Development. Copyright © 2000 The Society for International Development. SAGE Publications (London, Thousand Oaks, CA and New Delhi), 1011-6370 (200006) 43:2; 77–82; 012995.

Special Section on Food Security

WORLD FOOD PROGRAMME

The Multiple Functions and Benefits of Small Farm Agriculture in the Context of Global Trade Negotiations[1]

PETER ROSSET

ABSTRACT *Peter Rosset challenges the conventional wisdom that small farms are backward and unproductive. Using evidence from southern and northern countries he demonstrates that small farms are 'multi-functional' – more productive, more efficient, and able to contribute more to economic development than large farms. He analyses the threats posed to small farmers by today's trade liberalization and concludes with a call to unite against an Agreement on Agriculture that might make their continued existence impossible.*

KEYWORDS *biodiversity; environment; food security; liberalization; social justice*

In praise of small farms

For more than a century mainstream economists in both capitalist and socialist countries have confidently and enthusiastically predicted the demise of the small, family farm. Small farms have time and again been labelled as backward, unproductive and inefficient – an obstacle to be overcome in the process of economic development. The American model of large scale, mechanized, corporate agriculture is held out as the best, if not the only, way to feed the world's population. Small farmers – or 'peasants' – have been expected to go the way of the dinosaurs.

The conventional wisdom about small farms needs to be challenged. Their 'multi-functional' character makes them more productive, more efficient, and enables them to contribute more to economic development than large farms. Small farmers make better stewards of natural resources, conserving biodiversity and better safeguarding the sustainability of production.

The ongoing process of trade liberalization – now being taken a step further in the World Trade Organization (WTO) negotiations for the Agreement on Agriculture (AoA) – has already had dramatically negative effects on small

farmers everywhere. The AoA has the potential to severely undercut the remaining viability of small farm production, with potentially devastating consequences for rural economies and environments worldwide. It is now time to act in support of the small farm model of rural development.

Small farm virtues in the US

Although rural–urban migration has driven small farmers out of rural America by the millions, family farmers do still persist in the US and continue to be numerically dominant. Policy changes are necessitated to take advantage of small farms' potential dynamism. According to the United States Department of Agriculture (USDA, 1998), the public value of small farms includes:

- Diversity. Small farms embody a diversity of ownership, cropping systems, landscapes, biological organization, culture and traditions. A varied farm structure contributes to biodiversity and a diverse and esthetically pleasing rural landscape.
- Environmental benefits. Responsible management of the natural resources of soil, water, and wildlife on the 60 percent of all US farms less than 180 acres in size, produces significant environmental benefits for society. Investment in the viability of these operations will yield dividends in the stewardship of the nation's natural resources.
- Empowerment and community responsibility. Decentralized land ownership produces more equitable economic opportunity for people in rural areas, as well as greater social capital. This can provide a greater sense of personal responsibility and feeling of control over one's life, characteristics that are not as readily available to factory line workers. Landowners who rely on local businesses and services for their needs are more likely to have a stake in the well-being of the community and the well-being of its citizens. In turn, local landowners are more likely to be held accountable for any negative actions that harm the community.
- Places for families. Family farms can be nurturing places for children to grow up and acquire values. The skills of farming are passed from one generation to another under family ownership structures.
- Personal connection to food. Most consumers have little connection to agriculture and food production. As a consequence, they have little connection with nature, and lack an appreciation for farming as cultivation of the earth for the production of food that sustains us. Through farmers' markets, community supported agriculture, and the direct marketing strategies of small farmers, consumers are beginning to connect with the people growing their food, and with food itself as a product of a farmer's cooperation with nature.
- Economic foundations. In various states and regions of the US, small farms are vital to the economy.

The USDA Commission on Small Farms concludes with a powerful call to change the policies that have favoured large, corporate-style farms for so very long, with hideous costs to rural communities and the environment.

Virtues of the small farm in the South

A similar pattern holds in the South, where policies promoting large farm export agriculture have increasingly eroded the viability of small farms, despite the many benefits small scale production of food offer.

In traditional farming communities the family farm is central to maintaining community and to the sustainability of agricultural production. On the small farm, productive activities, labour mobilization, consumption patterns, ecological knowledge and common interests in long-term maintenance of the farm as a resource contribute to a stable and lasting economic and family-based enterprise. Work quality, management, knowledge and relationships are intertwinned and mutually reinforcing. Short-term gain at the risk of degrading essential resources not only invites community sanction, but also places the family and the farm at risk of collapse. Family farmers regularly achieve higher and more dependable production from their land than do larger farms operating in similar environments. Labour intensive practices such as

manuring, limited tillage, ridging, terracing, composting organic matter, and recycling plant products into the productive process enhance soil conservation and fertility (Netting, 1993).

