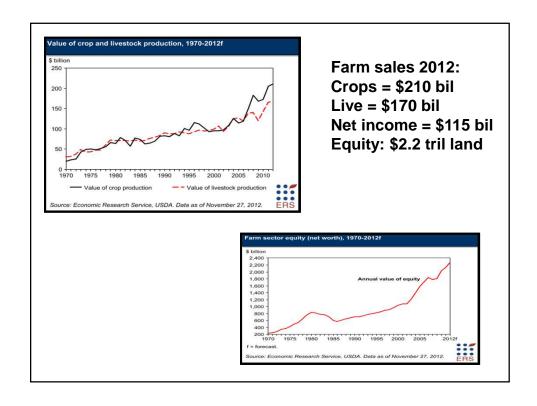
US & California Agriculture: Dimensions and Challenges

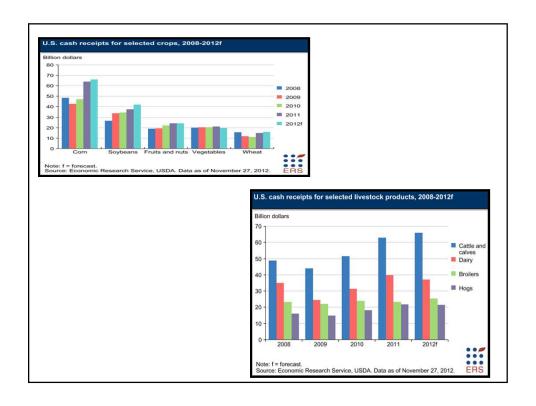
Philip Martin: plmartin@ucdavis.edu

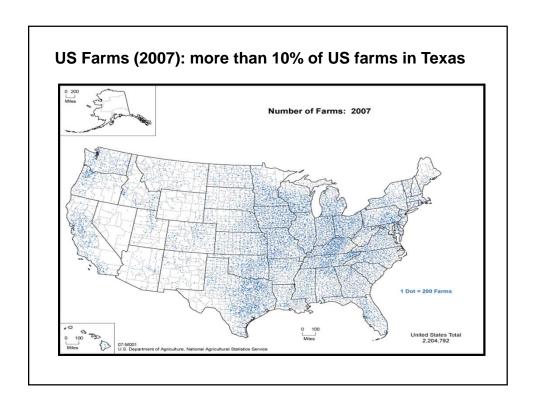
http://migration.ucdavis.edu February-March 2013

Highlights

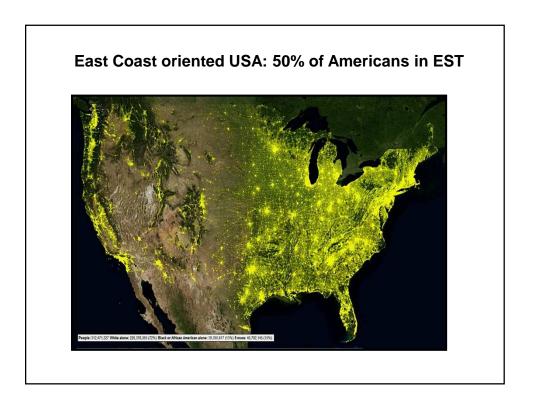
- US agriculture: \$375 billion sales in 2012, 55% crops, 45% livestock, \$114 billion net farm income
- Hired workers: 60% of average employ in US ag; Almost 100% in FVH ag, whose sales of \$60 bil are 30% of crops
- ¾ of hired workers = Mexican immigrants;
 half are unauthorized
- How will immigration reform affect farm labor costs?

