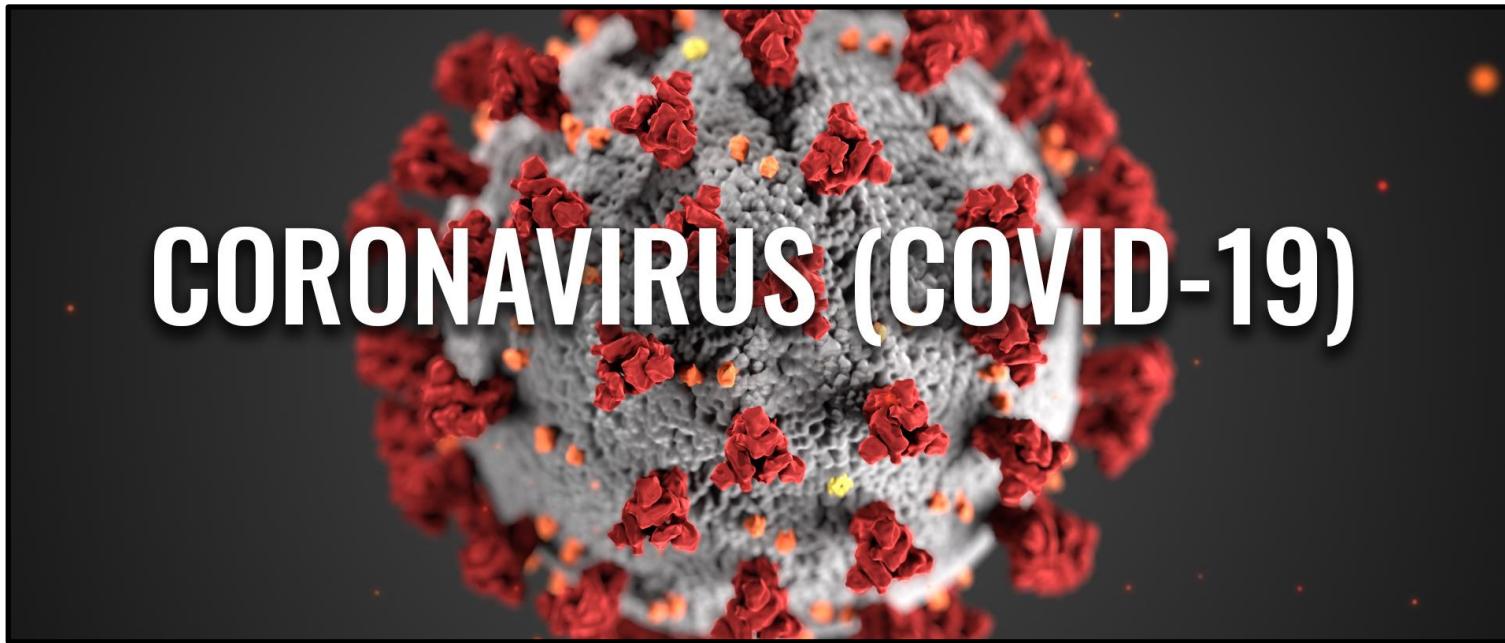


Labor migration after Covid: Agriculture

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Highlights 1

- **Global ag: 884 million, 27% of 3.3 billion LF**
 - Ag = 80-20 sector: 80% of farms = 20% of output
 - 40% hired or 353 mil: concentrated on 20% largest farms
- **Industrial countries: <5% of labor force in ag**
 - Hired do > 50% of farm work, more in FVH ag
 - Hired = vulnerable: local workers who can't find nonfarm jobs and guest workers
- **North American ag depends on Mexicans**
 - US: average hired employment 1.5 mil, total 2.5 mil+ workers, 80% born in Mexico
 - Unauthorized down, legal H-2A up to 10% of employ
 - Canada: Mexicans are 1/3 of seasonal crop workers
 - Autos vs ag: national versus migrant workforces

