In 2002, after too many years of too little progress, the California plum industry recruited an outsider to oversee the settlement of a progressively heated family row. Two years later, when I asked Blair Richardson, that outsider-turned-insider, if his dealings so far in the plum world had been as challenging as he’d anticipated, the chairman of the (perhaps unsuitably named) California Tree Fruit Agreement spotted the question for the bait that it was. “My grandfather was a farmer,” he said, “and he always told me that if you put five of us together in a room, you’d get six different opinions.” Richardson has had to keep that chestnut in mind as he’s tried to steer California’s plum industry—which is to say the nation’s plum industry—toward a compromise on The Question of pluots.

If those involved could agree on one right answer to The Question, the schism would have already passed, may never have even happened. But, What is a pluot? has provoked all kinds of answers. Here, then, are a few (maybe the only) undisputed remarks on the nature of the pluot: One, the name “pluot” is a trademark owned and used by Floyd Zaiger and his family to distinguish their hybrid, or interspecific, plum tree varieties. Two, the Zaigers are fruit breeders who live in and around Modesto, at the northern end of California’s San Joaquin Valley, an inland basin larger than West Virginia that has often been called the most productive agricultural region in the world. Three, for the distribution of pluot trees in the United States—that is, the sale of trees to commercial growers and nurseries—the family has an exclusive agreement with the nearby Dave Wilson Nursery. And four, just about all factions—the five farmers and their six opinions—agree that in pluots—whatever the hell they are—lie, more or less, for better or worse, the future of plums.

But before the future, more about the past. California’s commercial plum growers—those who sell fruit here and abroad to retail buyers, who in turn sell the fruit to us, the snackers, jammers, and fruit-pie bakers—are loosely governed by something called the California Plum Marketing Board. The Plum Board is one of the three promotional arms, known as generic marketing orders, that make up the California Tree Fruit Agreement (CTFA) over which Blair Richardson presides. (In addition to plums, the CTFA administers the marketing orders for nectarine and peach growers.) Agricultural marketing orders like those of the CTFA have their roots in the New Deal, specifically the Agricultural Marketing Agreement Act of 1937, which gave producers of certain crops the opportunity—with government oversight from the United States Department of Agriculture (USDA)—“to establish and maintain…orderly marketing conditions.” That is, to organize for the purpose of keeping tabs on themselves. Though the CTFA acts as a kind of watchdog—monitoring industry standards and overseeing research and crop reporting—its main purpose is to promote, to spread the good word about the Golden State’s plums, peaches, and nectarines, aka “California Tree Fruit.” Most of the money used for that generic promotion comes from the growers themselves; for every box of fruit sold, growers must pay what’s called an assessment fee into the communal pot of the CTFA. Each arm of the CTFA sets its own assessment and funds its own promotion, reporting, and research. That is, plum pays for plum, peach for peach. Right now plum growers pay the maximum fee of twenty cents for every twenty-eight-pound box of fruit packed and sold.

Every few years plum growers vote by mail to decide if they, as a group, will continue to participate in the CTFA. From the mid-1930s until 1990, the plum growers stuck with their federal marketing order and its part in the CTFA. But fifteen years ago it was a nasty time to be a plum grower in California. Growers were packing record crops, and the market was bottoming out in a sea of too much fruit. And too often that fruit tasted like cardboard since growers were favoring varieties that set well, that colored well and shipped well, but that didn’t, as they say in the San Joaquin, eat well. To make matters worse, many growers were picking the fruit too early, before its sugar had filled out, so that the overall fruit quality of plums had tanked. Other factors contributed to the hard times: bad weather here, a housing development there, stricter environmental regulations, higher minimum wages, the consolidation of retail buyers.

