

Cuba has become a world-class laboratory for organic farming. Walter Schwarz reports on the city gardens where crops are grown to sell to local people.

Nothing that lives and grows in Ricardo Sanchez's garden needs anything putting on it that comes from elsewhere. He feeds his vegetables with compost from his kitchen, his catfish on worms and larvae, his rabbits on leaves and herbs. He makes natural pesticides to protect his produce. His tomatoes, guavas, avocados, mangoes, herbs and medicinal plants compete for space under the shadow of palm trees between his house and the neighbour's.

An organic gardening freak? No, this is one of Havana's 62,000 patio gardens - private urban plots of less than 800 square metres devoted to food production. All enjoy elaborate official support. A sign outside his house proclaims that Sanchez's garden is supported by three separate institutions: the people's patio movement for eco-organic production, the agriculture and pisciculture network and the municipal food development committee.

In Britain, eco-enthusiasts dream of state-sponsored organic farming, of farmers' markets supplying local produce for everyone, of city gardens feeding urban populations. In Cuba, the government orders this to happen and provides the means.

You see the veggie stalls on pavements, at street corners and under the covered walkways of Havana's elegant, crumbling colonial buildings. Produce arrives all day in handcarts and lorries, and turnover is fast. Food grows in unlikely spaces between houses. Patios (or *huertos*) are the smallest unit. Over a million patios are registered in Cuba. Larger urban market gardens, growing vegetables on raised beds and selling them on site, are called *organoponicus*. In the Playa borough, at the corner of 25th and 14th Streets, the *organoponicus* boasts a hectare abundant with parsley, lettuce, Chinese spinach and tomatoes. Growing on 250 raised beds supported on tiles, the vegetables look as large, shiny, regular and immaculate as they would on a supermarket shelf.

Enlisting the Natural Enemy

Members were tending the plants as volunteers, alongside paid workers. Andreas Verdecia, the technical manager, is employed full-time by Granja Urbana, the government's urban farming institute. He said the produce was 100% organic. 'We are supplied with compost made by worms. Against fungi, we use other fungi; we try to find the natural enemy.'

Cuban food is what we would call 'organically grown'. There is not yet an organic certifying institution like our Soil Association. Most chemical inputs are banned in cities, but a mild, low-toxin pesticide called *Cabaril* is allowed, to protect seeds from ants.

'What matters for us is that it's sustainable,' said Leonardo Cirino, an assistant director of *Anap*, the association of small farmers. 'Look what happens in Latin America. Organic coffee, but there's no education, no health services, bad housing. For us, organic growing is part of a culture.'

The *organoponicus* at 44th Street and Fifth Avenue, one of the oldest in Havana, employs nine full-time workers and sells most of its produce on the spot. Prices are lower than in the mainstream markets but higher than the ration shops. The vegetables are not certifiably organic because *Cabaril* is used. No other chemicals are allowed. 'When we came up against a soil parasite we tried every natural remedy, but the parasite is still there,' says the manager, Alvaro Garcia, a former physics lecturer. 'So we just plant short-harvest crops like lettuce; no tomatoes.'

The Cuban organic revolution has happened because there was no other alternative. Boycotted by the US, Cuba's communist economy had been tied to the Soviet bloc in conventional, capital-intensive chemical farming. With the collapse of the Soviet Union in 1989, most imports of food, fuel, tractors, fertilisers and pesticides were cut off.

'Our problems must be solved without feedstocks, fertilisers or fuel,' said Fidel Castro in 1991. Cuba's 'alternative model', a science-based, low-input sustainable agriculture, was launched - the largest such conversion in history.

Cuban agriculture has now become a world-class laboratory for non-chemical fertilizers and pesticides, farming in small units with highly motivated producers, and growing food in and around cities. Traditional practices, such as the use of compost castings made by red worms fed on a diet of kitchen scraps, were revived and refined.

With 2% of Latin America's population, Cuba has 11% of the scientists. 'Barefoot' agronomists, just graduated, worked in rural co-operatives to invent organic fertilizers and pesticides. Farmers rediscovered sustainable techniques of intercropping and replacing tractors with oxen. The experiment continues to evolve. More than 200 bio-tech centres produce and distribute non-toxic bio-fertilisers and pesticides based on local micro-organisms.

Bucking the Trend

A crucial part of the drive to food sovereignty was the land reforms which switched 40% of farmland from state farms to incentive-based co-operatives. Farmers could sell to farmers' markets, offering better prices than the state. Remaining state farms were broken up into basic production units in which the state owns the land but the members manage the business. In the cities, patio gardeners can sell their surplus in approved stalls.

'Checkmate to neo-liberalism' proclaims a poster in the offices of *Inifat*, the national institute for tropical agriculture. Cuban policies have bucked the world trend. Other Latin American and Caribbean countries, forced to follow the prevailing model of liberalized markets and deflationary monetary policy, saw greater inequality, concentration of holdings and rural poverty as small farmers could not compete against cheap food imports. In the Cuban countryside, organic sugar, coffee and orange juice are becoming established with official support.

But the spectacular success story is city farming, which produces 60% of Cuban vegetables and provides more than the UN's recommended health quota of the 300 grams per day per person.

'The secret is in the high productivity of small urban units,' said Nelso Compagnioni, at Inifat - denying the conventional wisdom behind industrial farming. 'Every dollar of produce on a small plot costs 25 cents to produce; as soon as you increase the area you get higher costs - more workers, lower yields, more complex irrigation. And there's no need for transport: customers collect their food on the way home from work.'

At the start of the organic revolution, as the government gave unused city land to anyone who wanted to cultivate it, many first-generation city dwellers remembered their country childhood. Development officials encouraged their efforts, state shops supplied seed and tools. Under a 1996 bylaw in Havana, only organic growing methods are allowed.

Down in Ciego de Avila, Cuba's best orange-growing province, they claim yields from the organic plantations - still only a small area - are 20% higher. Instead of weeding, organic growers encourage weed-killing legumes to grow around the trees, giving them an untidy look. Instead of chemical fertilisers, they apply compost from the wastes of rice, beans, bananas and sweetcorn.

Some day, US economic sanctions will be lifted. Cuba will be able to import chemical fertilisers, pesticides and fuel for tractors; foreign investors will want to buy profitable farmland, and urban land may become too valuable for mere gardening.

But Cubans engaged in the organic effort are confident that the essentials of their revolution will be preserved. 'Americans too want good food,' says Compagnioni. 'We'll export the stuff to them.'

Mavis Alvares, director of *Anap* and an influential figure in ruling circles, says: 'We've put an immense educational effort into sustainability. It simply isn't the policy of the government to have cheap imported goods. When the Americans lift the embargo, there will be tough negotiation. We want to attract investment rather than cheap goods. We fought the Americans for 40 years and they won't get the better of us now.'

This article first appeared in The Guardian and was reprinted in Fourth World Review Number 115 in May 2002 entitled Havana Harvest by Walter Schwarz