POOR FARMERS CAN'T AFFORD CONSERVATION

Canberra -- Farmers who lack the simple necessities of life probably don't think about the impact of their farming practices on the environment, an expert on international agriculture says. "Their greatest concern is survival: for themselves, their families and their animals."

Only when poor farmers can increase their earnings will there be any hope of restoring and sustaining erosion control, according to Dr. Leslie Swindale, Director General of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Hyderabad, India. Finding ways that Third World farmers can increase food production without depleting basic soil and water resources is a long-standing goal of the 13 international research centers supported by the CGIAR--the Consultative Group on International Agricultural Research, he says.

Swindale, a New Zealander, is in Canberra this week for the annual mid-term meeting of the CGIAR. As chairman of the CGIAR's committee on sustainable agricultural production, he will report to the meeting delegates on how to promote agricultural sustainability--the effort to ensure that today's productivity breakthroughs are not being made at the expense of tomorrow's environment.

"The most important way we help the poorest people is to help them reduce the costs of their staple foods," Swindale says. "We all share a common concern that increased production does not lead to resource degradation. Profits
without conservation will not provide lasting benefits," he says, "neither will conservation without profits."

As an example of research that leads to sustainable increases in productivity, Swindale cites farmers in India, who have left a certain type of deep, black soil exposed to erosion during the rainy season because it is too sticky to cultivate when wet.

Scientists at the Hyderabad center have developed new technology for double-cropping these soils, which can increase farmer profits by 250%. Double-cropping consists of raising two crops per year.

Farmers are quick to adopt the double-cropping systems, the improved seeds, and the use of fertilizers, Swindale says. But they are less likely to take up the more expensive land-leveling and drainage systems.

"Fortunately, the most important erosion control measure is to crop the soil during the rains. This farmers seem willing to do--once the problem of managing the wet, sticky soil is overcome--because of the extra profits."

Although the centers supported by the CGIAR devote some time to high-input agriculture, which is increasing in the developing world, the major portion of their research is currently aimed at developing technologies for resource-poor farmers and for producers who work in difficult farming environments.

Research that emphasizes the recycling of nutrients, the incorporation of crop residues, and the use of intercropping systems--including agroforestry and the combination of cereals and legumes--contributes to the sustainability of low-input agriculture.

So too do crop varieties that are tolerant of environmental stresses and animals and crops tolerant or resistant to existing pests and diseases, Swindale says.