



CAN HOUSTON *feed* ITSELF?

IF WE CAN WALK TO THE FARM.

By John S. Jacob

IT WAS SOIL, NOT OIL, THAT DETERMINED THE location of the largest Texas cities. It was good dirt that drew people here—good dark, rich soil that is found in two prominent strips: the Texas Blacklands that extend from Dallas to Austin and San Antonio, and the coastal Blacklands that run from Houston to Corpus Christi. Seventy percent of the population of Texas now reside on these relatively narrow Blackland strips, most of them oblivious to the role of soil in their history.

In Houston, we call blackland soils gumbo clay, and we think of them as more of a nuisance than an attraction: they have some of the highest shrink-swell potential of any soils in the world. We support a world-class foundation repair industry here. When the first settlers came, the gumbo clay didn't seem so tough. The clays had so much organic matter they could run their hands through the prairie soils like a knife through butter. It took thousands of years for nature to form these soils, a legacy that can be lost for generations when paved over.

The technical term for this good dirt is Prime

Farmland—soils with the best combination of biophysical characteristics for producing food and fiber. It is currently cheaper to produce many of our foodstuffs far away from here, and the highest and best use of these soils under current market conditions is often residential subdivisions and other kinds of development. But what if rising fuel costs suddenly made food shipped 1,300 miles prohibitively expensive? Could we feed ourselves with what is left of our rich endowment of good dirt?

According to USDA maps, we still have about 3.2 million acres of prime farmland within 100 miles of Houston. We can't produce everything we like and want to eat. No cacao trees for chocolate here, for example. A more relevant question is whether we could supply most if not all of our basic needs from soils within a hundred miles or so. I think the answer is yes. The amount of land to support one person varies in the scientific literature from less than an acre to 20 or so acres. With 4 million people, we would likely need at least 2-4 million acres of farmland.

But we are expecting 3.5 million more people by 2035. So not only will there be more people to feed, there will be less land to feed them from, locally. If current density and development practices continue, we can expect to lose at least 1,000 square miles of prime farmland, prairie, and forest habitat to development.

Even if we could save remaining quality farmland, wouldn't a re-localized and re-intensified agriculture destroy what little we also have left in terms of natural diversity? Surely, every square inch of land would be needed to supply local food to the Houston area. The answer to this question requires us to consider the nature of small-scale intensive agricultural operations and the kinds of landscapes they might support.

In Amish country, for example, the land is inten-

sively cultivated—much more actively than in large-scale extensive systems associated with industrial agriculture. There is substantial natural habitat in that landscape, in some ways similar to the pattern of the Houston region 100 years ago. In *Larding the Earth*, Steven Stoll recounts the experience of the Amish in Ohio, and ties them to a long forgotten tradition of "soil improvers" active in America in the 19th Century. One of his informants says: "By working and farming the way the Amish traditionally have done, we make our place more attractive to wildlife. Should we be removed from the land and our farm turned into a 'wildlife area,' I am almost positive that the numbers and species of wildlife would dwindle."

We need more people on the land. It is only in labor-intensive mixed agricultural systems that enough manure and other organic matter is generated to renew and build up the soil food web, to put more in than is taken out. In addition, stewards on the land who know the lay of the land and who love the land can ensure that riparian buffers are in place and that enough natural refuges remain to protect our biodiverse heritage. Organic matter in the soil sustaining a healthy soil food web, and a diverse food web above ground, are what constitute a healthy working ecosystem.

We need more people on the land. Though a hyper-dense urban core might preserve farmland, the best pattern might also include a nucleated pattern of dense towns and villages. We may have enough good farmland to take care of our most basic needs in a post peak-oil era. But we will need people on the land to feed ourselves sustainably. And we will therefore need an urban pattern that facilitates connections between the city and the country.

Our long-term sustainability might just hinge on how close we are to the farm, and that proximity will hinge on how dense and walkable our urban areas are. It is ironic that the wide-open spaces that attract homebuyers to outer suburbs ultimately creates a leap-frog effect, further isolating everyone from farmland. Even preserving suburban life requires a change to development patterns.

I dream of a city—set on a plain, since we have no hills in Houston—where I can get to a pocket park within a five-minute walk. Where most everything I need in terms of services is also within walking distance—groceries, movies, cleaners, etc. Where I might have a small space in my house (perhaps on a flat roof) for a garden, or where a community garden is just around the corner. Where I am connected to my fellow citizens because we are all frequently out walking. But I dream also of a city where some deeper more primal needs can also easily be satisfied—the need to experience nature on its own terms (not just in some 5 or 10 acre park) and the need to have a connection with local soil through the food I eat. **c**