

### Tomatoland- Highlights and Notes

Key for Sticky notes in the book:

- = Highlight
- = Note
- = Highlight & Note

#### **Chapter 1: On the Tomato Trail**

H1/N1- “A ten-foot drop followed by a sixty-mile-per-hour impact with pavement is no big deal to a modern, agribusiness tomato.” NOTE: What ingredients allow tomatoes to survive hard drops? To bounce?

H2/N2- “Americans bought \$5 billion worth of perfectly round, perfectly red, and, in the opinion of many consumers, perfectly tasteless commercially grown fresh tomatoes in 2009- our second most popular vegetable behind lettuce.” NOTE: Why do people continue to buy these “tasteless” tomatoes? How do artificial tomato agricultural businesses still make billions of dollars with these fruits?

H3- “Of all the fruits and vegetables we eat, none suffers at the hands of factory farming more than a tomato grown in the wintertime fields of Florida.”

H4- “...found in nearly nine out of ten backyard plots.”

H5- “...birthplace of tomatoes in the remote coastal deserts of northern Peru.”

H6/N3- “Regulations actually prohibit growers in the southern part of Florida from exporting many of the older tasty tomato varieties because their coloration and shape don’t conform to what the all-powerful Florida Tomato Committee says a tomato should look like.” NOTE: Why is the Florida Tomato Committee so picky about tomato appearance? Why isn’t taste a factor?

H7- “Taste is not a consideration.”

H8- “When forced to struggle in the wilting humidity of Florida, tomatoes become vulnerable to all manner of fungal diseases.”

H9/N4- “To get a successful crop, they pump the soil full of chemical fertilizers and can blast the plants with more than one hundred different herbicides and pesticides, including some of the most toxic in the agribusiness’s arsenal.” NOTE: How is it legal to spray tomatoes with pesticides? How do companies get away with it?

H10- “The toll includes eye and respiratory ailments, exposure to known carcinogens, and babies born with horrendous birth defects.”

H11/N5- “The U.S. Department of Agriculture has found residues of thirty-five pesticides on tomatoes destined for supermarket produce sections.” NOTE: Do artificial tomato farms get punished when it is discovered that their tomatoes destined for produce sections are still coated in pesticides?

H12- “...2008... \$1 million in lost sales... U.S. Food and Drug Administration erroneously put fresh Florida tomatoes on a shortlist of suspects responsible for a massive salmonella outbreak.”

H13- “...a person picking tomatoes receives the same basic rate of pay he received thirty years ago.”

H14- “Paid on a “piece” basis for every bushel-sized basket they gather, tomato pickers are lucky to earn seventy dollars on a good day.”

H15- “South Florida’s tomato fields are “ground zero for modern-day slavery.”

H16- “In the last fifteen years, Florida law enforcement officials have freed more than one thousand men and women who had been held and forced to work against their will in the fields of Florida...”

## Chapter 2: Roots

H1- “The Atacama Desert makes up the southernmost part of the geographic range of modern tomatoes’ wild ancestors, which still grow in parts of western Chile, Peru, and Ecuador.”

N1- What do the researchers plan on doing with *S. chilense*?

H2- “Botanists think that the modern tomato’s immediate predecessor is a species called *S. pimpinellifolium*...”

H3- “...tomatoes were domesticated by Mayan or Mesoamerican farmers somewhere in what is now southern Mexico or northern Central America...”

H4/N2- “...they began using them as medicines, most often to treat eye ailments.” NOTE: What part of tomatoes treated eye ailments? What other medical uses did tomatoes serve?

H5- “To protect American farmers from competition from Caribbean growers of fresh winter tomatoes under the Tariff Act of March 3, 1883, the justices in 1893 rewrote the dictionary and decreed that tomatoes were vegetables (they are in fact fruits).”

H6- “...Alexander W. Livingston... one of the greatest tomato breeders in history...”

H7- “By 1930, there were twenty-nine thousand acres of tomatoes growing in the Sunshine State.”

H8- “In 1960, the state grew about 450 million pounds of tomatoes a year.”

N3- What is horticulture?

H9- “The Rick Center acts like a lending library, nurturing and preserving its 3,600-specimen collection but also making it readily available to scholars and plant breeders worldwide who want to “check out” seeds for their own experiments.”

N4- Why did companies stick with the red color for tomatoes?

H10/N5- “...fusarium wilt (the disease that wiped out tomatoes in Florida in the early 1900s)...”  
NOTE: How does fusarium wilt affect tomatoes?

N6- Why would you grow this species if it is inedible?

### Chapter 3: A Tomato Grows In Florida

H1- ...the majority of the state’s tomatoes are raised in sand...nearly sterile medium, Florida tomato growers have to practice the equivalent of hydroponic production, only without the greenhouse.”