In the late 1980s a group of growers and packers began withholding their assessment fees from the CTFA, in order to dispute what they considered subjectively enforced standards.
Eventually, the group sued the USDA, arguing both that the standards were “arbitrary and capricious” and that the forced participation in the federal plum marketing order’s generic promotion was a violation of free speech. For an interesting examination of, in the words of one court of appeals judge, “one of the more byzantine, and all-encompassing, areas of federal administrative regulation—that governing fruits and vegetables,” check out the summary of Wileman Bros. & Elliott v. Espy. The same judge wrote in his opinion: “The complexity of the legal proceedings in this case have [sic] been matched by their prolixity.” Eventually, a variant of the case made it to the US Supreme Court, which ruled against the growers. In the early 1990s, hopeful that a change would improve their fortunes and bolstered by that lawsuit filed by some of their own, the plum people voted themselves out of the CTFA and into a voluntary growers’ association. In so doing they freed themselves of regulations, such as the minimum-size standard, that had stopped them from packing out more fruit in the past. They freed themselves, too, of the assessment fee.

Freedom, at least, was the idea. But the secession was a flop. Without a central command to monitor, record, and promote, the plum industry lacked the ability to report even to itself—much less to grocery stores and exporters—the nature and volume of its harvests. Plum growers saw an almost immediate decline in both price and movement. So, a few years later the plum industry said oops and came running back to the CTFA. This time, however, instead of resuscitating the federal marketing order that had been in place before the break, they set up a state marketing order that walked, talked, and looked much like the initial arrangement, only this time they worked with oversight from the California Department of Food and Agriculture (CDFa) instead of the USDA.
Soon after the adoption of the state marketing order, a plum grower filed another complaint, this time against the CDFa, citing a similar restriction on free speech, but according to the California constitution, not the US one. The case made it to the Supreme Court of California, which sided with the grower and remanded the case back to the lower court, which had based its earlier decision on the Wileman ruling by the US Supreme Court. As of this past winter the case still lingered in legal purgatory.

As the plum growers were disbanding in the late 1980s, Floyd Zaiger was just beginning to see his first generation of truly promising plum hybrids, which he patented and trademarked as “pluots” because the varieties were of plum (“plu-”) and apricot (“ot”) descent. (“Plumcot” is the generic name for a cross between a plum and an apricot.) Zaiger started breeding fruit in the late 1950s, after a two-season apprenticeship with a man named Fred Anderson, the breeder known in fruit circles for having created the nectarine industry. Zaiger had been operating an azalea nursery before the stint with Anderson. When he returned to Modesto, he continued working full time with azaleas and spent his off hours with the fruit. He had some early success with peaches and nectarines and is generally credited with popularizing commercial-quality, white-fleshed varieties of those fruits in the United States. As he made a little more money and cobbled together more property, Zaiger was able to get into other varieties as well.

As Zaiger added more and more varieties, he began to see some new fruit in his fields, fruit generated from the cross-pollination of the bees. As he collected those naturally pollinated cultivars, he gave himself more avenues to travel in the hopes of creating even more new fruit through controlled pollination—that is, by stripping and crushing the pollen from one tree and painting it onto the stigma of another tree’s buds. He began crossbreeding plums, apricots, peaches, nectarines, and other species of the prunus, or drupe, fruits, observing characteristics as he went along, trying to get a handle on what worked and why. Gradually, Zaiger started to come across promising varieties from his own doing; these would become stronger links in the bridge between different species of fruit.

To succeed as a private fruit breeder, it helps to have a good sense of too many “-ics,” “-ures,” and “-ings” to list, though horticulture, genetics, economics, and marketing rank high. You’ve got to operate on a long clock, you’ve got to know dirt, how to keep good records, how to balance a ledger, how to get by on much less than eight hours’ sleep a
night. But most of all, it helps—and I don’t think that this is too much of an overstatement—if you think of breeding as a mission and not a vocation. On one wall of his wood-paneled office, Zaiger has tacked a piece of paper onto which someone has typed: “Having brilliant ideas is easy. Just have a lot of ideas and throw away most of them.” The quote is attributed to Linus Pauling, and whether he even said it or was exaggerating when he did doesn’t matter, because for a private fruit breeder those words are gospel. The more experiments you perform—the more crosses you make between fruit varieties—the better your chances are to come away with something worth keeping. You have to have some sense of the direction you want to be going in, but the more opportunities you give yourself, the more likely you are to find a path in that direction. Of all the explanations I’ve heard about the scientific art of fruit breeding, David Ramming’s is the best. Ramming grew up dreaming of becoming a fruit breeder, and for the past quarter century he’s been the USDA’s plum and table grape man at the Agricultural Research Station outside of Fresno. I asked him how much of successful fruit breeding involves a focus on volume and how much involves a focus on pedigree.