The durability of small farm production is clear in its historical and spatial ubiquity: small farms exist in all environments, in all political and economic contexts, in all historical periods over the last 5000 years, and in every known cultural area where crops can be grown. Small farmers have developed and use a variety of technologies, crops, and farming systems. Perhaps most important in an era of diminishing non-renewable resources, small farmers frequently produce with minimal recourse to expensive external inputs (Netting, 1993).

According to the Food and Agriculture Organization (FAO) of the United Nations (1999), we must value the multiple functions of farms in the Third World if we are to achieve a sustainable agriculture and which is not just a means to obtain more food and income, in socially acceptable ways which do not degrade the environment. Rather, sustainable land use should be an opportunity to improve the quality of the environment, including its physical (increased soil fertility, better quality air and water), biological (healthier and more diverse animal, plant, and human populations), and social, economic and institutional (greater social equity, cohesion, peace/stability, well-being) components.

Small farm productivity

How many times have we heard that large farms are more productive than small farms, and that we need to consolidate land holdings to take advantage of that greater productivity and efficiency? The actual data shows the opposite – small farms produce far more per acre or hectare than large farms.

One reason for the low levels of production on large farms is that they tend to be monocultures. The highest yield of a single crop is often obtained by planting it alone on a field. But while that may produce a lot of one crop, it generates nothing else of use to the farmer. In fact, the bare ground between crop rows invites weed infestation. The weeds then invest labour in weeding or money in herbicide.

Large farmers tend to plant monocultures because they are the simplest to manage with heavy machinery. Small farmers, especially in the Third World, are much more likely to plant crop mixtures – intercropping – where the empty space between the rows is occupied by other crops. They usually combine or rotate crops and livestock, with manure serving to replenish soil fertility.

Such integrated farming systems produce far more per unit area than do monocultures. This holds true whether we are talking about an industrial country like the United States, or any country in the South. In all cases, relatively smaller farm sizes are much more productive per unit area – 200 to 1000 percent more productive – than are larger ones. In the United States the smallest farms, those of 27 acres or less, have more than 10 times greater dollar output per acre than larger farms. While in the US this is largely because smaller farms tend to specialize in high value crops like vegetables and flowers, it also reflects relatively more attention devoted to the farm, and more diverse farming systems.

Small farms and economic development

More bushels of grain is not the only goal of most farm production; farm resources must also generate wealth for the overall improvement of rural life – including better housing, education, health services, transportation, local business diversification, and more recreational and cultural opportunities.

In the United States, the question was asked more than a half-century ago: what does the growth of large-scale, industrial agriculture mean for rural towns and communities (Goldschmidt, 1978)? In farming communities dominated by large corporate farms, nearby towns died off. Mechanization meant fewer local people were employed, and absentee ownership meant farm families themselves were no longer to be found. In these corporate-farm towns, the income earned in agriculture was drained off into larger cities to support distant enterprises, while in towns surrounded by family farms the income circulated among local business establishments, generating jobs and community prosperity. Where family farms predominated,

there were more local businesses, paved streets and sidewalks, schools, parks, churches, clubs, and newspapers, better services, higher employment, and more civic participation. Recent studies confirm that Goldschmidt's findings remain true.

If we turn toward the Third World we find similar local benefits to be derived from a small farm economy. The Landless Workers Movement (MST) is a grassroots organization in Brazil that helps landless labourers to organize occupations of idle land belonging to wealthy landlords. When the movement began in the mid-1980s, the mostly conservative mayors of rural towns were violently opposed to MST land occupations in surrounding areas. In recent times, their attitude has changed. Most of their towns are very depressed economically, and occupations can give local economies a much needed boost. Typical occupations consist of 1000 to 3000 families, who turn idle land into productive farms. They sell their produce in the market-places of the local towns and buy their supplies from local merchants.

Not surprisingly, those towns with nearby MST settlements are better off economically than other similar towns, and many mayors now actually petition the MST to carry out occupations near their towns. Local and regional economic development benefits from a small farm economy, as do the life and prosperity of rural towns. Can we re-create a small farm economy in places where it has been lost, to improve the well-being of the poor?

