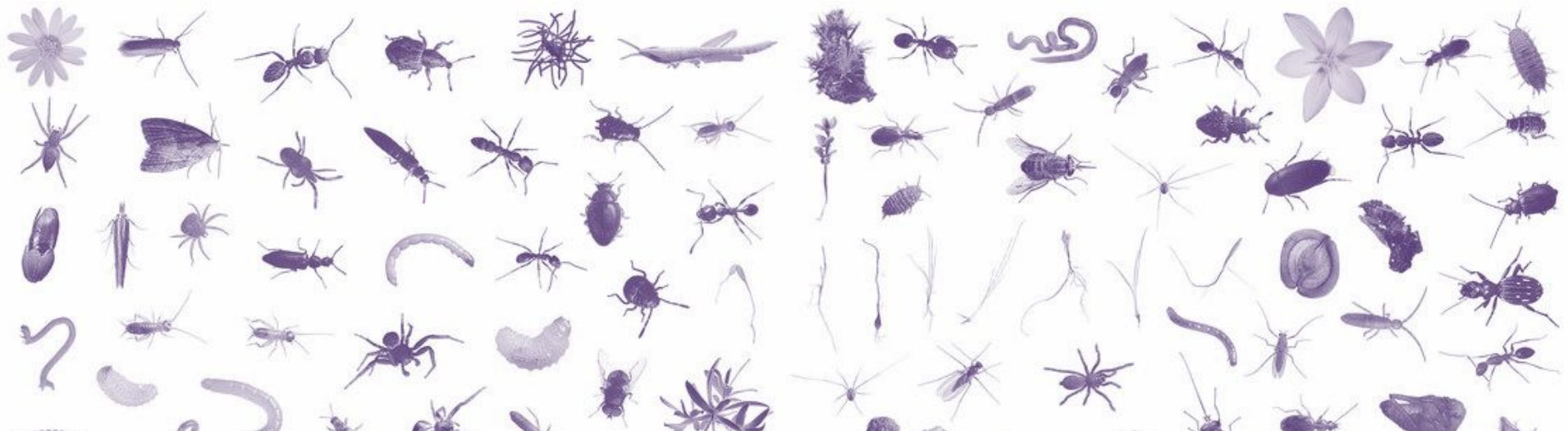




# Planning the Garden: Biodiversity Principles





Most farms are mono-cultures

*“mono”* = one

*“culture”* = plant







# Water pollution





# Worker health



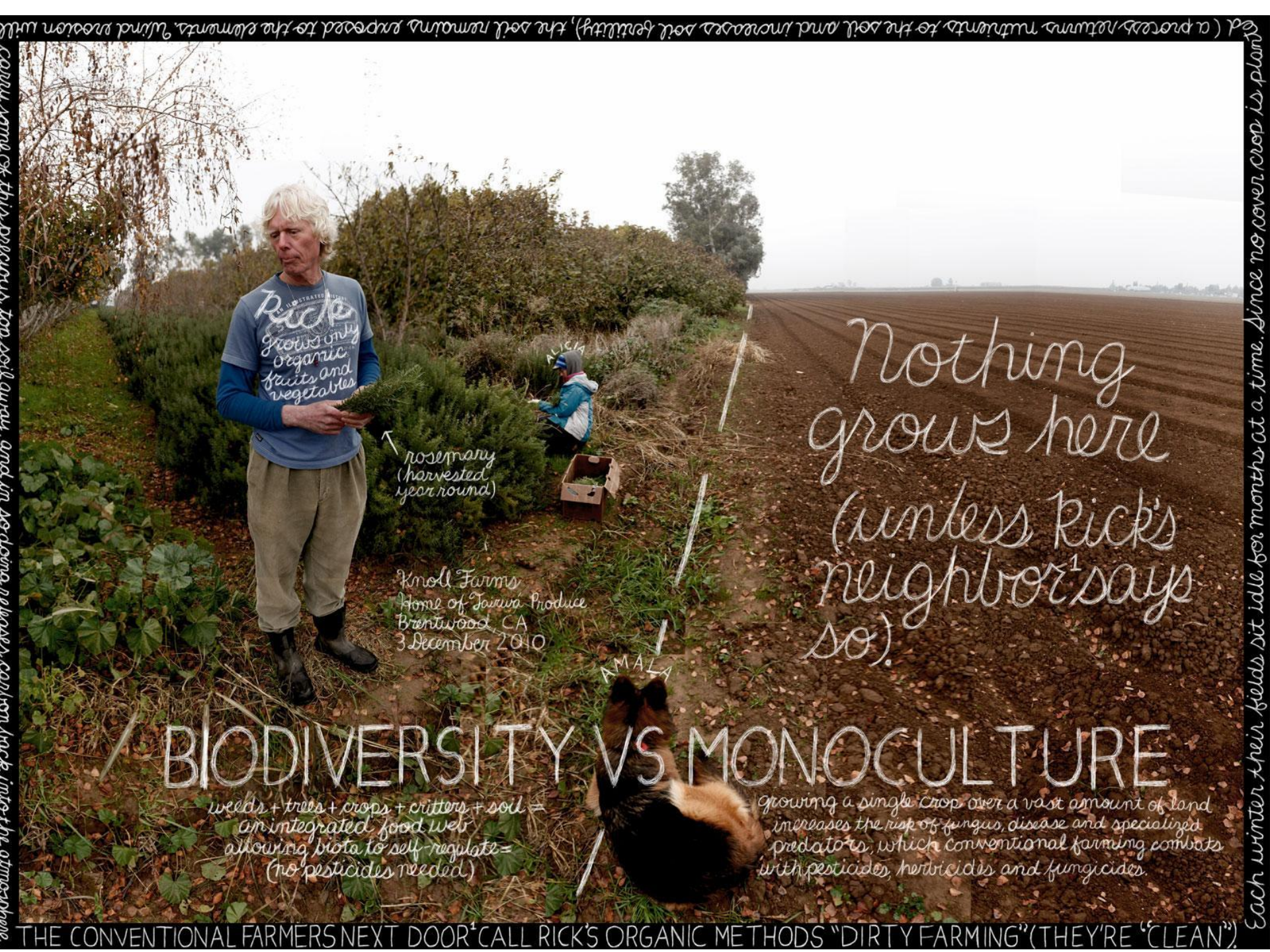




# Declines in beneficial insects







Rick  
grows only  
organic  
fruits and  
vegetables

↑ rosemary  
(harvested  
year round)

Knoll Farms  
Home of Jovina Produce  
Brentwood, CA  
3 December 2010

Nothing  
grows here  
(unless Rick's  
neighbor<sup>1</sup> says  
so).

# BIODIVERSITY VS MONOCULTURE

weeds + trees + crops + critters + soil =  
an integrated food web  
allowing biota to self-regulate =  
(no pesticides needed)

growing a single crop over a vast amount of land  
increases the risk of fungus, disease and specialized  
predators, which conventional farming combats  
with pesticides, herbicides and fungicides.

THE CONVENTIONAL FARMERS NEXT DOOR<sup>1</sup> CALL RICK'S ORGANIC METHODS "DIRTY FARMING" (THEY'RE "CLEAN").

(a process returns nutrients to the soil and increases soil fertility), the soil remains exposed to the elements. Wind erosion will  
Each winter their fields sit idle for months at a time. Since no cover crop is planted

Compare this to Rick's top soil away and in the same place, a carbon rich inter-humic atmosphere





## *Poly-culture*

“agriculture using multiple crops in the same space, ***in imitation of the diversity of natural ecosystems***, and avoiding large areas of single crops”

AN ECOSYSTEM IS DEFINED AS A GROUPING OF PLANTS, ANIMALS, AND OTHER ORGANISMS INTERACTING WITH EACH OTHER AND THEIR ENVIRONMENT IN SUCH A WAY AS TO PERPETUATE THE GROUPING MORE-OR-LESS INDEFINITELY