Highlights 2

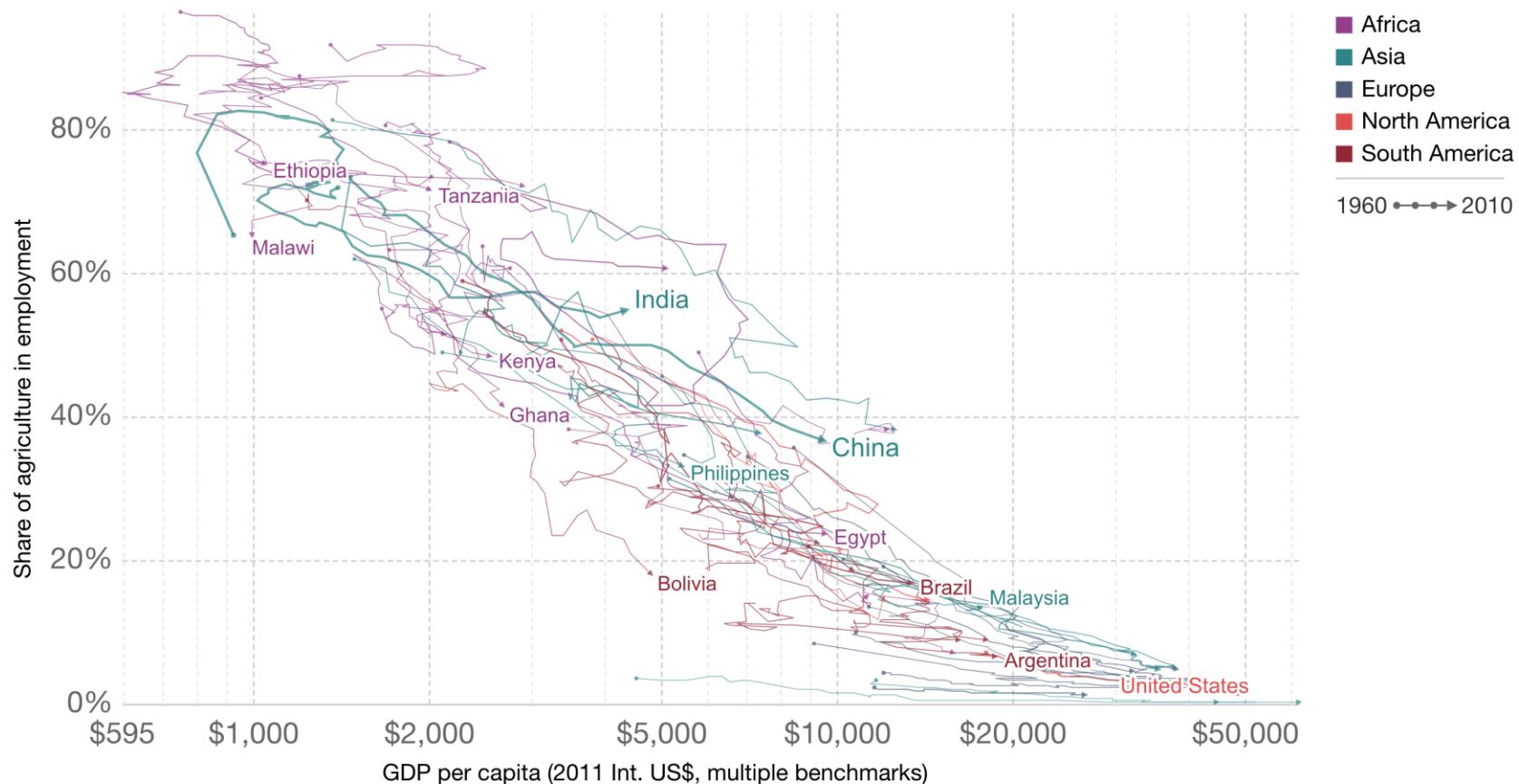
- **Covid: lockdowns to reduce spread of virus**
 - **Food essential, but uneven impacts on food sector employment: meatpacking jobs up & restaurant jobs down**
- **Do jobless workers shift within the food system?**
 - **NO: jobless rest workers lack links to farm jobs, poor temp housing, employers prefer guest workers**
 - **No BIG changes to farm wages and working conditions**
- **Impacts of Covid: accelerate trends underway**
 - **Speed labor-saving mechanization and labor aids**
 - **More just-in-time guest workers**
 - **More imports of EVH commodities**

Share of employment in agriculture falls as incomes rise

GDP per head vs share of agriculture in employment, 1960 to 2010

Our World
in Data

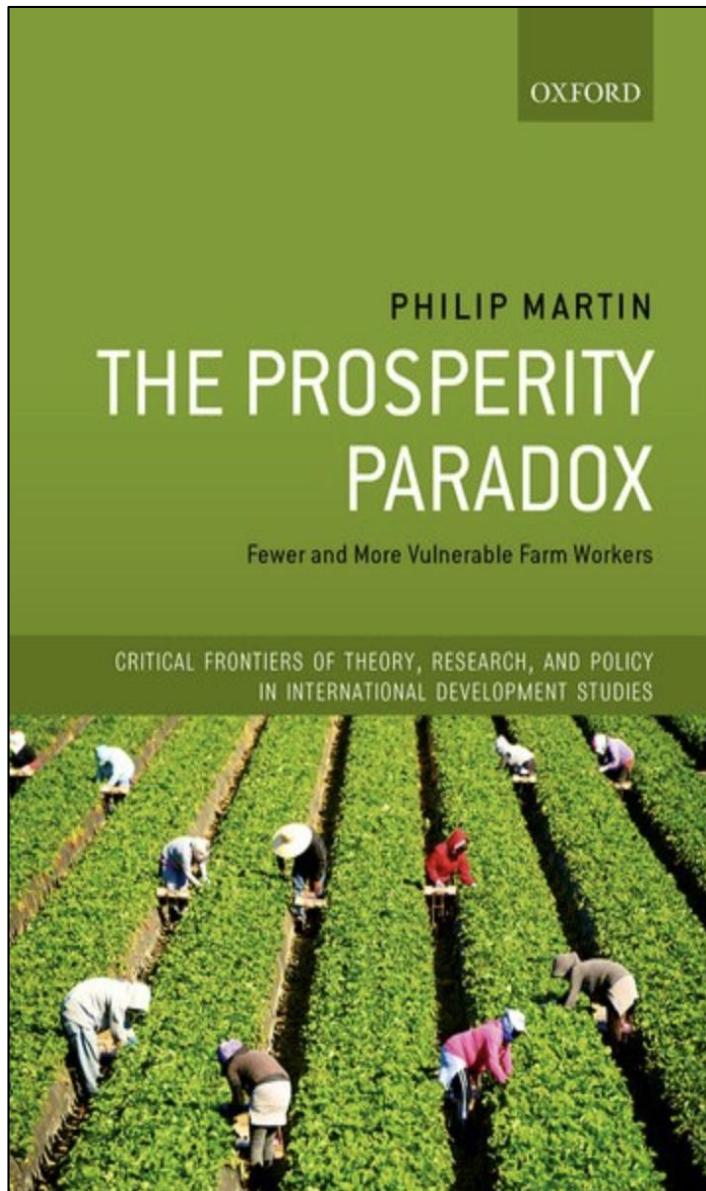
The vertical axis shows historical estimates of the employment share in the agriculture sector. The horizontal axis shows GDP per head after adjusting for inflation (figures are in 2011 international US dollars) and uses multiple benchmarks for cross-country income comparisons.