“Breeding is based on genetics,” he said, “and genetics is a field of chance. I liken it to gambling. If you go to Las Vegas and play blackjack, and you don’t know the game, what are your chances of winning? Not very good. If you know the cards—which cards are high, what the cards mean, the chances that certain cards will appear and in which combinations—and if you can remember what’s being played, you increase your chances of winning, even though it’s still a game of chance.

“The same is true of breeding. If you know the inheritance scheme of the traits you want to improve, then you can plan the breeding methods, or if you can develop some of the techniques for selecting what you want, if you can improve your ability to pick those traits out, and if you can pick them out earlier, then you’re increasing your chances of winning. Anything you can do to improve your chances is important.”

Floyd Zaiger and his family seem to have combined volume with a rare ability to spot potential. Still, between an initial cross and a successful introduction of the resulting variety twelve to fifteen years can pass. Even if a cross does prove fruitful—Zaiger has estimated that one in every hundred thousand does—it still probably won’t be viable as a commercial variety. Before anything else a new commercial variety has to be “farmer friendly.” A variety can taste like God’s own creation, but if it cracks before maturity or bruises too easily or doesn’t produce a high enough yield on the tree, if it’s too ugly or if there are too many other varieties competing in its maturity period, then a variety may not be right for commercial release. But after years of working with his hybrids—working especially to bring up the sugar level in them so that growers could pick them early and still pack a sweet piece of fruit with good shipping quality—Zaiger finally had some varieties that the commercial market wanted.

The Zaigers began patenting interspecific plum varieties in the late 1980s, as the plum growers were voting themselves out of the federal marketing order. Originally, the varieties—ones called Flavor Supreme, Flavor King, and Flavor Queen—were meant for retail nurseries to sell to home gardeners; they didn’t seem to hold up well enough in shipping for commercial farming. But commercial growers wanted them, anyway, and so the first plum varieties went into the ground here and there around the San Joaquin, sometimes in great numbers.

To be granted a plant patent, breeders must (among other things) include a short paragraph about the variety’s lineage and a summary of its characteristics. Of Flavor Supreme the Zaigers wrote:

ORIGIN OF THE VARIETY
The present variety of interspecific (plum.times.plumcot) tree was originated by us in the experimental orchard located at Modesto, Calif. as a first generation seedling from a cross between a plum selection identified as 572220 and a plumcot selection identified as 462748. Both of the above parents were selected from a group of open pollinated Red Beauty Plum (U.S. Plant Pat. No. 2,599) seedlings grown in our experimental orchard.

SUMMARY OF THE VARIETY
The present variety of interspecific (plum.times.plumcot) tree which is of large size, dense, semi-upright in growth and a regular and productive bearer of medium size, clingstone fruit. The fruit is further characterized by having firm flesh texture which is intermediate between plum and apricot, being excellent in flavor and eating quality, and having good storage and shipping quality.

Initially, Zaiger was told that because one branch of the family tree had at least some traces of apricot, he could not market his hybrids as plums. So after a reasonably simple trademark registration, pluots became their own fruit. At first, because volume was so low, this didn’t really matter. But in 1994 as the plum growers were corralling themselves back into a state marketing order at the CTFA, the Zaigers patented and released another variety they called “Dapple Dandy.”

In the hand Dapple Dandy is an odd but well-formed piece of fruit: not too big and not too small, mottled, light
red skin with pale green veins shooting through it. But it’s not so beautiful if you’re a buyer for a giant retail chain whose produce managers are used to stocking only solid, shiny, monochromatic pieces of fruit. If it had to fend for itself on looks alone, Dapple Dandy never would have made it out of the test block. What made Dapple Dandy special was its flesh, which bleeds from bright red to pink to white and that it tastes dynamic and sweet — more candy than honey — with very little of the tartness that can turn people off of plums. California plums have two miniseasons: the end of May until the end of June and then the end of July until the first of October. Dapple Dandy ripens around the first of August, which makes it one of the first varieties available for the summer’s second season. On the tree the fruit sets well and wide and has few cosmetic problems. The sugar level is high enough in Dapple Dandy for pickers to pick the fruit before it’s tree ripe, so the variety can hold up firm in shipping and live a long life on the shelf. Dapple Dandy, one grower confessed, is about as idiot proof as a fruit tree gets.