# Planning the Garden: Biodiversity Principles







# Planning the Garden: Biodiversity Principles





# Planning the Garden: Biodiversity Principles

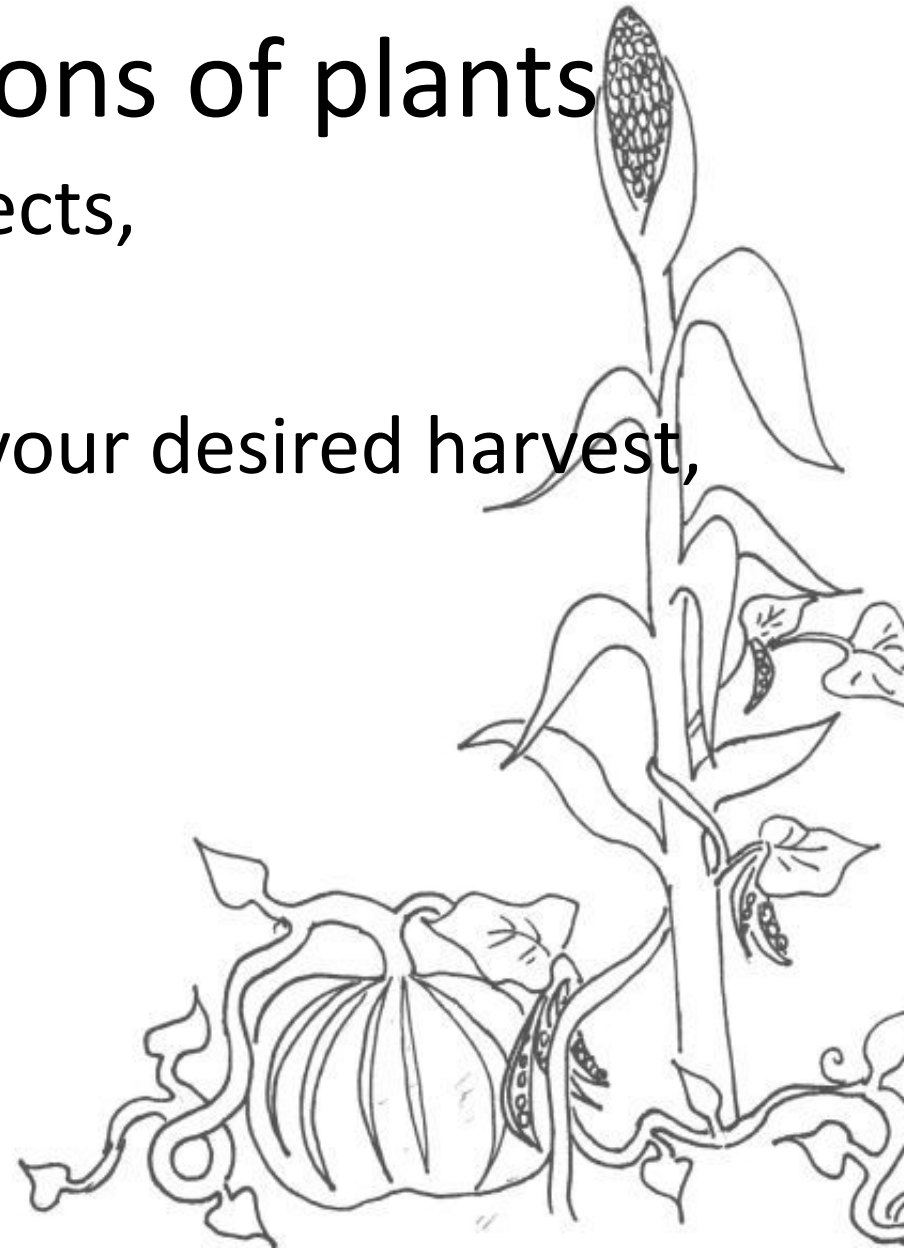






# Multiple functions of plants

- attracting beneficial insects,
- repelling pests,
- luring pests away from your desired harvest,
- suppressing weeds,
- attracting pollinators,
- building soil fertility.





# What kinds of biodiversity are in the garden?

- **Insect biodiversity**
- **Wildlife biodiversity**
- **Plant biodiversity**
- **Micro-organism biodiversity (in the soil)**