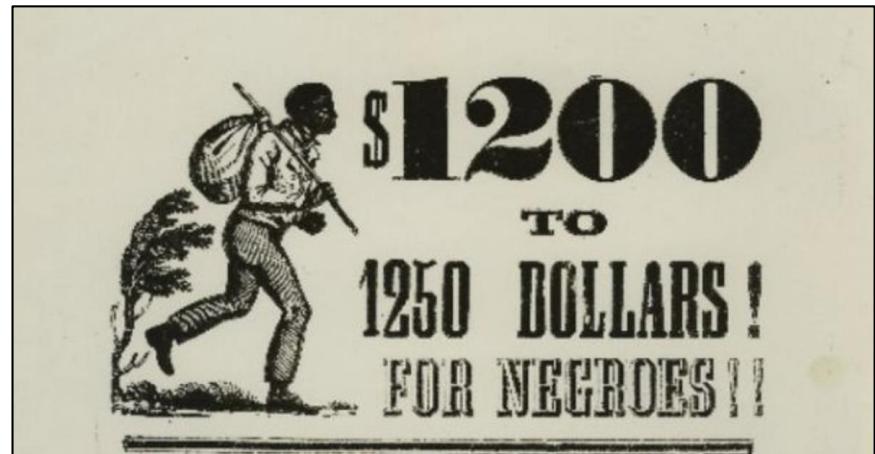
Source: Our World In Data based on Herrendorf et al. (2014) and GGDC-10 (2015), Maddison Project Database (2018), Population (Gapminder, HYDE(2016) & UN (2019)), Our World In Data
OurWorldInData.org/employment-in-agriculture • CC BY

The Prosperity Paradox

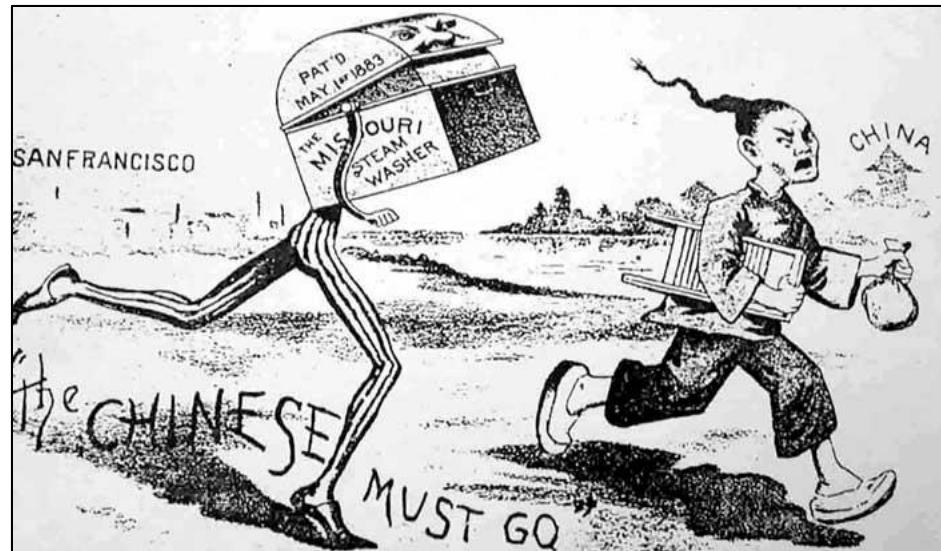
Share of labor in ag down, hired share up, hired vulnerable



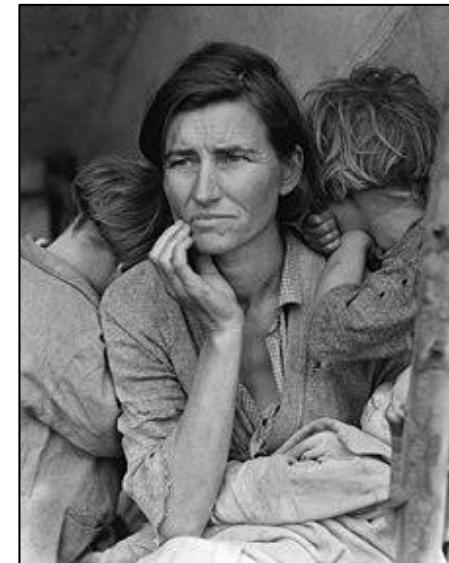
3 US farm labor systems: family & slaves in early 1800s



Western states: large farms and migrants
Chinese imported to build RR driven out of cities in 1870s
Migrant FWs who “come with the wind, go with the dust”



