



Applying the Farming First principles to mitigate and adapt to climate change

Members of the Farming First coalition believe that:

1. Agriculture generally, and farmers especially, are vital to mitigate and adapt to climate change.
2. Increasing farm productivity in a sustainable way and decreasing waste and losses can significantly mitigate the effects of climate change, prevent deforestation, and protect biodiversity.
3. Adopting proven sustainable agricultural practices reduces greenhouse gas (GHG) emissions and enhances the effect of natural carbon sinks.
4. Further research and innovation are essential to invent the necessary adaptation and mitigation solutions.

Farming First recommendations to negotiating governments

The Farming First coalition calls on all governments active in the COP15 negotiations to:

1. Support the unique role of agriculture in the global climate change response

- Ensure that agriculture is included within the UNFCCC negotiations at COP15 in Copenhagen.
- Refrain from setting an absolute emission reduction target for agriculture as an industry.

2. Encourage the use of all available and applicable climate change solutions

- Promote agricultural best practices, particularly Integrated Crop Management (ICM), conservation agriculture, intercropping, improved seeds and fertilizer best management practices.
- Support increased investment in agricultural research, including links between agriculture and climate change, involving research centres, programmes and industry R&D.

3. Promote funding mechanisms which support the needs of all levels and forms of farming

- Urge agricultural inclusion within multilateral financial mechanisms, potentially including the UNFCCC's Clean Development Mechanism (CDM) and Joint Implementation (JI).
- Promote voluntary carbon credit systems for GHG offsets from agriculture and land use to reward farmers for their contribution.
- Extend the scope of carbon markets to encompass the critical role of soil as a carbon sink.
- Establish international technology assessment and sharing programmes for climate change, as well as capacity-building programmes, including the development of local and global centres of excellence.

4. Reward resource-based productivity improvements as a direct contributor to climate-change effectiveness

- Encourage productivity improvements – in a sustainable way – on existing agricultural land to avoid additional land clearing and give priority to the rehabilitation of degraded agricultural soils.
- Recognise the positive contribution of sustainable land management practices through increased coordinated agricultural research.
- Include robust methodologies and field-testing to overcome uncertainties around measurement, reporting and verification.
- Provide incentives to farmers and other stakeholders which reward adoption of sustainable and responsible production systems, better performing technologies and the efforts of early adopters.

5. Invest in capability sharing to encourage all farmers to play a role in climate change while safeguarding local and global food security

- Enhance capacity building to implement sustainable land management policies and programmes.
- Create a dedicated adaptation fund for agriculture accessible to farmers' organisations in developing countries.

About Farming First

Farming First is a global coalition calling for a broad-based, knowledge-centred approach to increase agricultural output in a sustainable and socially responsible manner. The coalition includes scientists (ICSU), farmers (IFAP), engineers (WFEO), business, and NGOs.

Please visit the website to see a complete list of supporting organisations.

www.farmingfirst.org

Applying the Farming First principles to mitigate and adapt to climate change

More than a billion farmers and their families around the world are on the front line of climate change. Their lives and livelihoods are directly affected by its impact, and they are also vital to implementing many of the solutions we need to help delay and deflect it.

Therefore, farmers must be involved in implementing climate change mitigation and adaptation strategies. To support them, we must create sound and reliable incentives; we must share knowledge; and we must make adequate tools and technologies accessible to deliver both food and energy security.

As key stakeholders in agriculture, the world's farmers, agronomists, scientists, engineers and industries are working together through an open coalition, to provide innovative solutions which reduce emissions from agriculture and adapt to climate change while increasing agricultural productivity to meet growing food needs.

Given growing food demands, we believe that rather than pursuing blanket reduction targets for GHG emissions in agriculture, governments should commit to climate change mitigation through improved and sustainable agricultural productivity across multiple factors including water use, carbon efficiency, improved nutrient use efficiency, and land-use intensity.

In response, the Farming First coalition would like to bring forward a series of climate change adaptation and mitigation strategies in accordance with its six-point action plan for enhancing sustainable development through agriculture.

