

Agrarian Studies Colloquium  
February 5, 2009  
“Fabricated Fresh”

I am sending the final two short chapters of my book *Squeezed: What You Don't Know About Orange Juice*. The book is a history of the agriculture, science, regulation, marketing and politics behind what has become an international breakfast staple: processed orange juice.

I was torn between sending one of the middle chapters—for instance “Fabricated Fresh,” the chapter that focuses on the invention and regulation of the mysterious flavor pack that makes today’s orange juice drinkable—or these final “bigger picture” chapters. I decided on the latter because the specifics of orange juice are really a platform for discussing the question posed in Chapter 18, “The Right Fight:” Do we have a right to know how our food is produced? This question and the related observation that we need to increase the transparency surrounding food production in order to have true choice in the supermarket continue to drive my work.

## XVII

### Orange Juice Speaks Volumes

**T**wo related issues dominated the 2004 presidential election campaign: outsourcing and homeland security. With respect to the former, talk centered on the loss of jobs in the manufacturing sector to foreign nations. With respect to the latter, discussion focused on the need to become less dependent on other nations and to further develop this nation's energy supplies, meaning oil. Yet despite the severe economic crisis that came to dominate the 2008 presidential election, the two major-party candidates made little more than passing reference to agriculture and its relation to these two issues.

Indeed, little mention has been made of entire crops moving to nations with cheaper labor and less stringent environmental regulations. Similarly, when the discussion turns to importance of becoming more self-reliant with respect to energy, the most fundamental source of energy, food, is rarely discussed. The result is relative silence regarding the role domestic agriculture plays in strengthening national security. The rising cost of food, which has led to a global food crisis, is

finally drawing attention to the fact that such a disconnect is counterintuitive. For any nation to be truly secure it must be self-sufficient, and to be self-sufficient it must first and foremost be able to feed itself. Almost two centuries ago Thomas Jefferson advised potential émigré Jean Batiste Say that it is “the patriotic determination of every good citizen to use no foreign article which can be made within ourselves.” He encouraged Say, in the event Say decided to immigrate to the United States, to apply himself to the manufacture of cotton and establishment of a farm. Jefferson regretted Americans becoming “manufacturers to a degree incredible to those who do not see it.” Returning to the land was to him an important step toward “securing [the United States] against a relapse into foreign dependency.”<sup>1</sup>

The flood of food imports into the United States during the last couple of decades is evidence that policymakers and the public are ignoring the relationship between agricultural independence and homeland security. Before World War II fruit imports amounted to about one-seventh of domestic production. The figure dropped to one-tenth in the early 1950s. Bananas—a crop that in Jefferson’s words cannot “be made within ourselves”—accounted for most of that figure. Since then, imports are threatening U.S. crops as different as apples and oranges and, centuries after their arrival, as American as apple pie and not-from-concentrate.<sup>2</sup>

The loss to other countries of crops long grown in the United States destabilizes not only the homeland but also homesteads. In Florida, urban development is indiscriminately encroaching on irreplaceable natural and agricultural resources such as Orié Lee’s orange grove. The impending loss of these groves is part of what nursery owner Roland Dilley recognizes as a larger trend of depending on “everything we grow to come

from way down south.” Fruit growers are not the only producers losing their livelihoods to international competition. Major crops such as soybeans are moving to South America. “The whole farming industry in this United States is the pits,” says Dilley. “We can’t all work at McDonalds and make sales calls and that kind of thing. It’s terrible.”<sup>3</sup>

Moving manufacture, whether industrial or agricultural, to the lowest-cost producer is free trade dogma. Although the raw numbers say juice oranges are cheapest to grow in Brazil, there still is reason to question the free market’s cost assessment. Florida remains the most productive orange growing region in the world; acre for acre it yields the most fruit. Robert Barber, an economist at Florida Citrus Mutual, estimates that Florida produces 50 percent more pounds per acre of orange sugar solids, the basis upon which juice oranges are bought and sold, than its most formidable competitor, Brazil. Florida grower Jim Brewer contends that central southwest Florida “is the best citrus growing area in the world . . . because of the climate, because of the situation we’re sitting in.”<sup>4</sup>

The juice orange’s relocation from its historic home in Florida to Brazil is fueled not by superior agricultural geography but by low wages and minimal environmental regulations. Although Brazil can grow and process oranges at an unbeatable price, the bargain has been negotiated on the backs of labor and land. Free trade is supposed to bring about production efficiency, but the efficiency it promotes can be costly in terms of humanity.