Waves: Japanese, South Asians, Okies, Mexican Braceros



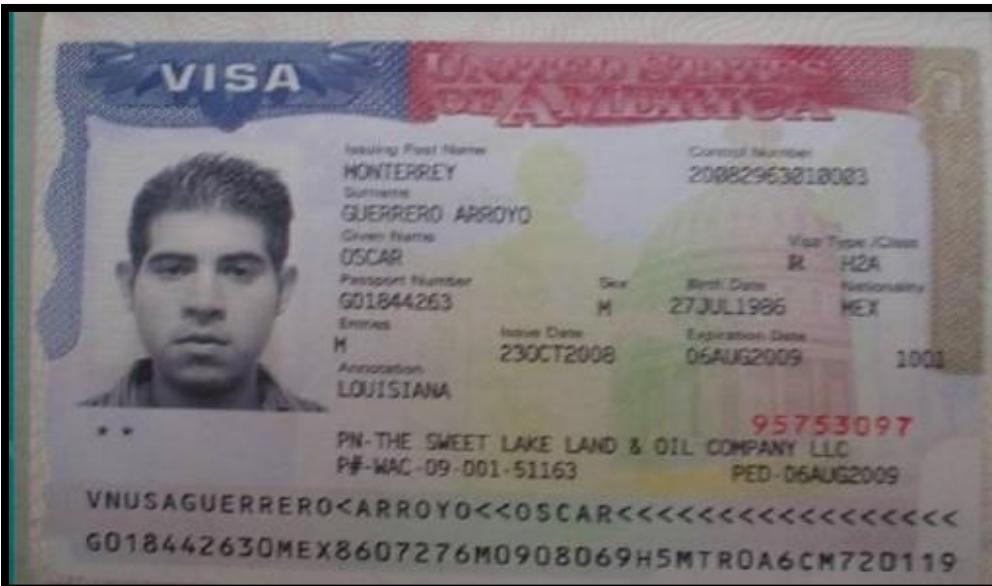
US farm workers today: aging, unauthorized, and settled



Most unauthorized farm workers have US-born children



Covid-19 accelerates 3 trends underway Mechanization, H-2A guest workers, imports



The Growing Regions of Mexican Produce