Recreating a small farm economy

Recent history shows that the re-distribution of land to landless and land-poor rural families can be a very effective way to improve rural well-being. We can examine the outcome of land reform programmes carried out in the Third World since World War II, being careful to distinguish between genuine land reforms – when quality land was really distributed to the poor and the power of the rural oligarchy to distort and 'capture' policies was broken – and 'fake land reforms' – when the poor have been relegated to the poorest, most remote soils. In every case of genuine land reform, real, measurable poverty reduction and improvement in human welfare has invariably been the result. Japan, South Korea, Taiwan, Cuba, and China are all good examples. In contrast, countries with reforms that gave only poor quality land to beneficiaries, and/or failed to alter the rural power structures that work against the poor, failed to make a major dent in rural poverty. Mexico and the Philippines are typical cases of the latter.

More recently IBASE, a research centre in Brazil, studied the impact on government coffers of legalizing MST-style land occupations *cum* settlements versus the services used by equal numbers of people migrating to urban areas. When the landless poor occupy land and force the government to legalize their holdings, it implies costs: compensation of the former landowner, legal expenses, credit for the new farmers, and others. Nevertheless the total cost to the state to maintain the same number of people in an urban shanty town – including the services and infrastructure they use – exceeds in just one month the yearly cost of legalizing land occupations.

Another way of looking at it is in terms of the cost of creating a new job. Estimates of the cost of creating a job in the commercial sector of Brazil range from two to 20 times more than the cost of establishing an unemployed head of household on farm land, through agrarian reform. Land reform beneficiaries in Brazil have an annual income equivalent to 3.7 minimum wages, while still landless labourers average only 0.7 of the minimum. Infant mortality among families of beneficiaries has dropped to only half of the national average. This provides a powerful argument that using land reform to create a small farm economy is not only good for local economic development, but is also more effective social policy than allowing business-as-usual to keep driving the poor out of rural areas and into burgeoning cities.

Good stewards of natural resources

The benefits of small farms extend into the ecological sphere. Where large, industrial-style farms impose a scorched-earth mentality on resource management – no trees, no wildlife, endless monocultures – small farmers can be very effective stewards of natural resources and the soil. To begin with, small farmers utilize a broad array of resources and

have a vested interest in their sustainability. Their farming systems are diverse, incorporating and preserving significant functional biodiversity within the farm. By preserving biodiversity, open space, and trees, and by reducing land degradation, small farms provide valuable ecosystem services to the larger society. In the United States, small farmers devote 17 percent of their area to woodlands, compared to only 5 percent on large farms, and keep nearly twice as much of their land in 'soil improving uses', including cover crops and green manures. In the Third World, peasant farmers show a tremendous ability to prevent and even reverse land degradation, including soil erosion. Compared to the ecological wasteland of a modern export plantation, the small farm landscape contains a myriad array of biodiversity. The forested areas from which wild foods and leaf litter are extracted, the wood lot, the farm itself with intercropping, agroforestry, and large and small livestock, the fish pond, the backyard garden, allow for the preservation of hundreds if not thousands of wild and cultivated species. Simultaneously, the commitment of family members to maintaining soil fertility on the family farm means an active interest in long-term sustainability not found on large farms owned by absentee investors.

Free trade threatens small farm agriculture

Despite decades of anti-small farm policies taken by nation states (Lappé et al., 1998), small farmers have clung to the soil in amazing numbers. But today we stand at a crossroads. Trade liberalization – the move toward global free trade policies – poses a grave threat to the continued existence of small farms throughout the world. Over the past couple of decades southern countries have been encouraged, cajoled, threatened, and generally pressured into unilaterally reducing the level of protection offered to their domestic food producers in the face of well-financed foreign competitors. Through participation in GATT, NAFTA, the World Bank, the International Monetary Fund and the World Trade Organization, they have reduced or in some cases eliminated tariffs, quotas and other barriers to unlimited imports of food products (Bello et al., 1999). On the face of it, this might sound like a good thing. After all, more food imports might make food cheaper in poor, hungry countries, and thus make it easier for the poor to obtain enough to eat. However, the experiences of many countries suggest that there are downsides to these policies which may outweigh the potential benefits.

Typically, southern economies have been inundated with cheap food coming from the major grain exporting countries. For a variety of reasons (subsidies, both hidden and open, industrialized production, etc.) this food is more often than not put on the international market at prices below the local cost of production. That drives down the prices that local farmers receive for what they produce, with two related effects, both of which are negative (Lappé et al., 1998).

First, a sudden drop in farm prices can drive already poor, indebted farmers off the land over the short term. Second, a more subtle effect kicks in. As crop prices stay low over the medium term, profits per unit area – per acre or hectare – stay low as well. That means the minimum number of hectares needed to support a family rises, contributing to abandonment of farm land by smaller, poorer farmers – land which then winds up in the hands of the larger, better off farmers who can compete in a low price environment by virtue of having very many hectares. They overcome the low profit per hectare trap precisely by owning vast areas which add up to good profits in total, even if they represent very little on a per hectare basis. The end result of both mechanisms is the further concentration of farm land in the ever fewer hands of the largest farmers (Lappé et al., 1998).