H2/N1- “The Pesticide Action Network of North America, a group advocating for stricter controls on pesticide use, rates methyl bromide as a “Bad Actor”, a category reserved only for the worst of the worst agricultural poisons.” NOTE: What effect does methyl bromide have on tomato farms?

N2- How long does it take farmers to seed their tomato farms?

H3- “...forty- to forty-five thousand acres are planted with tomatoes in Florida...”

H4- “During the months it spends in the field, a Florida tomato plant can be attacked by at least twenty-seven insect species and twenty-nine diseases.”

N3- What qualifications must be met for a chemical to be a “Bad Actor”?

H5- “...a grower typically applies more than \$2,000 worth of chemical fertilizers and pesticides to every acre of tomatoes that he raises during a season.”

H6- “...Florida tomatoes are ready for picking after ten to fifteen weeks.”

H7/N4- “Despite decades of efforts to design machines that can harvest fresh-market tomatoes, as they are called in the business, someone still has to pick each one individually by hand.”  
NOTE: Is this labor usually done by modern day slaves?

H8- “Tomatoes are responsible for 17 percent of all the produce-related foodborne illnesses incidents in the country...”

N5- How can tomato farmers prevent themselves from getting salmonella?

## **Chapter 4: Chemical Warfare**

H1- “Because of all the nearly infinite variables- heredity, exposure to chemicals at other job sites, possible smoking or drug abuse, environmental factors- cases linking pesticide exposure to birth defects are notoriously hard to prove.”

H2- “...Florida officials take a what-we-don’t-know-wont-hurt-us approach to enforcing pesticide application laws and recording instances of farmworkers being exposed to chemicals while on the job.”

N1- What happens when a company is reported for pesticide poisoning?

N2- Why were seventy-five of the charges dismissed for Ag-Mart?

H3- “...America’s agricultural workers are more likely to be poisoned by pesticides on the job than those in any other occupation.”

H4- “The vast majority of workers who are exposed to pesticides on the job do not report the incidents.”

N3- What can be done to reduce the health problems in Apopka?

H5/N4- “Not only is methyl bromide a potent poison to humans and wildlife, it is also one of the leading causes of the depletion of the atmosphere’s ozone layer, the part of the stratosphere that absorbs ultraviolet radiation from the sun, radiation that causes skin cancer.” NOTE: Skin cancer cases are going to skyrocket if methyl bromide does not receive limits soon.

H6- ““Soil solarization” is a promising new technology that involves spreading clear plastic over rows during fallow periods between crops to heat the soil to levels that kill potential pests.”

H7/N5- “...Florida growers are showing more interest in an alternative to methyl bromide that many scientists view as one of the most toxic compounds employed in chemical manufacturing- so carcinogenic it has been used to induce cancers in laboratory cell cultures...methyl iodide, or iodomethane...approved in 2008 by the George W. Bush-era U.S. Environmental Protection Agency...” NOTE: Why was this chemical approved despite all of the health hazards? What good does it do? What are its benefits?

H8- “Donald Long...president of Ag-Mart...ordered that Ag-Mart stop using five chemicals that had been linked to reproductive problems...he did not admit that his company was in any way responsible for causing the children to be born the way they are.”

H9/N6- “...pesticide exposure is only one of a long list of abuses that the men and women who pick our winter tomatoes have to endure.” NOTE: What other abuses do they endure in the fields?

## **Chapter 5: From the Hands of a Slave**

H1- “Immokalee’s per capita income is only \$9,700 a year, about one-quarter of the national average.”

H2- “Even the police there are sometimes criminals.”

H3- “...Immokalee is the town that tomatoes built.”

H4/N1- “Immokalee, [Douglas Molley] says, is “ground zero for modern-day slavery.” ...any American who has eaten a winter tomato...has eaten a fruit picked by the hand of a slave.”

NOTE: What is the punishment for companies caught with modern-day slaves?

H5- “...became ill or too exhausted to go to the fields, they were kicked in the head, beaten with fists, slashed with knives or broken bottles, and shoved into trucks to be hauled to worksites.”

H6/N2- “Government statistics suggest that a total of about fifteen thousand new human trafficking incidents take place in the United States each year.” NOTE: How many of these cases take place on tomato fields?

N3- Did Ramos ever get in trouble for the murder of Roblero?

N4- Why do police in the area not perform investigations for these slavery cases?

H7- “...congressional legislators inserted a clause in the Victims of Trafficking and Violence Protection Act allowing victims of slavery who cooperate with law enforcement officials to receive T-1 visas, documents that allow them to stay and work in the country for four years and can lead to permanent residency.”

N5- Did anyone listen or follow Viacava’s suggestion to go after the large corporations, too?

## **Chapter 6: An Unfair Fight**