What’s Wrong with Free Trade in Biofuels?

Politicians sure like to pile up the rural waste product when talking about ethanol and America’s “energy security.” President Bush joined the shovel brigade when he spoke of switch grass as a cure for America’s “addiction to foreign oil.”

Is there a pony in there somewhere?

Yes, if you stretch a point and include various one-celled bugs, yeast and fungi. Scientists and entrepreneurs have spent the past 30 years diligently bioengineering such critters to produce motor fuels from carbohydrates, especially parts of common agricultural crops now thrown away, such as cobs, stalks and leaves, known as corn stover.

Nancy Ho, a Purdue scientist, led a team that by the early 1990s had succeeded in modifying the ancient brewer’s yeast, Saccharomyces, to convert two kinds of sugar, xylose and glucose, into ethanol (the original only cared for glucose). Biotechnologists have also plugged away at Zymomonas, a bacterium, which has been tinkered with to improve its ability to convert sugars into ethanol.

Others have worked a different side of the problem, how to free these simple sugars from the complex chains that make up cellulose, or the tough, inedible parts of plants, including stover, wood chips and fast-growing wild grasses like switch grass. Here, an object of affection has been Trichoderma, a fungus known to WWII troops in the Pacific for causing “jungle rot,” munching tents and uniforms made from natural fibers.

Start with the good news: Our habit of injecting apocalyptic fears into energy discussions, while it may satisfy a human need for ghost stories, lacks a basic realism. Private investors, research institutions and government agencies have been willing to throw money at alternative energy on the assumption that oil is ripe for substitution at some price, as is true of any commodity. And they’ll keep spending, and one day they’ll be right. The market for energy is huge, thus hugely stimulating to inventors and entrepreneurs. How to capture, store and package energy for specific uses, such as motor fuel, is merely a technical problem as well as a problem of relative costs.

The latter is key. Fantasies of self-sufficiency won’t fly — there’s not enough crop land in the U.S. to replace imported oil with ethanol. At best, ethanol can be an additional source of fuel supply, contributing to a strategy of diversifying our supply base to soften the possibility of price shocks.

But this runs straight into the clout of the farm lobby. Brazil has already established itself a low-cost producer of cane-based ethanol churned out in large volume at the oil-equivalent price of $25 a barrel without any heroic biogenetics involved. Its example is already inspiring copycat behavior by other Latin, Caribbean, African and South Asian countries, with similar conditions that make them potentially prolific exporters of biofuels.

Unfortunately, against the danger that poor countries might find profitable new niches for themselves as energy producers, rich countries have been busy erecting trade barriers to kill off the incipient competition to their own farmers. The U.S. imposes a 54-cent-a-gallon tariff on Brazilian ethanol, to discourage competition with domestic ethanol, which receives a 54-cent subsidy from taxpayers. The European Union just slapped new duties on Pakistani ethanol.

The farm lobby’s bait and switch grass.

This should lay bare the fraud that what’s going here has anything to do with energy security. It has only to do with the agricultural lobby masquerading its interests behind foolish and misleading rhetoric about energy security.

Take the pressure for flex-fuel mandates, requiring auto companies to build cars capable of running on 85% ethanol. Unmodified cars can already burn fuel comprised 10% of ethanol. If we were honestly keen on diversifying supply and squeezing out imported oil, we’d throw open our dense coastal markets to ethanol producers in Brazil, India, Pakistan, Nigeria and Thailand, displacing perhaps 10 billion gallons of current gasoline use without any vehicle modification or taxpayer subsidy at all.

In the latest insidious turn, domestic auto makers see a chance to shelter behind the political power of the farm lobby, so now plump for preferential subsidies and mandates for ethanol-ready vehicles as a way to carve out a piece of the auto business protected from foreign competition.

With its shorter growing seasons, high labor costs and competing uses for land, North America is hardly the ideal place for growing biofuel crops. Corn-based ethanol costs more than $50 a barrel to produce, surviving only on taxpayer subsidies. Cellulose-based ethanol would, in theory, be cheaper to make, though this has yet to be demonstrated on an industrial scale. The bioengineered enzymes alone, even after a federal program devoted to cost reduction, are still likely to contribute $20 a barrel in production costs. And backers are saying they won’t proceed unless assured that subsidies and trade protection will be forthcoming.

The real danger isn’t the money thrown away on dumb farm programs — American taxpayers can afford it. But the farm lobby, its voice unnaturally magnified by the overrepresentation of rural interests in the U.S. Senate, is a steady source of sound effects designed to foster an inappropriate sense of “energy insecurity” in the American people, the better to wieldle support of more ethanol handouts.

No wonder the Mulahs of Tehran believe they have us over a barrel. We wring our hands about Iranian nukes, treating it as unthinkable that we might blockade Iran’s oil. Why not? Iran puts out barely four million barrels a day — the same amount of oil we blockaded when Iraq invaded Kuwait in 1990. The world survived just fine. Mr. Bush only ties his own hands by indulging in silly rhetoric about “oil addiction.” In the meantime, U.S. agricultural protectionism makes our real energy vulnerabilities worse, not better.