



Sustainable Agriculture Initiative Platform

Newsletter

New Information Pack illustrates concrete actions of the food industry to encourage sustainable agriculture

In order to illustrate how the industry promotes sustainable development in the agricultural sector, SAI Platform issued a new Information Pack. The document contains a number of inserts describing the progress of the Platform's crop-specific Working Groups as well as some of its member companies' concrete programmes aimed at encouraging the development of sustainable agriculture worldwide.



SAI Platform's new Information Pack outlines the initiative's overall principles and actions. It also describes the way member companies promote sustainable agriculture on the ground, in the context of the Platform's Working Groups or independently. In particular, fifteen case studies illustrate how companies research, test and roll-out specific issues related to sustainable agriculture, or the entire concept. They can be grouped according to the pillar(s) of sustainability they focus on:

Economic:

- Sustainability, supply chain & quality assurance, Campina;
- Designing sustainability across the value-chain, Nestlé;
- Increasing the income-generating capacity of shade-grown coffee in Uganda, Sara Lee.

Environmental:

- Improving soil conditions for tomato production in Italy, Consorzio Interregionale Ortofrutticoli (CIO);

In this issue

Water: the Challenge for Agriculture and Food Security	2
World land use is top environmental issue	3
Agricultural biodiversity key to eliminating hunger	3
U.S. tomato growers dabble in sustainable agriculture	3
Further sources of information On sustainable agriculture	4

- Improving the environmental and animal welfare conditions of dairy farming in New Zealand, Fonterra.

Economic and Environmental:

- Testing tools for the environmental and economic improvement of milk production in France, Groupe Danone;
- Growing quality vegetables with minimum input, Findus;
- Joint programme towards increased sustainability in potato and French fry production, McDonald's & McCain;
- Putting palm oil waste to good use in Ghana, Unilever.

Environmental and Social:

- Improving the social and environmental sustainability of coffee production in Guatemala, Nestlé & VOLCAFE;

All three pillars:

- Contributing to the development of banana smallholders and their community in Peru, Dole;
- Implementation of principles and practices for sustainable coffee production in Nicaragua, ECOM & Nestlé;
- Improving the sustainability of mainstream & forest Arabica coffee production in Ethiopia, Kraft Foods;
- Promoting the sustainable production of Arabica coffee in El Salvador, Neumann Kaffee Gruppe (NKG);
- Improving the sustainability of Arabica coffee production in Honduras, Tchibo.

For the Platform and its members, sharing experiences is key to progressing towards sustainable agriculture. We hope that this new Information Pack, by allowing more people to learn from these, contributes to further promoting the sustainable development of the agricultural sector worldwide.

The Information Pack is available in pdf on <http://www.saiplatform.org/about-us/information-pack/default.htm>



Water: the Challenge for Agriculture and Food Security

When the production of food degrades the natural resource base, the ability of future generations to flourish decreases. The decline of ancient civilizations in Mesopotamia, Mediterranean as well as North and Central America is believed to have been strongly influenced by natural resource degradation from unsustainable practices. Water, which is the principal resource that has helped our societies to prosper, is becoming highly scarce. Its management thus appears to be one of this century's main challenges.



Source: Nestlé.

Worldwide, the demand for water is growing rapidly, and in many countries the cost of developing new supplies is becoming prohibitive. Simultaneously, water pollution is worsening the imbalance between water supply and demand. Estimates from the World Resources Institute in collaboration with the University of New Hampshire show that some 41% of the world's population, or 2.3 billion people, live in river basins under "water stress," meaning they are subject to frequent water shortages. Some 1.7 billion of these people live in "highly stressed" water basins where problems with local food production and economic development abound.

In this context of scarce water availability, agriculture continues to be the world's largest water user. For decades, it has been responsible for the withdrawal of about 70% of all fresh water consumed worldwide. In addition, irrigated agriculture is expected to generate much more in the future. According to a recent estimate, agriculture will need 17% more water to meet the food demands from three billion more people. This assumes that irrigated agriculture contributes 40% of all food production and that all irrigation systems achieve a water use efficiency of 70% - while at present efficiencies are in the order of 40%.

The above numbers clearly illustrates that progress on water use, especially in the agricultural sector, is becoming critical to the world's food security & development.

Schematically, the way non-sustainable agriculture depletes water resources is two-fold. Firstly, by eroding the soil and triggering nutrient leach, farming activities carry potential pollutants from farmland into surface waters and groundwater, dramatically reducing its quality. Secondly, agriculture changes the physical presence of water in a landscape through, for example, the construction of dams and reservoirs; distribution of irrigation water; drainage of wet soils and sedimentation of streams and lakes. Such changes not only affect the environment and give rise to conflicts between users of water.

Impacts of Agriculture on Water Quantity.

