

Agroecosystems *Glossary*



● Surrounding land



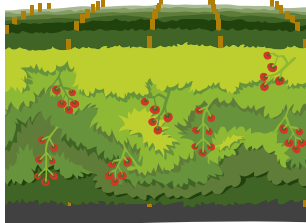
● Space and time



● Food system



● Focal crop



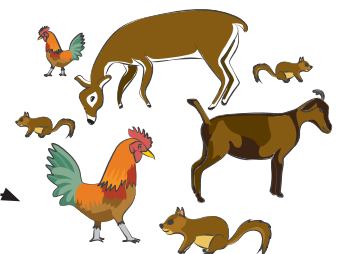
● Population



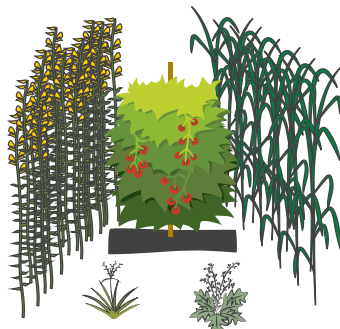
● Environment



● Ecosystem



● Vertebrate community



● Plant community



● Invertebrate community

Agroecology

farming that works with nature to maintain production, economic, and environmental well-being by balancing interactions between plants, animals, humans, and the environment. Agroecology accounts for environmental conservation and social responsibility along with the production of food and materials. Agroecology deploys resources from the natural world toward the optimum balance of productivity, biodiversity, and resilience and the long-term sustainability of agricultural systems. Practitioners of agroecology try to reduce negative consequences of agriculture and build in benefits for nature and society through a deep knowledge of the unique aspects of their place, plants, and people.

Agroecosystem

lands and biological systems managed for production including consideration for external features of the neighboring area and connected systems. Production can include food, feed, fiber, and medicine. Managing agroecosystems facilitates productivity through the many dynamic and connected components of the agricultural system across space and time, often emphasizing focal crops and livestock.

● **Environment**

the non-living surroundings that impact plant and animal growth such as water, temperature, light, and soil.

● **Focal crop (or livestock)**

main source of productivity and target for management for the agroecosystem.

● **Population**

a single species grouping of organisms like crop plants in monoculture or single herd of livestock.

Community

a multi-species grouping of similar organisms like a mixture of plants in a crop field.

● **Plant community**

plant diversity within and around agroecosystems. Beneficial plants can lessen the movement and erosion of soil, slow and filter the movement of water, disrupt extreme temperatures and winds, and encourage and increase the movement of wildlife. Plants with negative

impacts on the agroecosystem, commonly known as weeds, can compete for crop resources or carry disease.

● **Invertebrate community**

diversity of microbes and insects in and surrounding the crop field. Beneficial invertebrates can include pollinators, predators, parasitoids, and microbes living on plants and in the soil. Harmful invertebrates can include herbivores that eat plant leaves, bore plant stems, and suck plant fluids. Other harmful invertebrates can deliver or be the cause of plant diseases.

● **Vertebrate community**

diversity of animals (with spines) in and surrounding the crop field. Beneficial vertebrates can leave manure for plant nutrition, eat weeds, and eat plant pests. Harmful vertebrates eat the crop or promote weeds.

● **Ecosystem**

the environment, organisms, and their interactions in a geographical area and related ecological boundaries. Organisms and their environment are connected through nutrient cycles and energy flows.

● **Surrounding land**

the nearest connected geographical area and ecological boundary around an agroecosystem that impacts nutrient cycles and energy flows critical to farming. Other farms, urban areas, and natural areas are a part of the surrounding land.

● **Food system**

lands, biological systems, and social systems linked to the production and distribution of food. People play a critical role in the management of agroecosystems and consume the harvested products.

● **Space and time**

agroecosystems are dynamic and interconnected through flows of nutrients and energy. Geographical and ecological boundaries are gradual or diffuse and vary through space and time.