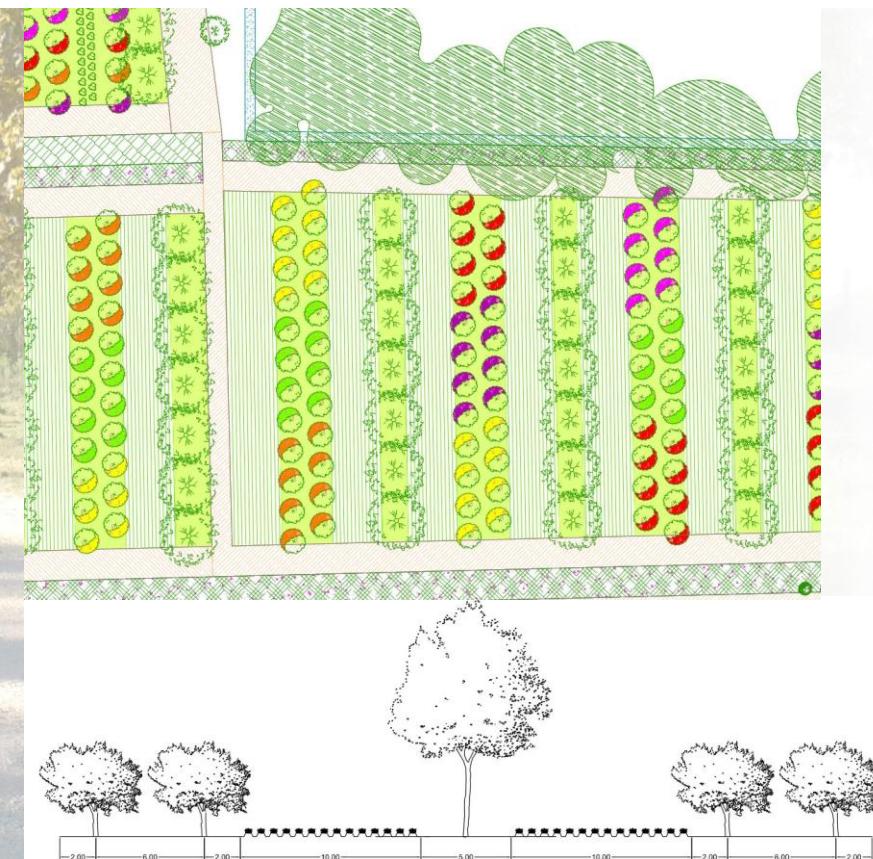
Hedgerows in vineyard

Agroforestry & Orchard

Does biodiversity enhancement help pest and disease control ?



Biodiversity at work



Lycée
François
Pétrarque



UNIVERSITÉ
d'AVIGNON
ET DES PAYS DE VAUCLUSE



www.grab.fr



Carré de
Lagnes

Cardes de
Provence

Laitue Sanguine

Graines de
Cardes de
Provence

Tomate Kaki

Sucette
Hyéroise

Coco de
Vallouise

Violette
d'Avignon

Melon

Participatory breeding