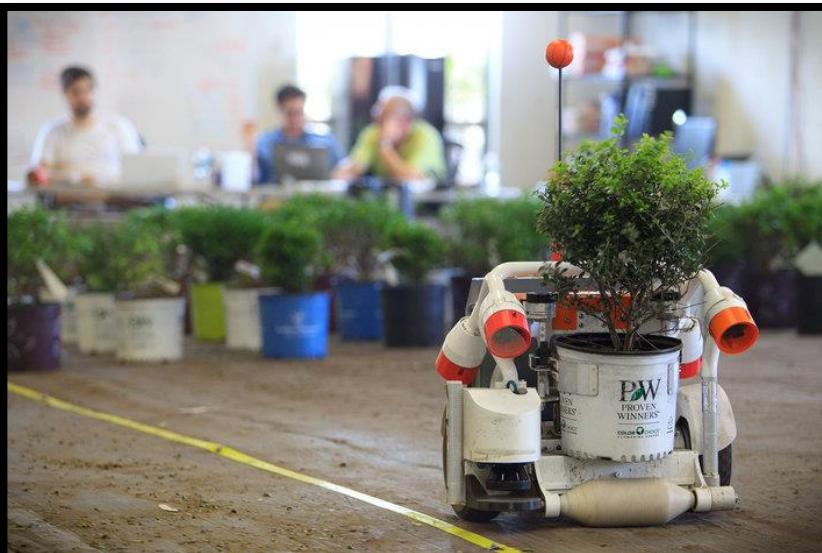


Other emerging items from Mexico include: blackberries, broccoli, chayote squash, cranberries, dragon fruit, grapefruit and jicama.

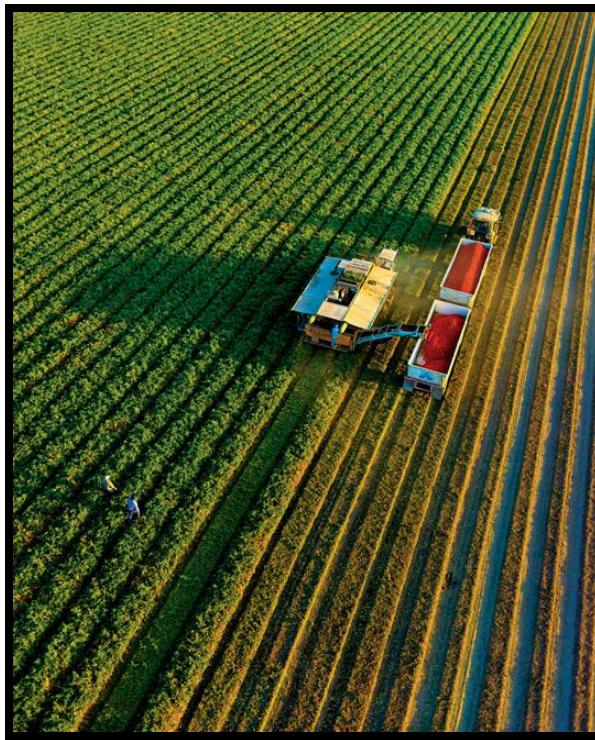
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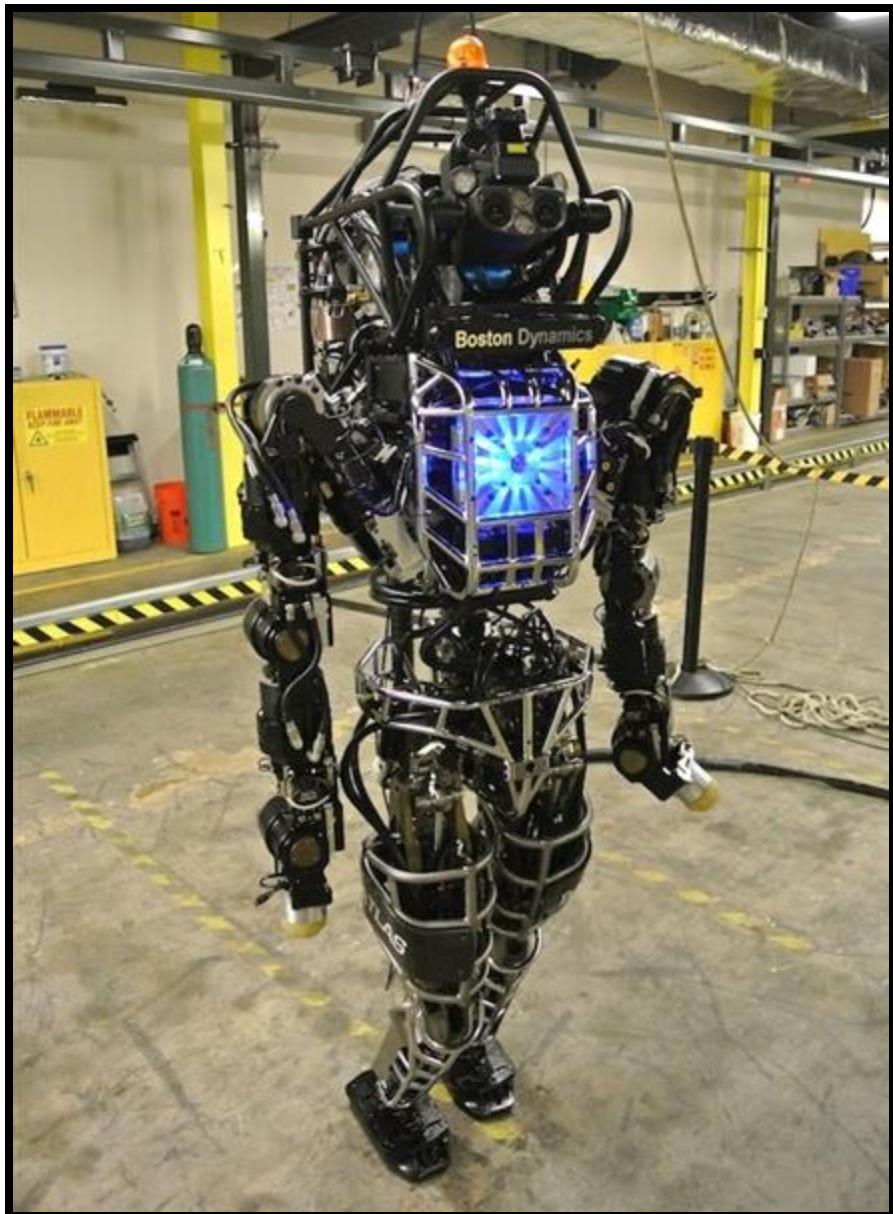
LAT: July 21, 2017. Robots in the fields?