Dapple Dandy took pluots mainstream, out from the farmers’ markets and into the supermarkets. Much of the fruit’s success revolved around one grower, who planted an enormous acreage of the variety, then stuck his own label on the fruit: a picture of what appears to be an unnaturally enormous acreage of the variety, then stuck his own label on the fruit: a picture of what appears to be an unnaturally cheerful brontosaurus. The grower called it a “Dinosaur Egg” and created a hit. At a time in the late 1990s when many plum varieties were selling for a dollar or so per pound retail, those pluots were going for as much as four dollars per pound. They were novel, they were tasty, and they were about to draw a cultlike following among tree-fruit growers in California. Many growers who had planted pluots were making good money. They were saving money, too; since what they were packing were not technically plums, the growers did not have to pay a per-box assessment fee to the CTFA.

By 2000 some estimates had the volume of packed pluots at twenty percent of packed plums; other estimates suggested much more than that. But without any hard numbers on the total plum crop, there was no way to tell. Whatever the number, the conventional wisdom that began to spread was that the volume of pluots in the market was just going to grow and grow over time, until — some people said, half joking — there were no plums left.

Maybe, though, the volume grew too fast. As the number of plum trees in the ground increased, especially Dapple Dandy, problems began to surface. For instance, with volume came mediocrity. Without any quality standards for pluots, some growers sold fruit that would not have made it out of the packinghouse as a plum. As more pluots fought for shelf space, there were complaints that some were picking fruit way too early in order to get a better price. And with more competition among growers trying to dump all that fruit, buyers were able to negotiate a lower price, which was already coming down anyway, as pluots became less of a niche product.

Pluot trees were (and are) still going into the ground fast, and in the rush to get in on the action, some growers took varieties that had not sufficiently proven themselves, that had not been observed long enough in a test block. Also, the Zaigers and their nurserymen at Dave Wilson Nursery have had to contend with illegal propagation of trees. Because the trees are patented and trademarked, every tree is supposed to come directly from the nursery at a price. Some growers, however, have cut shoots from their existing trees and grafted that wood onto a rootstock, multiplying their tree count at no extra charge. The damage from that is twofold: it of course cheats the nursery and the Zaigers (who get a royalty from every tree sold), but it also makes the effort to keep a tally of pluot trees in the ground more difficult.

There have been other problems, ones having to do with spraying the fruit, insuring it, and packing it. But the root problem, the one around which everything else revolved, was the lack of a clear answer to The Question.

Aside from the fact that pluots were not being assessed and inspected like plums, some small buyers just didn’t want to fool with calling the fruit a “pluot” when, in their view, it was just a glorified plum. For stores, buying “pluots” meant they had to sell them as “pluots,” and that meant placing more signage in the produce section, explaining (to the best of their knowledge) to consumers what a pluot was and how it was different from a plum (if, in fact, there was any difference). As some growers saw that the novelty of the pluot as “pluot” was wearing off, they wanted to label their varieties as “plums” but were unable to do so according to state agricultural code. To sell them at all, they had to sell them as “pluots,” a transaction that became more and more difficult as volume increased and the bigger players could supply the same fruit at a discount.

Other growers insisted that pluots were not plums but were something else altogether and therefore should continue to be called “pluots.” Of these growers some had taken large stakes in pluots and weren’t about to see their profits diluted by the assessment fee and loss of marketing power. Some were just constitutionally opposed to being regulated by the CTFA and the state.