In line with these six principles, we encourage stakeholders to pursue policies which achieve long-term global sustainability goals through proven techniques:

1. Safeguard natural resources

- Protect natural habitats by avoiding deforestation and land clearing by sustainably improving yields on existing arable land.
- Protect the integrity of watersheds, wetlands and pasturelands to preserve ecosystem services and biodiversity.
- Invest in technologies and techniques to promote water-use efficiency, such as improved irrigation systems, conservation agriculture and better water allocation systems.
- Build up soil organic matter and prevent erosion by applying techniques such as conservation tillage, nutrient management and the use of reclamation varieties¹.
- Facilitate drought-preparedness and mitigation through appropriate technologies, including use of remote sensing, local weather forecasting, drought-tolerant crops, early warning information systems, irrigation technology and the building of resilience in rural communities.

2. Share knowledge

- Encourage education in locally-relevant agricultural practices and technologies which significantly increase carbon sequestration, reduce GHG emissions and improve agricultural productivity, particularly in developing countries.
- Create international programmes which share best practice and build capacity for the efficient application of existing climate-friendly technologies by making them more affordable and efficient in use as well as more accessible to farmers.
- Foster energy-efficiency improvements and emissions reductions in nitrogen fertilizer production by helping producers of all sizes to adopt best practice techniques.
- Reduce livestock-related emissions through rapid education and dissemination of improved efficiency of grazing systems, manure management, methane capture for biogas production and enhanced feeds and feed additives.
- Use Integrated Crop Management (ICM) best practices (notably by deploying the right nutrient source, at the right rate, right time and in the right place to improve nutrient use efficiencies) and apply Integrated Pest Management (IPM) to optimise pesticide effectiveness.
- Recognise and support the development of synergies between resilience and mitigation through the inclusion of improved farm management practices in research programmes.

¹ Reclamation varieties are plant varieties used in the context of land reclamation to restore an area after its habitat has been damaged through natural or anthropogenic factors, such as desertification, deforestation, pollution, or salination.

3. Build local access and capacity

- Mainstream and co-ordinate funding for climate change and agricultural programmes, in ways which address grassroots needs and reach all levels of farming.
- Encourage improved cropping systems (e.g. the use of cover crops and appropriate crop rotation methods, such as nitrogen-fixing legumes), cultivation practices (e.g. by limiting fallow periods and reducing cultivation) and soil-quality practices to increase overall resource productivity.
- Invest in infrastructure-building and related training programmes.
- Provide training to existing extension networks to increase the efficiency and effectiveness of farm inputs (e.g. fuel, mineral and organic nutrient sources, seeds and crop protection).
- Invest in bioenergy to achieve energy security and rural development through sustainable local production.
- Secure access to land and water resources, especially for women farmers.
- Provide risk management tools to support farmers in managing weather and market variations.
- Localise the application of agronomic knowledge, pest identification and meteorological information.
- Facilitate the use of modern varieties which are resistant to pests and diseases and decreasing the need for tilling.

4. Protect harvests

- Reduce emissions by minimising pre- and post-harvest losses.
- Support efforts to enhance food quality and safety and to reduce waste along the food chain through to end-consumers.
- Improve safety testing for food-handling and processing equipment, as well as storage techniques, cold-chain systems and transportation infrastructure.

5. Enable access to markets

- Channel new and additional funding for climate change mitigation, adaptation and technology transfer directly to the agricultural sector.
- Reward all responsive farmers using sustainable agricultural practices through positive incentives which acknowledge their vital role in providing ecosystem services.
- Develop innovative financial mechanisms for the transfer of technologies in order to support farmers in developing countries.
- Support farmers' organisations, enabling them to operate as aggregating agencies bringing together individual farmers to improve access to financial mechanisms, funding and carbon markets.
- Mainstream climate change related efforts into market development.

6. Prioritise research imperatives

- Invest in R&D aimed at scaling up a broad range of new mitigation and adaptation technologies and practices addressing diverse climate needs.
- Develop climate information services and early warning systems, as well as best possible estimates of weather and climate impacts on crop or forage production, at a temporal and spatial scale useful for vulnerable rural communities.
- Promote partnerships between farmers and scientists to develop adequate and fit-for-use technologies as well as land and water management tools where they are most needed.
- Improve scientific insight into the role of GHG emissions from methane (CH₄) and nitrous oxide (N₂O). Increase research on areas of potential savings in order to include them in any future monitoring and accounting rules determined through the Copenhagen process.
- Improve the capacity of a broad range of crops to grow in harsher climates, developing locally-adapted drought-tolerant, salinity-tolerant and heat-tolerant varieties.
- Instigate a system for monitoring GHG emissions from agriculture, including developing performance indicators for agricultural practices that reduce emissions.