Mechanize olives, carrots, tomatoes, nursery

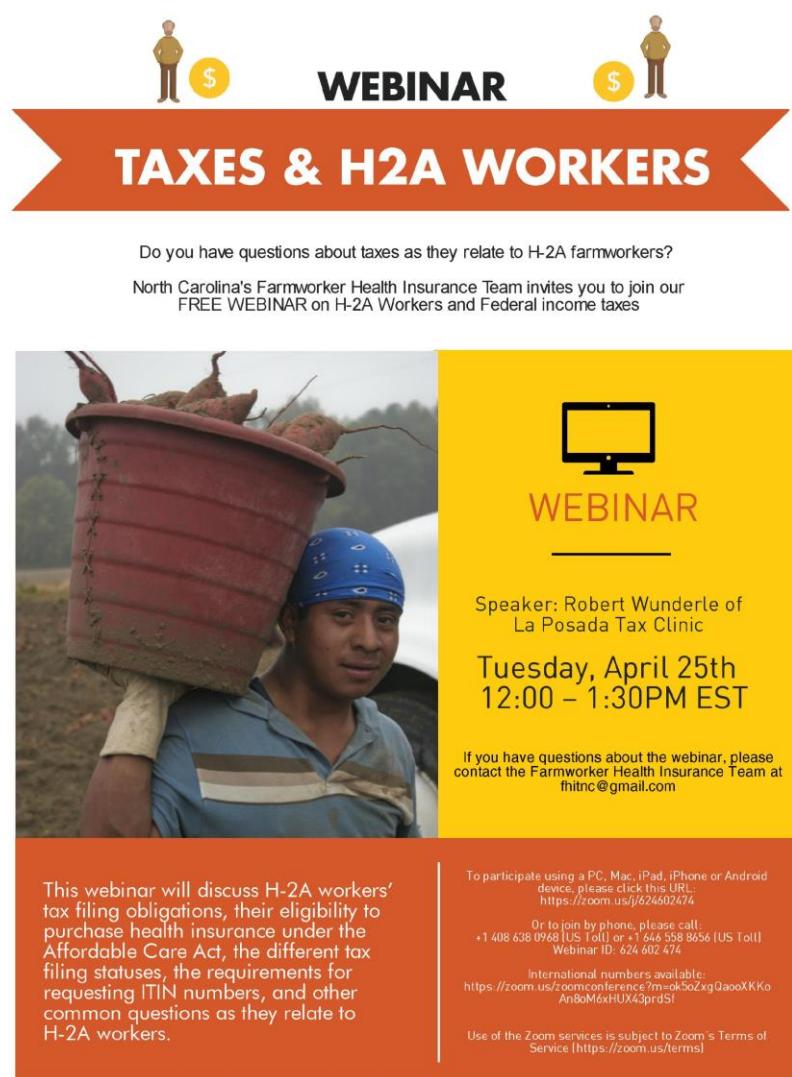
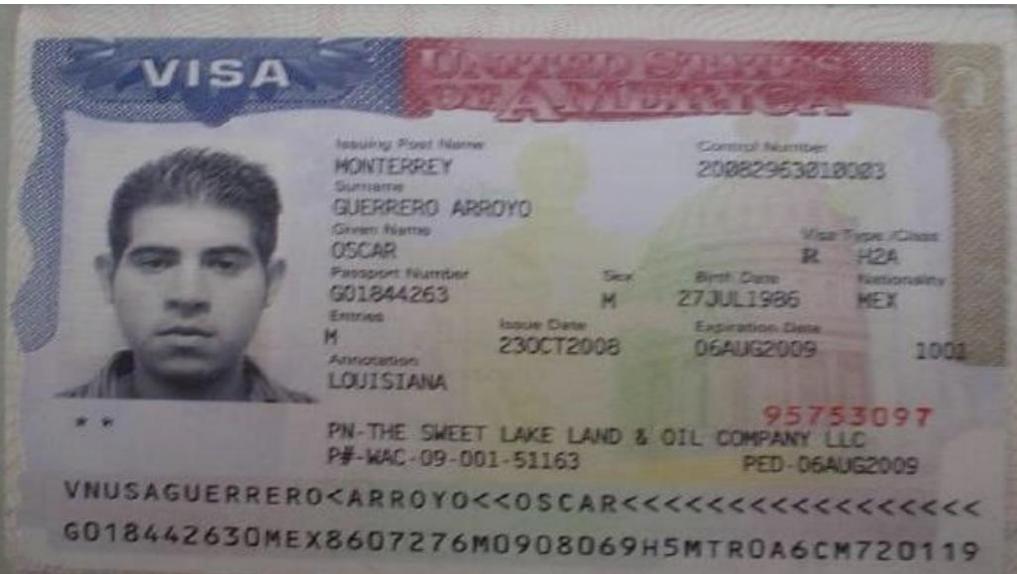
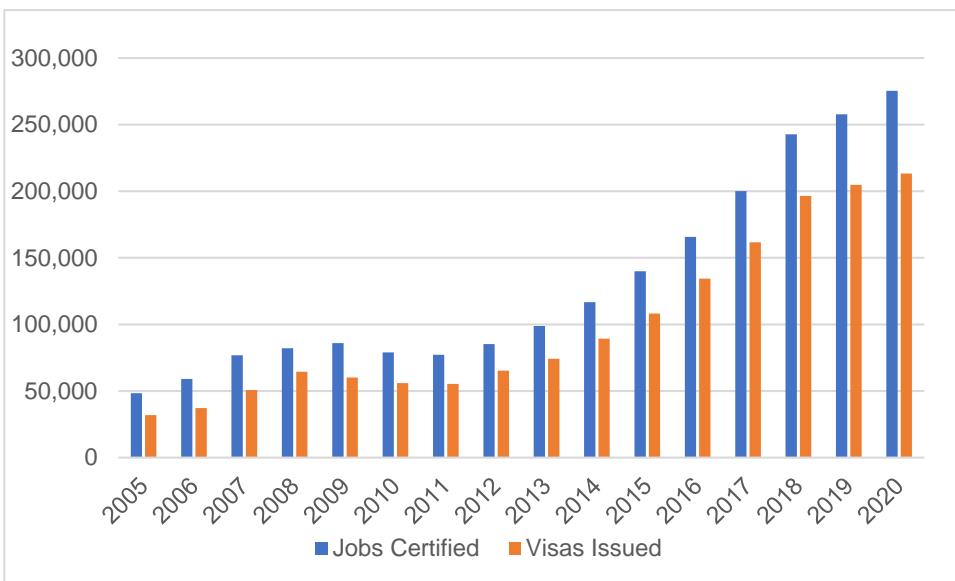