The increasing reliance of the United States on distant food sources for its sustenance has repercussions that extend beyond homeland, homestead, and human and environmental security. The more removed that consumers are from the foods

on which they subsist, the more foreign the wisdom of Wendell Berry's basic observation: "Eating is an agricultural act."<sup>5</sup>

In a letter to Arthur Greeves, C. S. Lewis recounted a conversation with J. R. R. Tolkien that captures the state of the twentieth- and, even more so, the twenty-first-century consumer:

Tolkien once remarked to me that the feeling about home must have been quite different in the days when a family had fed on the produce of the same few miles of country for six generations, and that perhaps this was why they saw nymphs in the fountains and dryads in the wood—they were not mistaken for there was in a sense a *real* (not metaphorical) connection between them and the countryside. What had been earth and air and later corn, and later still bread, really was in them. We of course who live on a standardised international diet (you may have had Canadian flour, English meat, Scotch oatmeal, African oranges, and Australian wine today) are really artificial beings and have no connection (save in sentiment) with any place on earth. We are synthetic men, uprooted. The strength of the hills is not ours.<sup>6</sup>

Modern science now has the capacity to show what is "really" in us. With a mere hair or fingernail sample biologists can trace the carbon that *is* each of us to specific plant species using a mass spectrometer. Michael Pollan, self-described food detective, is working with Todd Dawson at the University of California–Berkeley to determine precisely how much Americans "are" corn. As it turns out, the percentage is high.<sup>7</sup>

In the days that Tolkien conjured, when “the family fed on the same few miles of country,” the corn that came from the surrounding earth and air “really was in them.” Not true today. The corn in most of us does not grow from the air we breathe or earth beneath our feet. It travels from sparsely populated places, from faraway fields in Iowa, for instance. From there it is shipped to processing stations across the nation, where it is turned into unrecognizable forms such as cattle feed for meat and high fructose corn syrup for a rainbow of sweets. Whatever shape the corn takes, Pollan’s tests say it is sticking to the bones, and, as obesity rates say, not in a good way. It accumulates inside us, an alien substance as plastic as the wrapping of the myriad foods in which it is an ingredient.

The same goes for much of modern foodstuffs. A business executive in New Jersey has no relationship to the orange juice he drinks from Brazil. The connection that he may have “in sentiment” to Florida is due to successful marketing campaigns that have equated orange juice with Florida. The connection is as artificial as the man who is the synthetic foods that he eats.

The “standardised international diet” of which Lewis spoke does not, as the act of eating once did, root Americans in their surroundings. The distance between the soil that grows the foods Americans eat and the concrete ground the majority walks on fosters indifference to the environment. The nymphs and dryads that Tolkien believed animate the world remain invisible so long as food travels as far as it does to reach the consumer’s plate. Government and industry characterization into the 1960s of the food consumer as “Mrs. Housewife” is partly to blame for the average consumer’s obliviousness to where and how that individual’s food is produced. This label carried assumptions that led to the construction of flawed food regu-

latory structures. The standard of identity is one that failed to work the way it was supposed to regarding the “interest of consumers.” For decades it stood as an obstacle to the advancement of knowledge about the multifarious foods contained under its umbrella.

Disseminating the truth about processed orange juice, a product that since its debut has been promoted as Florida freshness concentrated in a glass, has the potential to wake consumers to how damaging food ignorance can be. Consumer unawareness about where and how the oranges in their juice are squeezed has allowed processors to spin tales that hide not only the extent of orange juice processing but also the struggling Florida orange growing economy.

The Florida Department of Citrus is betting that more forthright orange juice labels will encourage consumers to buy products that will benefit the Florida orange grower. It believes consumers want the real thing: 100 percent Florida squeezed. There may be little chance of returning to the days that Tolkien remembers, when families “fed on the produce of the same few miles of country.” However, food education promises to bring consumers closer, in spirit if not in body, to the producers of their food. In so doing it has the potential to shake consumers from their complacency and nurture the compassion that is essential to strengthening ailing agricultural sectors in the United States and elsewhere.

## XVIII

### The Right Fight

**I**n the mid-1940s the Food and Nutrition Board of the National Research Council (NRC) designated oranges, tomatoes, and grapefruit as a food group. The trio appeared second on the NRC's list of the "Basic Seven" food groups, a seminal guide to healthy eating. The orange had officially entered the nutritionist's vocabulary.