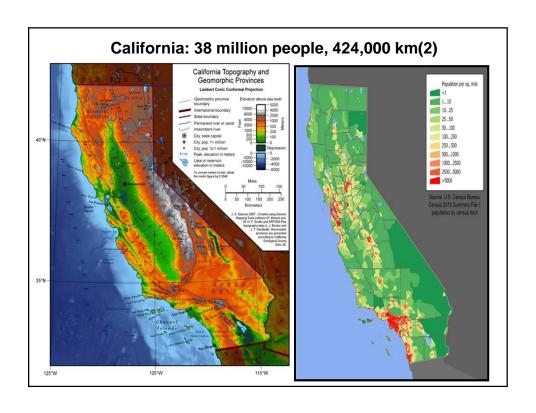


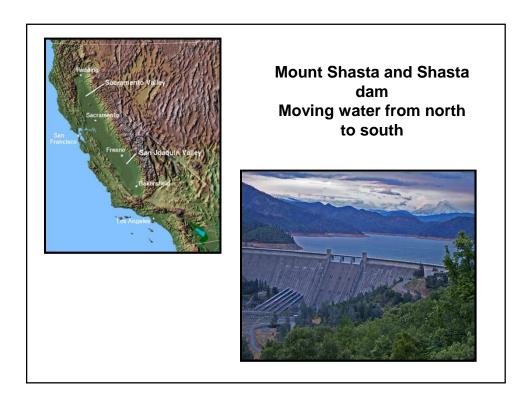


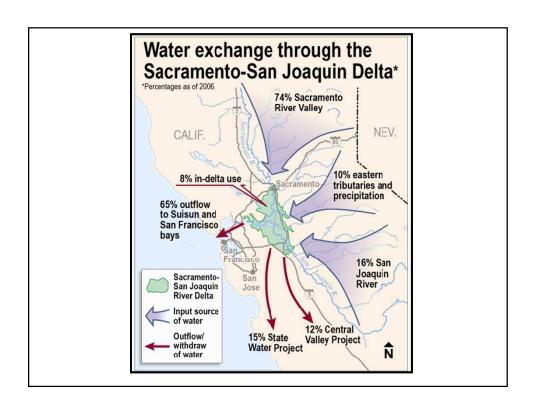












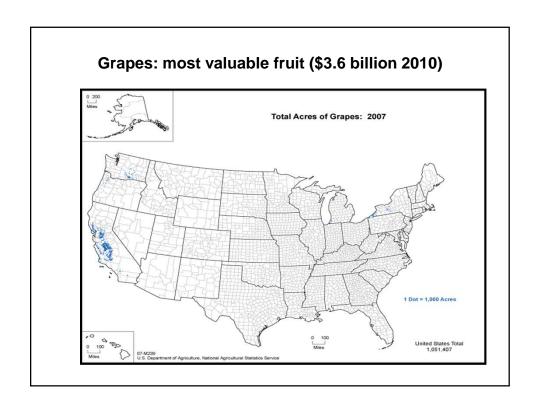


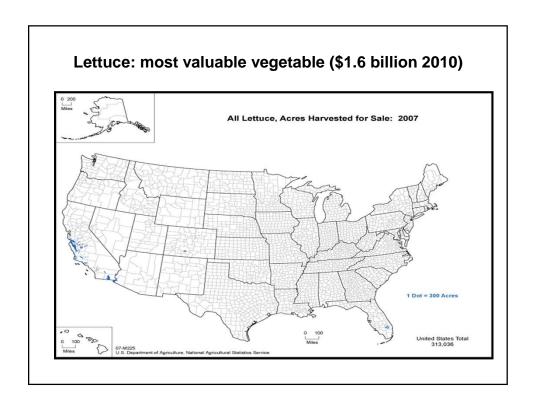
Crops grow where water flows



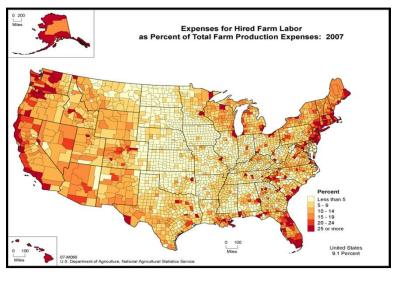
3 S's of Farm Labor

- FVH sales: small share of US farms & acreage, but FVH = (1) 30% of US crop sales (\$60 bil of \$200 bil) (2) 55% of US farm labor expenses
- Labor's share: typically 20 to 40 percent of production costs (labor = 14% of all prod costs)
- Seasonality: bio production process and fluctuating demand for labor
- Dealing with seasonal labor demands:
 - Pay higher wages to support workers year-round
 - Top up seasonal earnings (\$1 billion a year in fed MSFW assistance to MEP, MH, MSHS, NFJP)
 - Hire quest workers from poorer countries.









3 C's of Farm Labor: Concentration

- Concentration: by commodity, geography, & size of farm
 - Hired workers are concentrated on <10,000 large FVH farms (also big dairies)
 - Many farm employers, about 500,000 in COA or almost 1/10 of US employers. Large number of small farm employers = labor law and other exemptions for ag
 - US defines large employers as those with more than 500 employees. Most FVH commodities are produced by large farm employers
 - Large nonfarm: Walmart #1 private employer: 1.8 million US employees; McDonald's 450,000, UPS 400,000



Fruit: 1/4 of farm labor expenses 1/4 of seasonal farm jobs





Vegetables: 1/8 of labor expenses 1/10 of seasonal jobs





Nursery: 1/5 of expenses; 1/8 of seasonal jobs Dairy: 1/10 of expenses 1/20 of seasonal jobs



3 C's of Farm Labor: FLCs

- Contractors: bilingual intermediaries who earn a fee for assembling crews of workers and bringing them to farms
 - 1. Farmers pay a per acre, ton or other unit of work to FLCs, who in turn pay workers
 - 2. Farmers pay \$8 an hour plus a 25-35% commission for FLC payroll taxes, toilets, profit etc
- Mutual benefits or cheating?
 - FLCs accept money-losing commission rates
 - Make profit by not forwarding payroll taxes &/OR providing services to newcomer unauthorized workers, everything from housing and rides to work to check cashing

