

Earth Summit needs more than just flag waving

"Agriculture must seek to become more environmentally sustainable. Governments of all levels are redirecting resources and devising programs that encourage farmers to be as good managers of the environment as they are of food production. Considerable progress has been made; however, continued effort is required."

These words are the summary conclusion of the agricultural section of the "State of the Environment" report, recently published by Environment Canada. One can only hope that the government itself heeds its own advice. Indeed, progress is being made; farmers are flocking to joint federal-provincial programs that provide financial compensation to maintain a minimum crop residue cover on fields; the Ontario Federation of Agriculture has initiated a farm-based environmental plan; Quebec creeps towards the implementation of a three metre uncultivated strip along all waterways; many provinces are setting objectives to cut pesticide use in half within the next decade.

Nonetheless, more effort is still required and Canada, before the watching world at the Environmental Summit in Rio de Janeiro this June, could set an example that would be both good for agriculture and the environment. Global warming, through accumulated carbon dioxide emissions, ranks as one of the foremost environmental problems that the world faces in the next 50 years. The prospect of these emissions declining at a rate sufficient to avert serious regional weather dislocations appear remote. Strategies need to be identified which can remove carbon dioxide from the atmosphere (increase the carbon sink) and reduce use of fossil fuels (reduce carbon sources).

Canada, and the United States, have the greatest potential to become the carbon "sinks" of the world through the widespread cultivation of grasses on their native prairie regions, as well as on marginal lands in other regions. Such species as switchgrass (described in the Fall 1991 issue of Sustainable Farming) have a tremendous ability to absorb carbon from the atmosphere and convert it efficiently into plant material; over 90% of the energy used by pasture species for growth comes from the sun. Prairie grasses are a solar battery that can, in turn, be converted to usable energy as ethanol. Prairie grasses offer a double billing in carbon dioxide reduction - carbon removal from the atmosphere when stored as plant matter, and environmentally neutral when that energy is released through use. North America has vast areas suited to these types of plants, areas currently being used to produce

surplus crops in often fragile environmental conditions. For example, if just the 3.3 million acres in Iowa idled by U.S. federal agricultural programs were used to produce switchgrass, the state could produce 1.98 billion gallons of ethanol; in 1990, Iowa used only 1.3 billion gallons of gasoline.

The potential is tremendous, and inaction equally dismaying. A biomass fuel industry will touch some of this nation's most pressing concerns: global warming, energy security, soil conservation and rebuilding rural communities. Farmers could actually plant a soil conserving crop and get paid a decent rate of return - from the market, not the government. A recent analysis of U.S. conservation set aside programs by the Soil and Water Conservation Association indicated that economics was the main factor influencing a farmer's decision whether or not to idle marginal lands; remove set aside funding and much of that acreage will come back into production for both a potential financial and certain environmental loss.

The ecological balance of the world was long ago disrupted with the clear cutting of forests in the northern hemisphere. Temperate forests were the 'sink', storing carbon in the soil below as the plant biomass fell to the ground and rotted. Tropical forests are still the 'tap', producing greater quantities of oxygen but returning larger amounts of carbon to the atmosphere due to rapid consumption of decaying biomass by insects. The temperate forests of old are unlikely to return and it is the hope of many that the environmental summit will be the first step in preventing tropical forests from meeting the same fate as their northern cousins. In the meantime, Canada can do its part to return to an ecological balance by reactivating its natural carbon sink on the prairie. The development of a biomass fuel industry is a means of enabling Canada to lead the world in reducing carbon dioxide emissions and the summit in Brazil is the place to show that considerable effort is being made to ensure continuing progress towards environmental sustainability.

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