In the late 1940s three men invented a saleable frozen concentrated orange juice. It came just in time for Florida growers, who were having trouble getting rid of their surplus oranges, and consumers, who now had a way to get their daily dose of oranges in a form that was economical and always available. Florida, which grew an especially juicy orange, became home to a burgeoning juice industry.

Advertising played the final part in the orange's transformation from a luxury fruit into a perceived life necessity. Beginning in 1948 Bing Crosby crooned for Minute Maid. In the 1960s Anita Bryant brought the Florida Sunshine Tree into households across America. In the same decade the FDA acted on evidence that much of orange juice marketing misinformed

the consumer. After convening hearings in 1961, the agency resolved to regulate all forms of orange juice, including the one that Bryant reconstituted.

FDA regulation did not, as juice processors feared, impede the evolution of Florida's orange juice industry. In 1978 the USDA ranked oranges ninth—between potatoes and rice—on its list of the fifteen most valuable crops to the United States.<sup>1</sup> Oranges grown for juice contributed greatly to the orange's strong showing. In the 1980s the convenience of ready-to-serve reconstituted orange juice made obsolete the cans of frozen concentrate that Bryant promoted. In the 1990s "Not From Concentrate" jumped to the top of processed orange juice charts. In the 2002–2003 season, Florida produced more than 203 million bushel-boxes of oranges, almost all of which were squeezed into juice.<sup>2</sup> University of Florida studies show that citrus has generated nine billion dollars of economic activity annually for the state.

Today Florida growers are skeptical that the money will continue to flow. Competition from Brazil, land development pressures, overproduction, and a perennial battle against insects, disease, and weather are all challenging the steadfastness of Florida's Sunshine Tree.

While Florida orange growers worry about their future, consumers continue to drink orange juice with little or no idea about the who, what, where, and why behind their buy. Sophisticated advertisements, combined with misdirected regulation focusing on product content rather than on consumer education, have deceptively created a national habit. Look no further than not-from-concentrate orange juice, the only category of processed orange juice that continued to grow into the twenty-first century. Consumers pay a premium for qualities that the juice does not carry. Marketed as fresh and "unfooled" with, NFC is heat-treated and heavily handled. And

contrary to what many consumers believe, much of NFC is not a purely Florida product anymore.

It is difficult to find an orange juice consumer who is not bothered by the fact that a product that is made out to be fresh sits in storage, sometimes for upward of a year, and is made palatable only by the addition of a flavor pack. As Americans we say in the U.S. Constitution and elsewhere that we value individual autonomy and free choice. Yet little is being done about the deceit and ignorance that guide consumers through the maze of modern supermarkets.

The consumer's misconception of NFC, and of commercial orange juice generally, raises the question of the regulatory role of a consumer right to know how food is produced. The concept of a more general community right to know began to take serious shape in the mid-1980s as a result of a deadly gas leak in Bhopal, India, where Union Carbide was operating a plant that was producing the pesticide carbaryl. Thousands died or were seriously injured from the accident. To prevent such an incident from occurring in America, the Emergency Planning and Community Right-to-Know Act (EPCRA) was passed as part of the Superfund Amendments and Reauthorization Act of 1986 (SARA), which amended the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). EPCRA and the other state and federal right-to-know laws currently on the books—such as California's Safe Drinking Water and Toxic Enforcement Act of 1986 (otherwise known as Proposition 65) and, more recently, the Food Allergen Labeling and Consumer Protection Act of 2004 (an amendment to the Federal Food, Drug, and Cosmetic Act)—complement traditional regulation with ways of raising community awareness about the potentially harmful substances that exist in the environment and food supply.

Given the historic link between the community right to know and toxic chemical management, it is not surprising that right-to-know laws to date have tended to be limited to situations where some immediate and quantifiable risk, whether to health, the environment, or the economy, results from ignorance. Some may cite the relative harmlessness to human health of commercial orange juice as justification for why a right to know how it is produced should not figure prominently in its regulation. There are good reasons to place boundaries on rights to know. Requiring industry to publicize information about its products offers competitors the opportunity to use this to their advantage. Heavy disclosure requirements also have the potential to stifle industry innovation. Interpreting a consumer right to know how food is produced as a right to full disclosure would be counterproductive. However, if there is a need to cap the amount and type of information that industry discloses, surely no argument can be made against requiring the information that industry *does* release be truthful.

