

The benefits of pesticides

Agricultural crop protection products provide many environmental, social, economic and human health benefits

Agricultural crop protection products such as herbicides, pesticides and fungicides are used by farmers to control weeds, pests and plant diseases. This farming practice provides a number of environmental, social, economic and human health benefits.

Before a product reaches the market regulatory bodies balance potential risk to humans and the environment against projected economic, social and environmental benefits. If the risks are so great that benefits of any kind would not outweigh them the pesticide won't be registered for use. In fact manufacturers would not even proceed to development, as the extensive screening procedures would have removed them from their development process.

Economic benefits

- Almost 1 billion people living on less than \$1 a day live and work in rural areas and rely directly upon agriculture. Resource poor communities with little in the way of food and financial reserves can use pesticides to prevent their crops from being ravaged by pests such as locusts.
- In resource poor communities a successful harvest provides enough food with excess available for export, boosting the economy. Pesticides can also be used to extend the life of stored products post harvest, an important factor in export.
- In Australia strict quarantine measures are in place to minimise the risk of pests entering through food imports but we also rely on the pest control practices of the export country to provide us with a safe food supply.
- Increased agricultural productivity creates direct economic benefits for farm families through increased income, which in turn promotes rural development and stimulates regional economies.
- Pesticides also broaden the range of viable crop options that a farmer can grow at certain times of the year.

Social and Health benefits

- The United Nations Food and Agricultural Organisation has found that pests cost developing nations billions of dollars in national income and the loss of food in farming communities contributes to malnutrition killing more than 12 million children annually.
- In sub-Saharan Africa HIV/AIDS has resulted in labour shortages with many adults too unwell to work. Herbicide use means a farmer does not need to manually weed their field which requires 6-7 days per 0.1 ha for weed control. If hand-weeding was the only option an additional 70 million workers would be required in the US alone.
- Greater quantities of available food in the communities also means better nutrition and better health.
- With the reduced drudgery of manual labour and improved nutrition from successful harvests there is a better quality of life for those living in farming communities slowing down the flow of people moving from rural areas to cities.

- Reduced requirements for manual labour gives farmers' families the option to pursue education, rather than being forced into full time weeding of crops.

Environmental Benefits

- Herbicides reduce the mechanical cultivation of fields in turn reducing the production of greenhouse gases, slowing down soil erosion and reducing moisture loss from soil surfaces.
- No till systems would be impossible without herbicides.
- Chemical weed control has been shown to reduce soil erosion by 400% (40 tonnes/ha) and does not affect soil health with long-term exposure to pesticides over 20 years shown to have no detrimental effect on soil microorganisms.
- Higher crop yields mean producing more on the same amount of land which reduces the pressure to cultivate uncropped land to increase production.

“In the developed world we now recognise that the advantages from a diet containing fresh fruit and vegetables far outweigh potential risks from eating very low residues of pesticides in crops.”

Ian Brown (*UK Pesticides Residue Committee Report, 2004*)

“If pesticides were abolished, the lives saved would be outnumbered by a factor of around 1000 by the lives lost due to poorer diets. Secondary penalties would be massive environmental damage due to land needs of less productive farming and a financial cost of around 20 billion US Dollars”.

Bjorn Lomborg (*The Skeptical Environmentalist, 2001*)