equivalent molecules in analogous developmental systems," he says.

The emerging unity of cancer and developmental biology research helped win the institute its funds. For the first time, the Cancer Research Campaign and the Wellcome Trust—two of Britain's biggest medical charities—came together to provide complete support for an institute. Serendipity—of the very kind that the institute likes to encourage—brought the two charities together when groups who had separately approached them overheard one another's plans.

For the British who have come home, the lab is more than just a symbol of changing disciplinary boundaries. It's also a reminder of what can be achieved in Britain—if there is funding. "It's the lack of new blood that hits you when you travel in Britain," says Akam. "We have created something new and exciting—not old and decaying." All research support is provided by the two charities at a cost of some $3 million a year. Which raises the interesting question: Must the best of British science now expect to live on charity? ■ ALUN ANDERSON

Small Is Beautiful: Microlivestock for the Third World

New York Times

Forget macrobiotic, that's as far out of style as Marxism in Prague. It's time to think microbiotic. Not microbiotic as in bacteria or fungi; microbiotic as in miniature pigs, cows, and sheep. It seems the proper "diet for a small planet" isn't brown rice, it's small animals. At least that's the view of an expert panel of the National Research Council (NRC), an arm of the National Academy of Sciences (NAS). In a report released last week carrying the intriguing title "Microlivestock: Little-Known Animals with a Promising Economic Future," the panel argues that as humans take up more open space on the planet, something's got to give. "Like computers, livestock for use in developing countries should be getting smaller and becoming more 'personal,' " says the report. "Conventional 'mainframes' such as cattle are too large for the world's poorest people; they require too much space and expense."

Instead, the NRC would have Third World citizens invest in "tiny, user-friendly species for home use." Some are animals we've all come to know and love—in miniature. But some are extra-meaty versions of creatures we haven't been salivating over lately—like the giant rat of Nigeria. This macrorodent, the report says, could feed millions in developing nations where food shortages might make people a touch less choosy about their cuisine than they are in, say, Paris.

Indeed, the list of "small is beautiful" candidates on the NRC's menu would make up a nice size and rather exotic children's zoo. Among the recommended microlivestock are species that are inherently diminutive, like rabbits and chickens, and compact versions of your giant economy-size animals: cattle, sheep, goats, and pigs less than half the size of common breeds. Some of these bantamweights go even smaller than that. For example, Mexico's "mini Brahman" cow is only 60 cm tall and weighs 140 kg; the southern Sudan dwarf sheep of eastern Africa can weigh as little as 11 kg; the Terai goat of Nepal weighs less than 12 kg; and the cuino pig of Mexico weighs merely 10 kg.

Then there are the breeds you've never come across on your average American menu. Besides the giant rat—which at 1.5 kg and 40 cm is called one of the "the most striking of all African rodents"—there is a panoply of fellow rodents: the agouti, capybara, hutia, mara, coypu, paca, and vizcacha. These, the report points out, are among the world's most adaptable mammals—and they breed like crazy. And if rodents don't tickle your palate, how about the black iguana, which can be raised in towns or cities and survives nicely on a diet of weeds and garbage?

In all, the NRC report gives high marks to 40 different nanospecies, culled from a list of 150 small wonders proposed by 300 animal scientists in 80 countries.

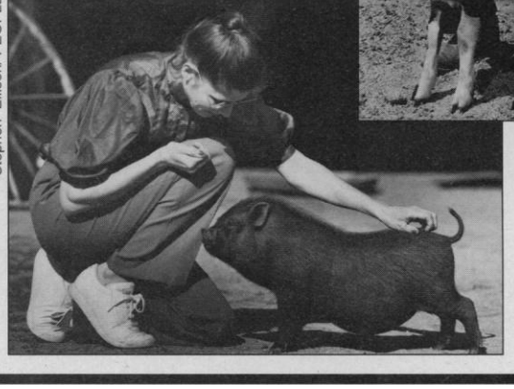
The common thread is that these minimalist flocks are less expensive to buy and feed—1 ton of hay can feed either one (ordinary, Brobdingnagian) cow or 300 rabbits—and they take up less space, reproduce quickly, and can be moved around easily. A side benefit: Some Lilliputian domesticates are endangered, and breeding keeps them and their gene pools alive. And the genomes of most of these microchip species are "virtually unstudied," the report notes.

But even advocates of smallness concede that downsizing your herd can have drawbacks. What happens, for example, if a passing dog snaps up 20 of your prize-winning agouti? One solution: Keep them around the house. But that presents another kind of challenge, this time in the realm of more conventional microbiotics: Some species could become reservoirs for diseases and parasites that affect people and other animals. And that was one of the problems that led the NRC to put a disclaimer in their report. Right up front, in bold letters: "If misunderstood, this book is potentially dangerous."

It seems that if they're exploited improperly, the agouti, the black iguana, and the giant rat could become "serious pests," not merely spreading disease to human beings and their pets, but also pushing bigger, slower breeding species out of their previously stable ecological nichezs. Which is no small problem.

■ ANN GIBBONS

Salt Lake City Tribune



Stephen Ellison/ PEOPLE

Nouvelle cuisine. *Microlivestock entrées include the Vietnamese pot-bellied pigs, Navajo sheep, and the green iguana* (above).