

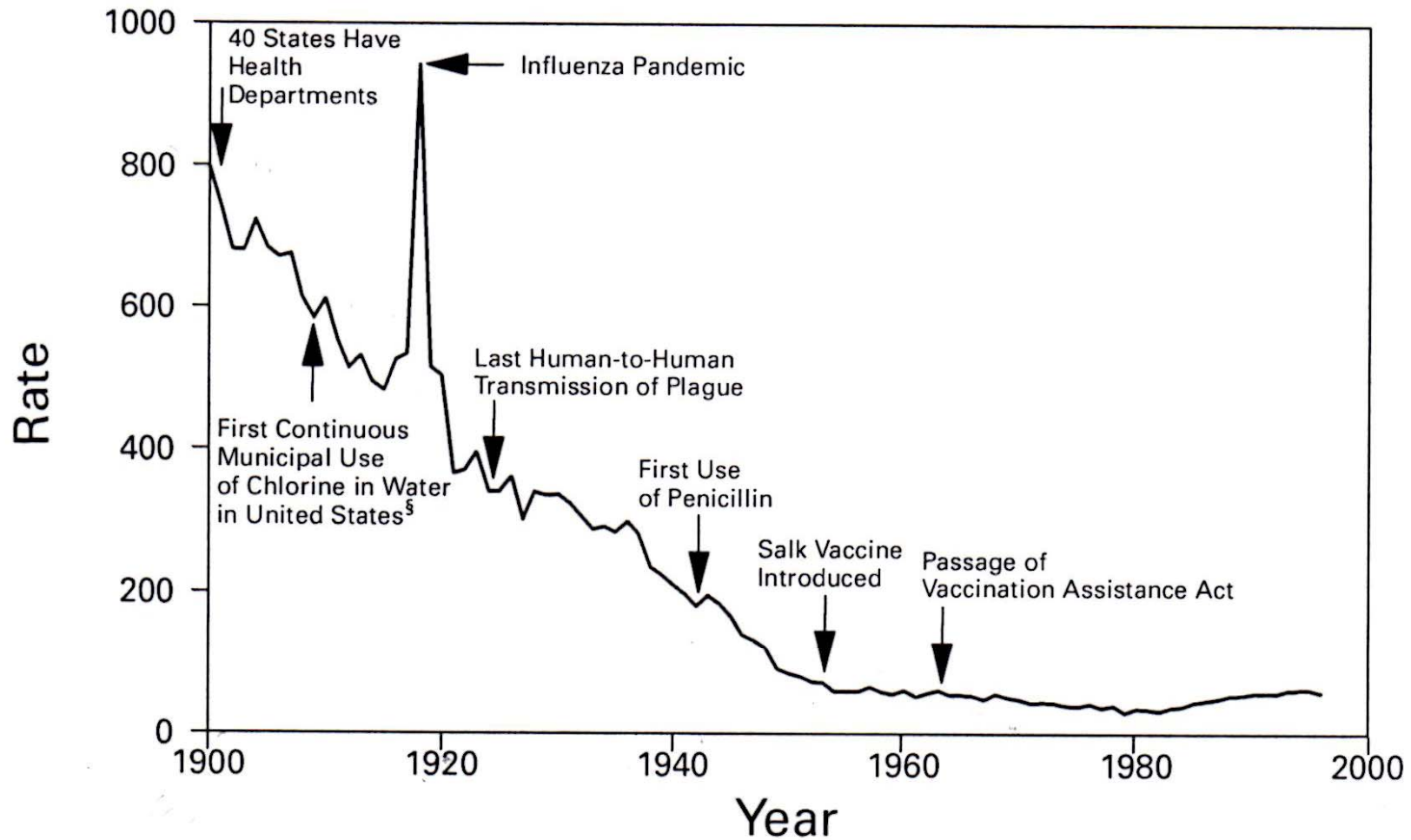


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UNIVERSITY OF ARKANSAS
DIVISION OF AGRICULTURE

Produce Safety - GAP

FIGURE 1. Crude death rate* for infectious diseases — United States, 1900–1996†



*Per 100,000 population per year.

†Adapted from Armstrong GL, Conn LA, Pinner RW. Trends in infectious disease mortality in the United States during the 20th century. *JAMA* 1999;281;61–6.