Moreover, restricting right-to-know laws to those situations in which there is an impending risk to health and safety is problematic not only because of the difficulty of proving a potential harm but also because it ignores the many situations in which the consequences of not knowing are far-reaching, if not ultimately life-threatening. For example, the existence of the organic, kosher, and halal certifications, which enable consumers to choose foods that meet certain standards of production, underscores the importance beyond reasons of health and safety of knowing how food is produced. Being able to choose kosher, or halal, or organic may not be a matter of life and death, but that does not diminish the importance of possessing information that makes it possible for people to keep a kosher, halal, or organic household. Because the certifications

let consumers purchase foods that accord with their values and beliefs, they further the objective of personal liberty that Americans hold so dearly.

In 1985 the UN General Assembly passed resolution A/RES/39/248, entitled “Consumer Protection,” that offers guidelines on the subject. The resolution’s “Guiding Principles” list the “legitimate needs” that the guidelines are intended to meet. As a reminder that legitimate reasons beyond preventing harm exist for informing consumers, one is providing individuals with access to information that lets them make informed choices “according to individual wishes and needs.”<sup>3</sup> Providing consumers with adequate information to fulfill personal wishes is, according to the UN, a “legitimate need” that all nations should strive to achieve.

The history of the production and distribution of orange juice and orange juice knowledge emphasizes the mistake in ignoring the right to know in situations in which relatively innocuous products are regulated. The result is a nation of consumers often basing their purchase decisions on false information. The implications of consumer ignorance about commercial orange juice are significant for health, personal autonomy, and agricultural and environmental integrity and make a strong case for recognition of a consumer right to know how food is produced. Unless we as consumers are provided with factual information, we cannot accurately assess what and what not to worry about. We cannot properly rank our priorities. We cannot make meaningful choices regarding the massive number of industrial products on the market.

Just before the 1961 standard of identity hearings, then-FDA commissioner George Larrick declared: “The consumer has a right to know what is in his food.”<sup>4</sup> The 1990 Nutrition Labeling and Education Act breathes life into the right by re-

quiring that the nutritional profile of packaged foods be labeled, and by deeming mislabeled and misbranded products adulterated. In 1991 then-FDA commissioner David Kessler acted on the act's definition of adulteration to impound reconstituted orange juice marketed as "fresh." Larrick's early words, the act, and Kessler's action illustrate that the FDA has interpreted the consumer right to know as more than a mechanism for harm prevention. But it has done so sporadically, and while it has recognized the importance of providing consumers with information about what is in their food, it has been less forthcoming in providing information about how food is produced.

Beyond the FDA the federal government has taken some measures to provide consumers with information about how food is produced. The USDA-administered organic certification regulations let consumers choose foods that have not been grown with synthetic pesticides and fertilizers. Congress approved the new Country of Origin Labeling (COOL) as part of the 2002 farm bill, which took full effect in September 2008 and which lets consumers know the source of their beef, pork, lamb, seafood, peanuts, and fresh and frozen fruits and vegetables. Both are steps forward, but more is needed. Congress has provided consumers with the right to know where their oranges come from but not the circumstances under which they were harvested and processed. The USDA has provided consumers with a means to choose foods that have not been grown with synthetic chemicals, but the FDA has not provided a way of telling whether certain other foods contain hidden ingredients such as genetically engineered organisms or flavor packs to make processed foods taste fresh. The logical next step is a comprehensive consumer right to know how food is produced.

The time is ripe to reevaluate the reach of right-to-know

laws. As more and more industries become transnational and mobile, traditional state-centered, top-down approaches toward regulation are proving ineffective. In an age in which information is powerful and plentiful, information-based strategies are obvious and appropriate substitutes. Right-to-know laws, historically used to supplement command and control forms of regulation, now stand as promising alternatives.

A consumer right to know is especially critical in the realm of food production. What to eat is arguably the most personal of decisions. The choice of what to eat determines not only each individual's physical being but also the broader physical and human environment in which each individual, as a member of the human community, lives. Until legislators and the federal agencies that implement the laws acknowledge the value of right-to-know laws as a means to freedom not only *from* harm but also *to* choose, consumers will continue to be unable to make truly autonomous, personhood- and environment-defining, decisions.

The Florida Department of Citrus has recognized the connection between consumer food literacy and land use. Its fight to have juice percentage stated on the front of light orange juice labels underscores the imperative of providing consumers with more, and more visible, information about the production of deceptively straightforward foods. Hopefully, federal lawmakers and agencies will listen and accept this as a right in its own right. A consumer right to know how food is produced is long overdue.