# Agricultural Biodiversity

Globally, International Day for Biological Diversity was celebrated on 22 May, putting the spotlight this year, on **'Biodiversity for Sustainable Development.'** Of all biodiversity's links to sustainable development, perhaps the most evident is its link to agriculture and food production. This week we explore the biodiversity through the lens of agricultural biodiversity. While the term agricultural biodiversity may readily bring to mind food production, it is much more complex. It includes all components of biological diversity that are relevant to food and agriculture such as:

- **Higher plants:** crops; harvested and managed wild plants for food; trees on farms, pasture and rangeland species;
- **Higher animals**: domestic animals; wild animals hunted for food, etc.; wild and farmed fish;
- **Arthropods**: mostly insects including pollinators (e.g., bees, butterflies), pests (e.g., grasshoppers, aphids), and predators (e.g., wasps, beetles), and insects involved in the soil cycle (notably termites);
- **Other macro-organisms**: e.g., earthworms and beetles;
- **Micro-organisms**: e.g., rhizobia, fungi, disease-producing pathogens.

## Importance of agricultural biodiversity

Agricultural biodiversity is essential to both human health and national and global economy. Some goods and services provided by agricultural biodiversity include:

- sustainable production of food;
- provision of raw materials for clothing, shelter, and medicines;
- supporting the breeding of useful new crop varieties;
- provision of income;
- biological support to food production via, for example, soil biota, pollinators, and predators;
- wider ecological services provided by agro-ecosystems, such as soil protection and health, water cycle and quality, air quality.

Maintenance of agricultural biodiversity within the agro-ecosystem is necessary to ensure the continued supply of goods and services. In today's society, most agriculture is industrial, characterised by the use of financial capital to fund investments in food production and with a primary focus on generating profits. In industrial-type agricultural systems, biological components have been replaced to quite a significant extent by inorganic fertilizers and chemical pesticides. However, while modern agriculture may produce a larger amount of food, it does contribute to environmental problems such as degradation of not only soil and water quality but the quality of the food as well. Therefore, for sustainable food production, farmers should seek to implement as far as possible, a form of agriculture that works in harmony with nature, i.e., organic farming, which considers biological aspects as part of the overall system. This would include cultivating a wider variety of crops, crop rotation and biological pest management.

Since we rely on a good quality environment to ensure our wellbeing, biodiversity including agriculture biodiversity is pivotal for sustainable development.

**Share your ideas and questions by sending letters to: "Our Earth, Our Environment", C/O EIT Division, Environmental Protection Agency, Ganges Street, Sophia, GEORGETOWN, or email us at: eit.epaguyana@gmail.com.**