§American Water Works Association. Water chlorination principles and practices: AWWA manual M20. Denver, Colorado: American Water Works Association, 1972.

1990 vs 1997

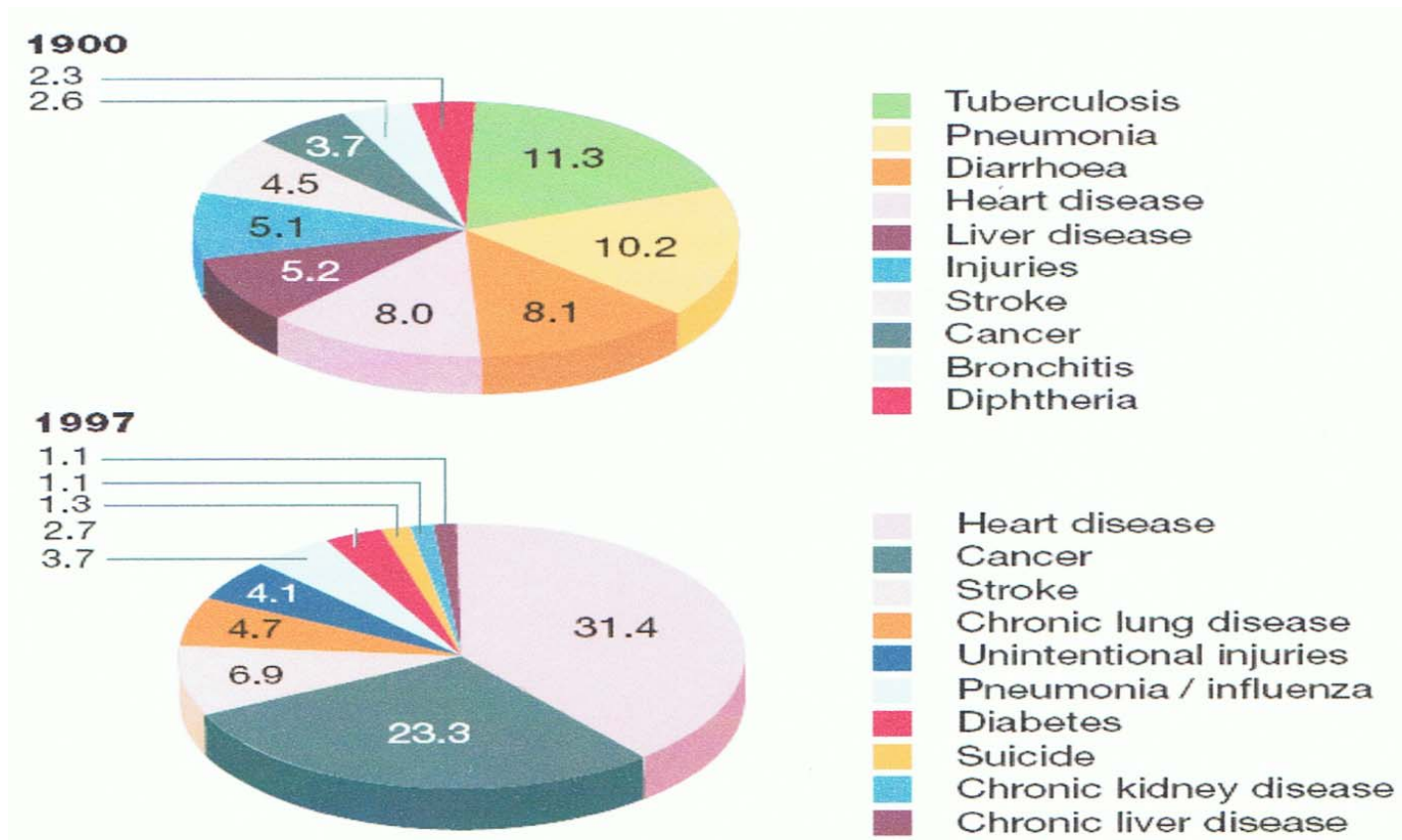


Figure 2 – The ten leading causes of death in the United States in 1900 and 1997. From “Changing Patterns of Infectious Disease”, Mitchell L. Cohen, Nature, Volume 406, 17 August, 2002. pp 762-767.

