



Crops and Gardening

Medium Risk Sector



Growing and harvesting of crops, vegetables and fruit for the food and beverage sector. Includes tobacco, nurseries and floriculture. For processing of harvested goods refer to the related 'Food and Beverage' sector.

Related Sectors:

- Livestock Farming
- Forestry
- Food and Beverage



Production Processes

Crops and gardening refers to the growing of vegetables, fruits and crops. This sector includes the process of cultivating food, feed, fibers and other useful products that can be gained from plants.

The mechanization and modernization of farming – including fertilizers and irrigation – are the chief characteristics of today's agriculture, and have increased farm efficiency and productivity enormously. However, animals, including horses, mules, oxen, camels, etc. are still used to cultivate fields, harvest crops and transport farm products to market in many parts of the world.

As agricultural activities extend into drier areas, irrigation has become crucial. There are various types of irrigation techniques that differ in how the water is obtained from the source and how it is distributed across the field. The three main techniques are water distribution via canals or ditches, overhead (sprinkler) irrigation and underground irrigation. In addition to dry areas, woodland is increasingly being transformed into fields and pastures. In some regions, tobacco is a key cash crop and an important subsector of agriculture. Tobacco fields are mainly harvested by hand. After the harvest, tobacco is dried either in the sun or in curing barns before it is fermented and sold to producers of cigars and cigarettes, or exported.

Sustainability Issues

M	Energy
H	Water Use
H	Emissions to Water
L	Waste
L	Emissions to Air
M	Ecosystems
M	Workplace Health & Safety
L	Disaster Risk
M	Site Contamination

Sector Rating

- H High risk issue
- M Medium risk issue
- L Low risk issue

Risks & Opportunities

- **Intensive crop-growing may put a strain on the local water supply.**
Crop-growing may require large amounts of fresh water for irrigation. A reliable supply of fresh water is essential for ensuring continuity of production. There may be potential for preventing shortages (i.e. storage tanks) and for addressing conflicts with other users of the same water resources. Inadequate irrigation may result in salinization of the ground.
- **The release of liquid effluents can lead to environmental pollution.**
Intensive crop-growing may use chemical fertilizers and pesticides, resulting in the contamination of rivers, lakes and groundwater. Conflicts with other users may result from water contamination. The application of pesticides must be handled carefully in order to mitigate risks to human health and the environment.
- **Monocultures impair soil quality and diminish biodiversity.**
Monocultures have a negative effect on soil fertility and require the application of large amounts of plant protective agents. By limiting the field size of a specific crop and planting a different crop each season (crop rotation) these effects can be mitigated.
- **Large-scale crop production may have a material impact on ecosystems, such as deforestation and desertification.**
Large forest areas or swampland may be cleared and drained for crop plantation. Deforestation results in erosion and changes the groundwater level. A groundwater level that is too low leads to the salinization of land, turning it into unproductive wasteland.
- **Production in greenhouses demands a great deal of energy for heating purposes.**
Crops produced in heated greenhouses require three to four times as much energy as conventionally grown crops.