Robots in defense vs ag: performance vs costs



H-2A guest workers

275,000 jobs, 213,000 visas in FY20



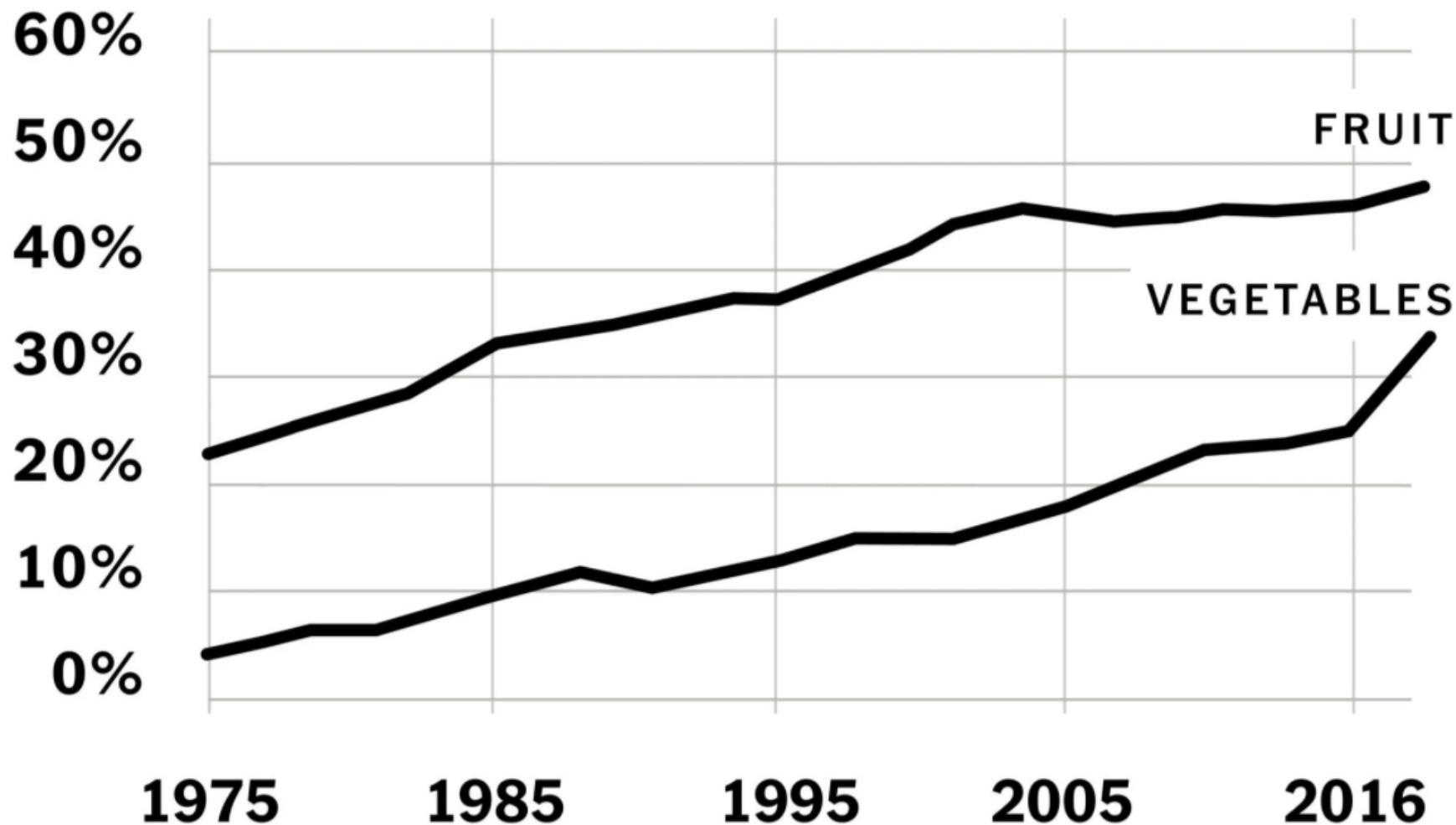
H-2As cost \$20-\$23/hour; US \$15-\$17/hour

Just in time vs just in case

- H-2A: employer selects worker & uses *positive networks*: best workers bring relatives into crew & train new hires
- US: worker selects employer & potential *negative networks*: hire 60+ relatives to get 30-year olds
- H2A: reliable & loyal: willing to work extra hours. What is the value of labor insurance?



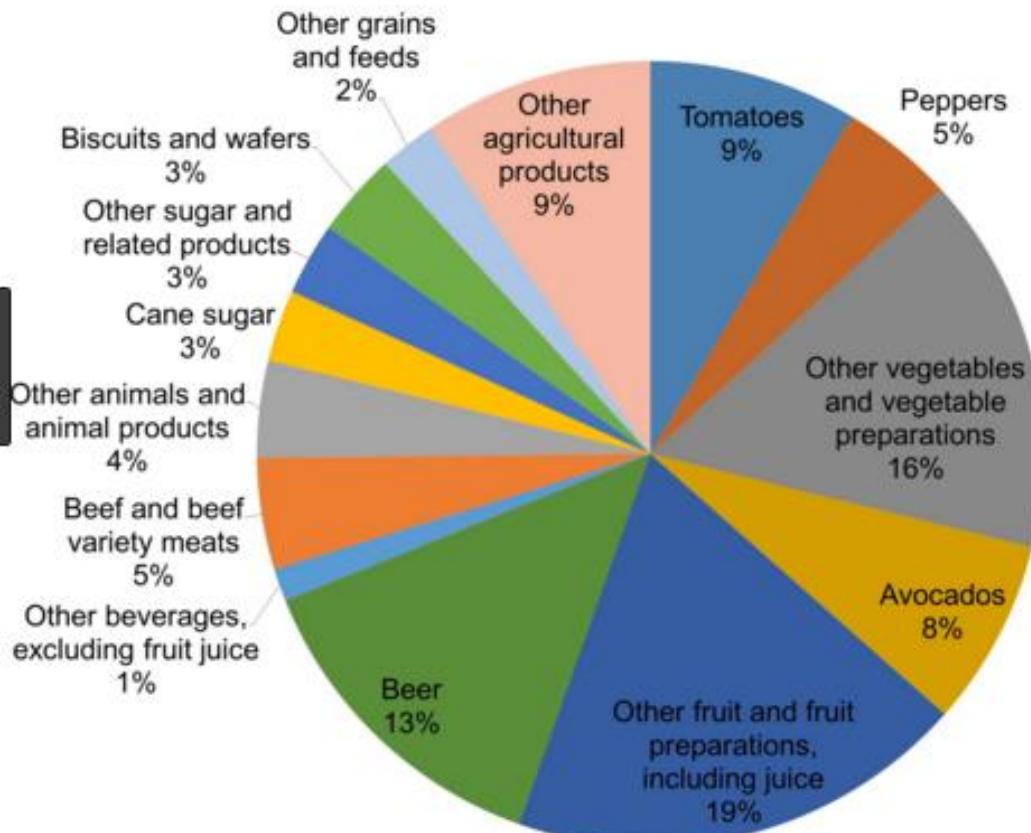
½ of US fruit, 1/3 of US veggies, are imported
Mexico: ½ of fruit imports & ¾ of veg imports