Good Agricultural Practices

Definition of GAP

- Good Agricultural Practices or “GAP” are a set of on-farm practices that have been proven to minimize the introduction and spread of harmful bacteria (pathogens) onto edible food.



The Problem



- About 37% of all foodborne illnesses are due to bacteria on fruits and vegetables that are not cooked prior to consumption.
- When these crops are growing in the field and subsequently being harvested, GAP practices prevent bacteria of fecal origin from contaminating fruits and vegetables.



The Goal



Food Safety Modernization Act (FSMA)

- The Food Safety Modernization Act passed Congress January 2011
- Several components that will effect growers.
- “Standards for the Growing, Harvesting, Packing and Holding of Produce for Human Consumption” – This is the GAP component



Components of GAP

- Water
- Manure
- Wildlife and Domestic Animals
- Personal Hygiene and Sanitation of Harvesters
- Equipment and Utensils





Water



- Water- important in irrigation, washing produce or chilling produce with ice –must be free of pathogens.
- The frequency of water checks is dependent on the source of the water (municipal, well or surface water).
- The type of irrigation – overhead spray vs furrow irrigation.

Manure



- Manure from mammals contains pathogens like Salmonella, E coli O157:H7 and others.
- Prevent manure from getting onto crops or contaminating irrigation/wash water.
- There are composting methods and time frames necessary to minimize the spread of fecal microorganisms from manure to fresh produce.

Wildlife and Domestic Animals

- Mammal fecal material contains pathogens.
- Limit their activity in fields where fresh fruits and vegetables are being grown.
- This includes dogs, cats, all domestic livestock and wildlife.

USA TODAY TUESDAY, AUGUST 9, 2011

One dies of E. coli in strawberries

Oregon health officials said one person has died and at least nine others were made sick from an E. coli outbreak traced to fresh strawberries picked at a farm in northwestern Oregon.

Paul Cieslak of the Oregon Public Health Authority identified the source of the outbreak as the Jaquith Strawberry Farm in Newberg, about 25 miles southwest of Portland. He said the bacteria are likely from fecal material from a deer, and the farm does not appear to have done anything wrong. Officials said strawberries are safe if they were sold in stores after Aug. 1.



Personal Hygiene and Sanitation of Harvesters

- The habits and health of harvest crews can affect the ultimate safety of fresh fruits and vegetables.
- Workers that are sick or have open sores should not be allowed to handle food.
- Worker hygiene practices such as not washing hands after going to the restroom can contaminate produce.



Equipment and Utensils

- Equipment and Utensils – Most of the items used to harvest crops such as knives and totes are capable of spreading bacteria once they are on the produce.
- Equipment and utensils must be routinely washed and sanitized to prevent the spread of harmful bacteria.



Types of GAP

- Voluntary GAP - for schools, farmers markets
- Third Party Audits – usually required by larger retailers.
- FDA GAP – For all growers of covered fruits and vegetables selling over \$25,000/ year or not having a qualified exemption