A penalty is paid for this land concentration in terms of productivity, as large farmers turn to monocultures and machines to farm such vast tracts, and in terms of the environment, as these large mechanized monocultures come to depend on agrochemicals. Jobs are lost as machines replace human labour and draft animals. Rural communities die out as farmers and farm workers migrate to cities. Natural resources deteriorate as nobody is left who cares about them. Finally, food security is placed in jeopardy: domestic food production falls in the face of cheap imports; land that was once used to grow food is placed into production of

export crops for distant markets; people now depend on money, rather than land, to feed themselves; and fluctuations in employment, wages and world food prices can drive millions into hunger.

In the context of today's trade liberalization, it is crucial to underline that agriculture produces not only commodities, but also livelihoods, cultures, ecological services, etc., and as such, the products of farming cannot be treated in the same way as other goods.

The Japanese government, in a preparatory document for the Seattle negotiations, put it this way (Permanent Mission of Japan, 1999):

> The multifunctionality of agriculture has the following characteristics: (a) Most aspects of multifunctionality are regarded as economic externalities and it is difficult to reflect their values properly in market prices. Though it is closely related to production, it cannot be subject to trade; (b) Market mechanisms alone cannot lead to the realization of an agricultural production method that will embody the multifunctionality of agriculture.

Norway has also endorsed the concept of multifunctionality as the basis for special treatment of farming for reasons of environmental protection, food security and the viability of rural areas (Norwegian Ministry of Agriculture, 1998), as has the European Union to some extent (European Commission, 1999), and as have some other countries.

Ignoring the multiple functions of agriculture has caused untold suffering and ecological destruction in the past. The time is long overdue to recognize the full range of contributions that agriculture – and small farms in particular – make to human societies and to the biosphere. The world's civil society should demand that our governments respect the multi-functionality of agriculture and grant each country true sovereignty over food and farming, by stepping back from free trade in agricultural products. Instead of deepening policies that damage small farms, we should implement policies to develop small farm economies. These might include genuine land reforms, tariff protection for staple foods – so that farmers receive fair prices – and the reversal of biases in policies for credit, technology, research, education, subsidies, taxes and infrastructure which unfairly advance large farms at the expense of smaller ones. By doing so we will strike at the root causes of poverty, hunger, underdevelopment and degradation of rural ecosystems.

Note

1 This article is a condensed version of Food First Policy Brief number 4, *The Multiple Functions and Benefits of Small Farm Agriculture in the Context of Global Trade Negotiations*. The complete policy brief, also including extensive bibliographic references, can be ordered from the Institute or read at <www.foodfirst.org/pubs/policybs/pb4.html>

References

Bello, W., Sh. Cunningham and B. Rau (1999) *Dark Victory: The United States and Global Poverty*, 2nd edn. Oakland: Food First Books.

European Commission (1999) 'The EU Approach to the Millennium Round'. Communication from the Commission to the Council and to the European Parliament. Brussels: European Commission <http://europa.eu.int/comm/dg01>

Food and Agriculture Organization, United Nations (FAO) (1999) *Synopsis: The Multiple Roles of Agriculture and Land*. Prepared for 'Cultivating our Futures: FAO/Netherlands Conference on the Multifunctional Character of Agriculture and Land'. Rome: Sustainable Development Division of FAO.

Goldschmidt, W. (1978) *As You Sow: Three Studies in the Social Consequences of Agribusiness*. New York: Allenheld, Osmun.

Lappé, F.M., J. Collins and P. Rosset, with L. Esparza (1998) *World Hunger: Twelve Myths*, 2nd edn. New York: Grove Press.

Netting, R. (1993) *Smallholders, Householders: Farm Families and the Ecology of Intensive, Sustainable Agriculture*. Stanford: Stanford University Press.

Norwegian Ministry of Agriculture (1998) *Non-Trade Concerns in a Multifunctional Agriculture – Implications for Agricultural Policy and the Multilateral Trading System*. Oslo: Ministry of Agriculture (ODIN-LD) <http://odin.dep.no/landbruk/faktorare.html>

Permanent Mission of Japan (1999) *Negotiations on Agriculture: Communication from Japan*. Geneva: World Trade Organization. WT/GC/W/220.

USDA (United States Department of Agriculture) (1998) *A Time to Act: A Report of the USDA National Commission on Small Farms*. Washington DC: USDA Miscellaneous Publication 1545.