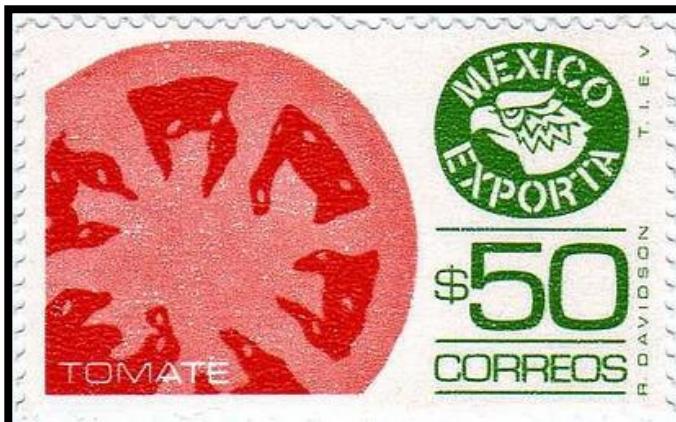
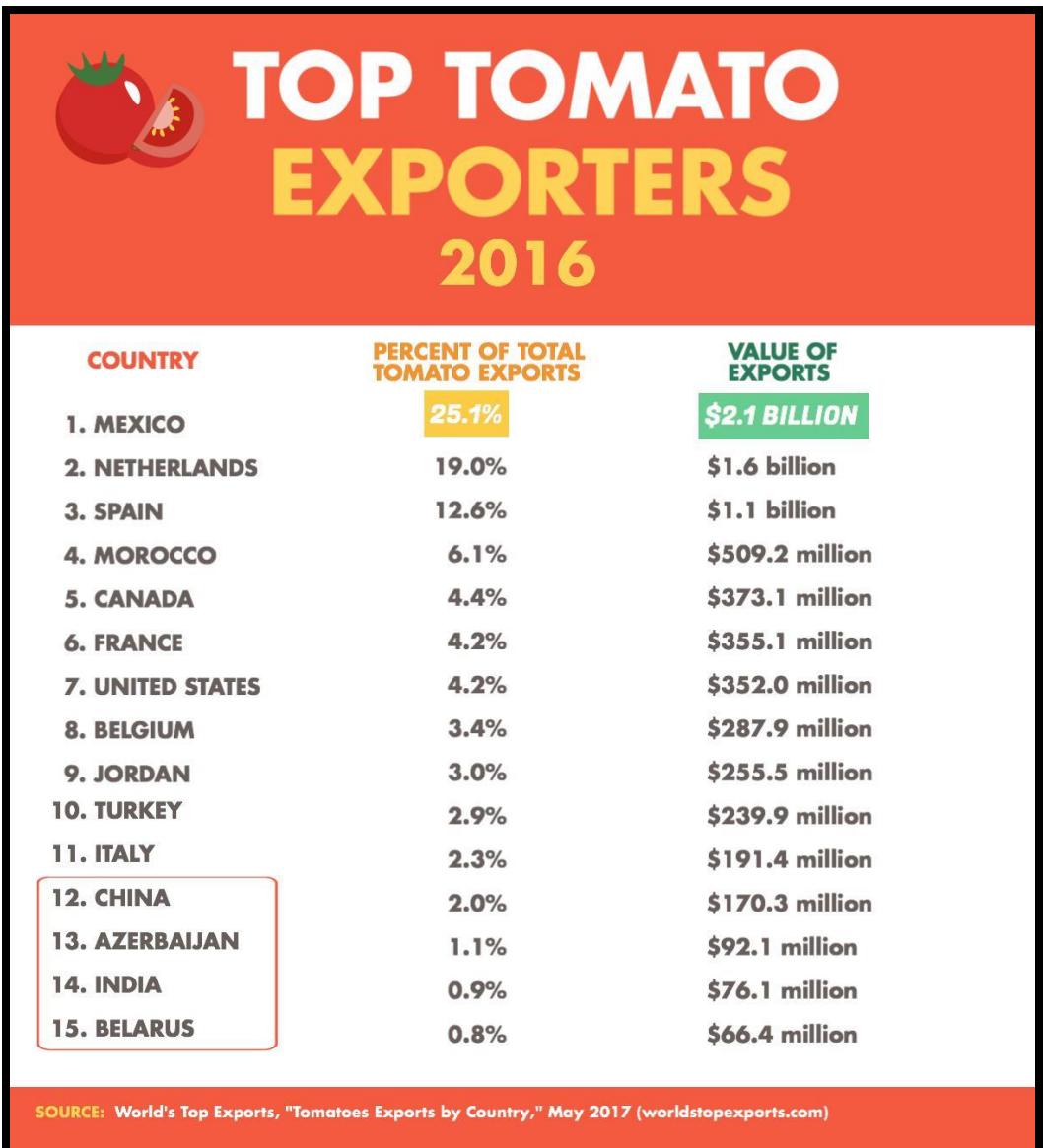
Big 3 Mex X: tomatoes, avocados, berries

Big 3 = half \$11 billion of US F&V imports from Mexico

More than two-thirds of U.S. agricultural imports from Mexico consisted of vegetables, fruit, or beer, in 2016



Mexico: 25% of global tomato exports.
Mexican Pres Salinas in 1990: Mexico can export tomatoes or tomato pickers to US



Trade offs in farm labor

- **Mechanization: machines do not get sick but:**
 - **Fixed machine costs vs variable-cost labor**
 - **Consumer acceptance of machine-harvested produce?**
- **Guest workers:**
 - **Do int'l wage gaps assure ample supply of workers?**
 - **Can “loyal” guest workers be kept safe & protected?**
- **Imports:**
 - **Trade in place of migration, but food safety & security**
 - **Should buyers help to enforce labor compliance on farms? How? What role for fair trade etc?**
- **Food is essential, but which foods? Should govts make migration exceptions for fresh berries during pandemics?**