Voluntary

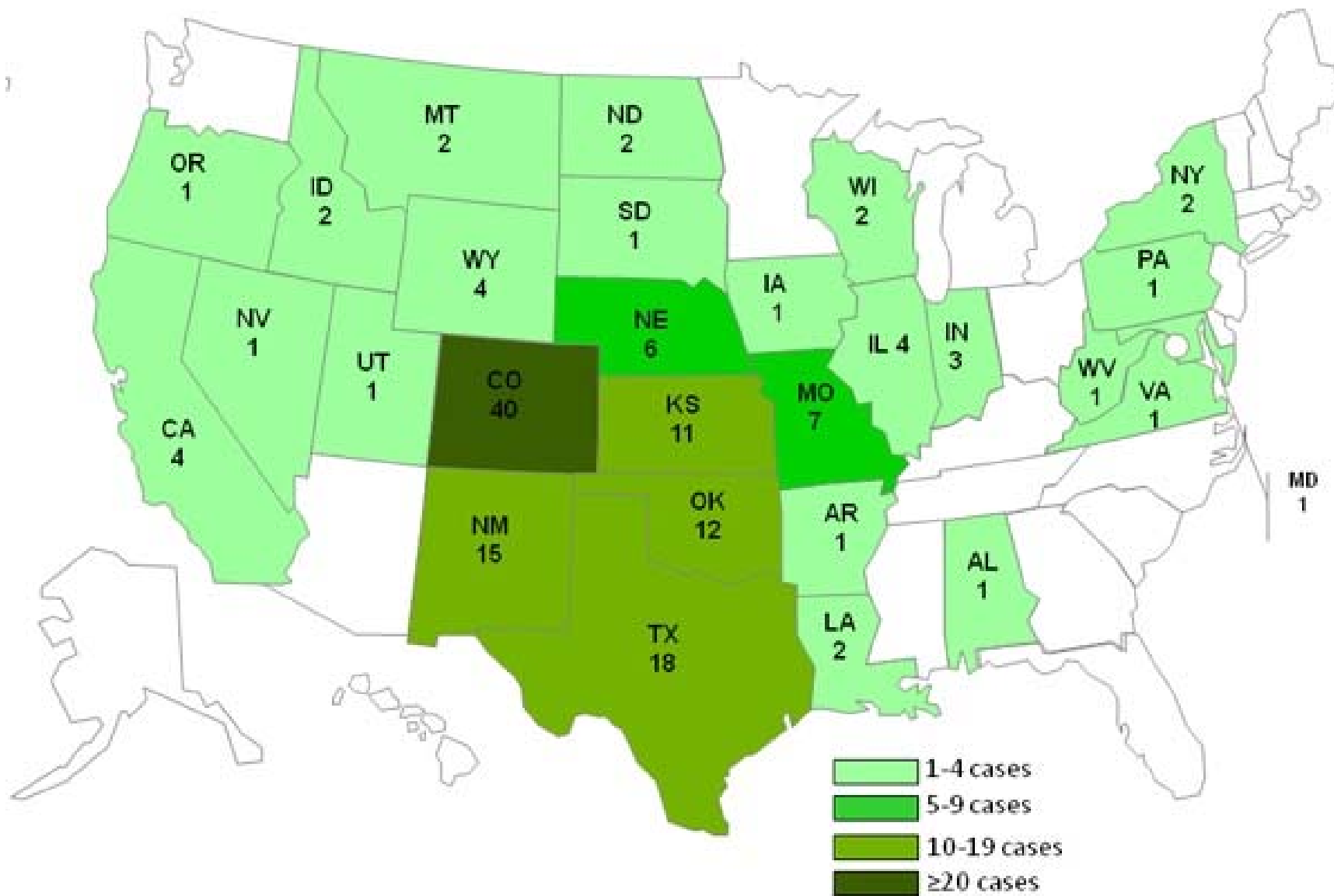
- May be required by vendors who sell at Farmers Markets or to schools who are interested in buying local produce.
- An auditor will come out to your farm and evaluate your operation according to the criteria at the following URL;
<http://www.uark.edu/ua/gap/Volunteer%20Certification%20Program/index.html>

Voluntary GAP

- Go over the checklist several times
- Some items may not be applicable NA
- The Fact Sheet describes what you are looking for.
- You want to develop an “culture of food safety” meaning you are thinking of how every step taken may have consequences.
- If you make children sick, you will not be forgiven.

Jensen Farms Cantaloupes

- 147 people sicken; 36 died
(maybe more re LM live 40 days or even months)
- Ave age 77 years old – Listeria
- Largest FBI in last 100 years



Jensen Farms

- Cull cantaloupes to cattle feedlot on truck- tires, In front of pack-off shed.
- Drains on floors - pooling
- Poor cleaning of equipment
- Listeria love moist environments

The Website

- The Website; The Division of Agriculture/ Cooperative Extension Service has a website dedicated to Good Agricultural Practices and Food Safety plans.
- Use the sample food safety plans and documents.
- <http://www.uark.edu/ua/gap/index.html>

Liability

- You are liable for the safety of your produce.
- Even if you obey all regulations and pass GAP audits, you are still liable.
- Conduct GAP audits and write food safety plans to minimize possibility of an accident and if it occurs, it shows you were reasonably active in prevention.
- DNA fingerprinting – can trace back to your farm.
- Buy FLIP insurance for as little as \$300/year.

Conclusions



- Good Agriculture Practices are for real.
- You should develop a “Culture for Food Safety” to be constantly thinking about it and minimizing risks.
- You should be advised that even though you follow the rules and regulations, you are ultimately liable for the safety of your produce. Embrace GAP to minimize your liability.