Extensive water storage and transfer systems have been established over the last decades, which have allowed crop production to expand to very arid regions. As a result, surface water supplies have declined, prompting overdrafting of groundwater and consequent intrusion of salt water or collapse of aquifers. In order to reverse this trend, several steps could be taken: improving water conservation and storage measures, developing drought-tolerant crop spe-

cies and using more efficient irrigation systems. In particular, the later option could save dramatic volumes of water given that around 60% of irrigation water today never reaches the crop, lost to evaporation & runoff.

Case Study: The High Plains Aquifer which underlies parts of Oklahoma, Texas and six other states could be depleted faster than expected, according to a recent U.S. Geological Survey study. In Oklahoma, more than 85% of the water pumped from the aquifer is used to irrigate crops. The rest is used for livestock, and municipal and domestic needs. K. Lunsford, a Texan farmer, already has been affected by the aquifer's struggle: "In order to preserve what water we do have, I had to look for a different crop," he said. "And cotton is the crop I chose for the water situation."

Impacts of Agriculture on Water Quality.

Water pollution adds enormously to existing problems of water scarcity by removing large volumes of water from the available supply. In many parts of the world, rivers and lakes have become so polluted that their water is unfit even for industrial uses. The most important problems are salinization and contamination of ground and surface waters by pesticides, nitrates and selenium. Temporary solutions include the use of salt-tolerant crops and various management techniques to minimize the effects of salts on crops. In the long-term though, some farmland will have to be converted to other uses such as the production of drought-tolerant forages, the restoration of wildlife habitat or the use of agroforestry to minimize the impacts of salinity and high water tables.

In the end, better management is key to mitigating water scarcities for the future. Nevertheless, more efficient technologies will not be sufficient to address this challenge. Policy choices will have to be made in order to reallocate water to the most economically, socially and environmentally beneficial uses. This may mean diverting water from agriculture. In China for example, planners estimate that water used in the industry generates 70 times more economic value than in agriculture. Farmers near Tirupur in India abandon their farms to sell groundwater to water-hungry industries & urban users. "Water markets" are also developing in the US and Australia.

An important aspect to managing water more efficiently is allowing water prices to reflect the true cost of supply. For instance, price reforms in Chile reduced irrigation water use 22-26% and saved \$400 million in costs for developing new water supplies. The policy and social decisions made over the next decade will be crucial to stop freshwater shortages and ensure long-term water access to the world's population in an equitable manner.

World land use is top environmental issue

The massive conversion of the world's natural landscapes to agriculture and other uses may soon begin to undermine the capacity of the planet's ecosystems to sustain a burgeoning human population.

According to a report published in *Science* by a group of lead scientists, land use is no longer just a local issue. It is a force of global importance as the world's six billion people compete for food, water, fiber & shelter. Nearly 30% of the world's land surface is now in use for agriculture & millions of acres of natural ecosystems are converted each year.

Many of the agricultural practices, built on Western-style methods, are unsustainable, requiring large applications of chemical fertilizers & further sculpting of the landscape to divert water to marginal lands. "While land use practices vary greatly across the world, their ultimate outcome is generally the same: the acquisition of natural resources for immediate human needs, often at the expense of degrading the environment," writes Foley, lead author of the *Science* paper.

The survey of global land use practices portrays a need for closer collaboration between scientists & land use planners,

hydrologists, farmers, architects and health care professionals to forestall greater environmental degradation. "Land use has multiple causes. We recognize the need for food, water and shelter," notes the author. "But it also has multiple outcomes, and scientists need to look at the big picture."

An example, he says, is changing patterns of human & animal disease as climate changes & allows pathogens to flourish in regions where they previously did not exist. Diseases such as West Nile, malaria and cholera are infectious diseases that have

emerged in new places and whose frequency has increased as land use shifts.

"Short of a collision with an asteroid, land use is the most significant impact on the world's biosphere," says Foley.

Foley emphasizes that scientists must now consider the whole landscape, incl. cities, suburbs and agricultural areas in their assessments of global environmental health. "We need to look at land use in a global context. The whole system needs to be considered."

Based on an article from GreenBiz.com, Aug. 9, 2005

Agricultural biodiversity key to eliminating hunger

Concerned about an assessment indicating that "progress in reducing hunger & poverty is inadequate", a consultation of experts and policy makers was explored how agricultural biodiversity can help the world achieve the Millennium Development Goals (MDG).

The consultation declared that agricultural biodiversity is central to poverty alleviation & hunger reduction programmes as it provides "opportunities for developing decentralised and locale-specific community

food security systems involving field gene banks, seed banks and grain banks developed and managed by local women and men."

International agencies & nations were urged to recognise that incorporation of agricultural biodiversity conservation & sustainable use in national development plans, along with the creation of cross-sectoral linkages & coherence among concerned Ministries at national level, is important to realise the MDG.

Nations were asked to introduce legislations allowing people to make use of agricultural biodiversity & its associated traditional knowledge for promoting farm employment & income generation in harmony with traditional rights, cultural diversity, ecosystem integrity & gender equity. They were further asked to reward the contributions of rural & indigenous people, incl. women, in the conservation & enhancement of agricultural biodiversity and confer social prestige

and economic benefit to its primary conservers.