To debate The Question the CTFA appointed a subcommittee called the Interspecific Task Force (ITF), which brought together big names from all sides in hopes of coming to some solution. Zaiger and his family, the breeders who...
brought this wonderful problem of plenty into the world, were caught in the middle, especially after the CTFA directed genetic testing of some pluot varieties to see if they could find any traces of apricot. The tests, which turned up no apricot in the varieties under review, were disputed and did little to solve the pluot's identity problem. They did succeed, however, in infuriating the Zaigers, who felt that their reputation as breeders had been impugned. (Because the Zaigers hold patents for all their commercially planted varieties, their business wouldn't necessarily suffer either way, except in the sense that growers who could manage to sell their pluots only as plums but were unable to do so were arguably in greater danger of going under.)

Steve Strong, the chairman of the CTFA until earlier this year, sympathized with the Zaigers' awkward position but repeated what had become, by the time Blair Richardson arrived in 2002 to help pull the sides together, a popular argument: If it walks like a plum, talks like a plum, looks like a plum, then it's a plum.

The state of California wasn't so sure, though. Strong, the CTFA, and the ITF tried to get the CDAF to issue a ruling on the problem. But, having reflected on the plum industry's recent disposition to sue for change, the state backed off for fear of having to defend its position in court and beyond. The state told the CTFA that the industry had come to some consensus before it would issue a ruling. After plenty of meetings and briefs and legal deliberations, enough to spread not just a little ill will among the members of all the acronymic groups, the CDAF and the CTFA finally made a decision of sorts during the winter of 2002–2003.

For the 2003 season a grower could continue selling pluots as “pluots,” in which case he was on his own. Or, if a grower was willing to adhere to the CTFA’s packing standards and to pay the assessment fee, he could sell his pluots as “plums.” That decision, though still under review, has stayed in place for the 2004 season.

Most everyone I’ve talked to called the compromise a decent temporary solution. Steve Strong, who decided last year to sell his small acreage of pluots as “plums,” said that a decision ultimately must come from the state. “The marketing order for plums derives its power from the state,” Strong said, “and now they’re taking a soft, rubbery position. As long as the state refuses to set a rule, the stalemate will continue.”

The CTFA reported that in 2003 growers packed five hundred and thirty thousand boxes of pluots as plums. How many sold as pluots? I asked Blair Richardson. “It’s impossible for us to know how widespread the adoption of the new ruling was,” he said, “because we just don’t know how many pluots are out there.” (One state ag official estimated three million total boxes of pluots in 2000, so the five hundred thousand that were packed as plums in 2003 doesn’t seem like that much.)

“Something else does need to be done on the issue,” continued Richardson, “because right now there are too many questions. Retailers don’t know what’s going on—one store is buying pluots as plums and one store is buying pluots as plums, and that just depends on their marketing strategy. And the retailers tell us that consumers don’t know what’s going on.

“We’ve taken some of the emotion out of the issue on our end,” Richardson said. “You know, the people in this industry are very passionate about their business. As they should be. And their business is so closely attached to their life. But it’s hard to move forward because some people feel like pluots are just plums, and others feel very strongly that they’re something else entirely.”

It’s possible, Steve Strong conceded, that The Question could resolve itself. Last year Strong was told by several different marketers that Dapple Dandy, the most widespread (too widespread, that is) of the pluots, brought a lower wholesale price than that of some plums in its maturity period. That’s a first.

“We were two points off of soluble solids”—meaning the sugar level was down—“across the board. Dapple Dandy is known for its sweetness, but it’s ugly. If it’s sweet and ugly, that’s one thing. If it’s not sweet and it’s ugly, well then you’ve got an ugly piece of fruit. And right now, you’ve got a lot of Dapple Dandies in the market,” Strong said.

Now that the volume of Dapple Dandy has turned it into a “non-unique” variety, the price could continue to drop. With the decrease in price, those growers with large acreages of Dapple Dandy may not be so steadfast in their insistence that pluots are something other than an improvement over most traditional plums. Better tasting, but still plums. As with so many questions that sound epistemological in nature, might the substance of this one have more to do with dollars and cents?

“You know, there are lots of sides to the issue,” Strong cautioned, “but I don’t think that anyone would venture to call these varieties pluots unless they thought they could get more money out of them.”