Finally, the consultation called upon nations and agencies to restructure research & development priorities to enhance productivity, profitability and value chain development of a wider range of agricultural biodiversity. It also wished that local markets facilitate access to international markets for traditional & functional foods.

*Based on an article from The Financial Times, July 22, 2005
Powered by Dialog*

U.S. tomato growers dabble in sustainable agriculture

After years of unsteady prices and crop yields, Central Valley growers who supply 95% of the nation's processing tomatoes, hope to boost profits & keep consumers happy by dabbling in the "sustainable agriculture" movement.

Even as organic growers often criticize "sustainable agriculture" as falling short of their environmental objectives of ending the use of chemical pesticides and fertilizers, its boosters believe they can produce more change on the farm with a gradual approach. "We strongly support organic agriculture," said E. Olson, senior

attorney for the Natural Resources Defense Council, "but this can be an addition that can reach a much wider swath of the economy & of agriculture."

Sustainable farming is a 1980s concept that has come to mean greater use of predatory insects to control pests, less plowing to curb dust and planting more off-season crops that replenish soil nutrients. It advocates family farms, greater crop diversity, better farm labor conditions and healthier rural economies.

Tomato growers and processors hope special labeling will

one day generate sales for their produce, much as organic growers do for their crops. Some industry representatives have begun teaming with the nonprofit group "Protected Harvest" to use that moniker as a label for sustainably grown tomato products. Labeling could begin within two years for tomato juice, salsa, sauces and ketchup -- more than half of a product lineup that grosses \$5 billion on grocery shelves.

The "Protected Harvest" logo, which already marks sustainably grown potatoes from 6,000

acres in Wisconsin, won over \$500,000 in government funding. The money will fund a book of mutually agreed practices that specifically define "sustainably grown tomatoes". Only growers and processors following those practices can label their product, said C. Brickey, Executive Director of Protected Harvest.

The group has also received a \$1 million U.S. Department of Agriculture grant to launch more sustainable farming practices in the state's tree fruit industry.

*Based on an article published in Contra Costa Times, Aug. 24, 2005
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Further sources of information on sustainable agriculture (and related issues)

“Methods and material in soil conservation” is a CD-rom aimed principally at the developing world and the manual it contains describes methods, techniques & the selection of materials for use in areas where access, resources & skills may be limited. To be ordered from FAO’s website at: http://www.fao.org/icatalog/search/dett.asp?aries_id=105784

“Irrigation and drainage performance assessment: Practical guidelines” provides guidelines enabling practitioners to carry out performance assessment and implement performance-based management. By M G Bos, M A Burton & D J Molden. To be ordered on: <http://cabi-publishing.org/bookshop/BookDisplay.asp?SubjectArea=Eco&Subject=All+Categories&PID=1834>

“Macrobiological methods for assessing soil quality” reviews the theory and practice of various microbiological methods used by many countries to monitor the protection of soil quality and biodiversity. By J Bloem. To be ordered on: <http://cabi-publishing.org/bookshop/BookDisplay.asp?SubjectArea=Eco&Subject=All+Categories&PID=1880>

“Valuating crop biodiversity: On-farm genetic resources & economic change” presents economic tools & methods for valuing and managing crop biodiversity drawing from case studies across a range of agricultural economies and income levels. By M Smale. To be ordered on: <http://cabi-publishing.org/bookshop/BookDisplay.asp?SubjectArea=Pla&Subject=All+Categories&PID=1893>

Market, Trade & Policy Corner

“Rural change and sustainability: Agriculture, the environment & communities” is a collection of papers focusing on agricultural change, environmental issues, rural communities, governance & globalization, and rural responses to these. By S J Essex, A W Gilg & R Yarwood. To be ordered on: <http://cabi-publishing.org/bookshop/BookDisplay.asp?SubjectArea=Agr&Subject=All+Categories&PID=1886>

“International trade and policies for genetically modified products” examines controversial issues surrounding international trade in and policies for, genetically modified products & agricultural biotechnology. By R E Evenson & V Santaniello. To be ordered on: <http://cabi-publishing.org/bookshop/BookDisplay.asp?SubjectArea=Agr&Subject=All+Categories&PID=1854>

“Agricultural policies in OECD countries” is a unique source of up-to-date estimates of support to agriculture. Can be purchased on: <http://www.oecdbookshop.org/oecd/display.asp?SF1=identifiers&ST1=5LH09QP33FD2>

“Integrating socio-economic considerations into bio-safety decisions: The challenge for Asia” introduces the socio-economic implications of agricultural biotechnology and suggests a research agenda to determine if/how biotechnology can contribute to pro-poor sustainable development in Asia. By A Lavina & L Fransen. Available in pdf on: http://pubs.wri.org/pubs_description.cfm?PubID=4089

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