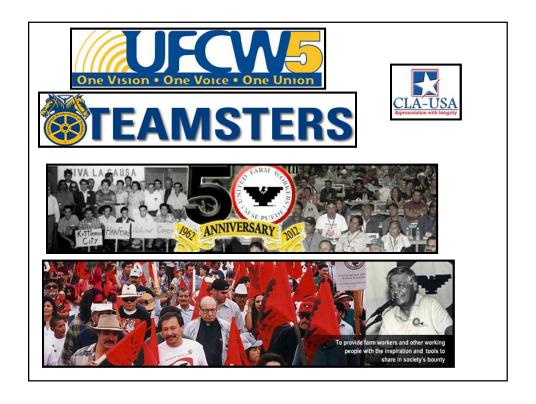


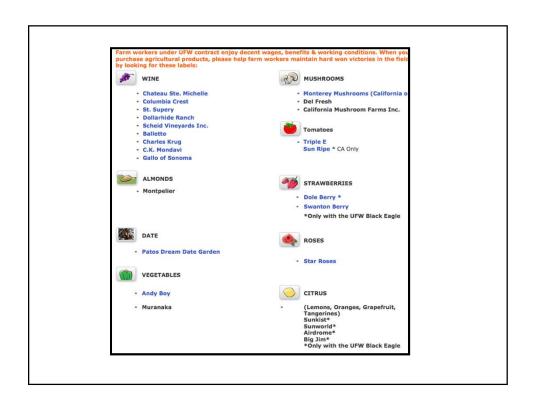
3,000 FLCs; 1,200 in CA FLCs = risk absorbers



3 C's of Farm Labor: Conflict

- Conflict: inevitable disagreement over "fair wage for fair work"
 - Farm workers are attractive to unions; large number
 & low wages; FWs often vote for union rep
 - BUT: the most able FWs find exit from ag easier than voice for change; they leave for nonfarm jobs, making it hard to build strong unions
 - CA ALRA (1975): very pro-worker & pro-union law to "right historic wrongs." 1. quick elections (within 2-7 days), 2. make-whole remedy, and 3. union power over members (solidarity > individual rights)
 - Mandatory mediation (since 2003): IF parties cannot negotiate a CBA within 90-180 days, mediator helps, then imposes a CBA





3 R's of Labor Markets

- Recruitment: FVH farms often hire crews of workers via fee-charging intermediaries
- Remuneration: work: exchange effort for reward
 - Piece rates make labor costs predictable without screening workers (\$20 to pick 1,000 pound bin)
 - Number of hourly wage jobs up with (1) homogeneous work force & (2) technology-field conveyor belts allow employers to set pace of work
- Retention: Short-run: iron triangle between min wage, piece rate, and prody standard; terminate slow workers
 - Long-run: NAWS finds 15-20% "new workers," that is, in US less than 12 months. Farm work=job, not career
 - Does high turnover have costs? Does worker prody decline with age?





Iron triangle: ave piece rate earnings must exceed min wage; If employer set piece =\$20/bin, and min wage =\$10/hour, Prody standard = ½ bin/hour or 4 bins in 8-hour

Piece rates are as follows:	ау
Apples- Pink Lady, Harvest	\$23.25 Per Bin
Apples- Braeburn, Harvest-	\$20.00 Per Bin
Apples- Fuji Harvest-	\$25.00 Per Bin
Apples- Red Delicious Harvest-	\$17.00 Per Bin
Apples- Golden Harvest-	\$20.00 Per Bin
Apples- Gala Harvest	\$20.00 Per Bin
Apples- Granny Harvest	\$20.00 Per Bin
Apples- Ambrosia Harvest	\$17.00 Per Bin
Apples- Jonagold Harvest	\$17.00 Per Bin
Apples-HoneyCrisp Harvest	\$20.00 Per Bin
Apples- Scifresh Harvest	\$18.00 per Bin
Apples- Scirose Harvest	\$20.00
Red Cherry Harvest-	\$5.00 Per 30 Pound Lug
Yellow Cherry Harvest-	\$5.00 Per 20 Pound Lug
Bartlett Pear Harvest-	\$18.00 Per Bin
D'Anjou Pear Harvest-	\$19.00 Per Bin
Red D'Anjou Pear Harvest-	\$19.00 Per Bin
Concord Pear Harvest-	\$17.00 Per Bin
Bosc Pear Harvest-	\$17.00 Per Bin
Comice Pear Harvest-	\$17.00 Per Bin

More hourly wage jobs with homogeneous labor force and field conveyor belts



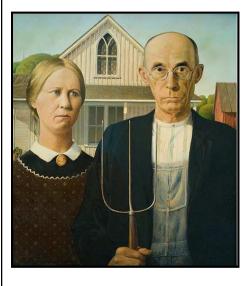
Retention: accept exits, seek new entries from abroad

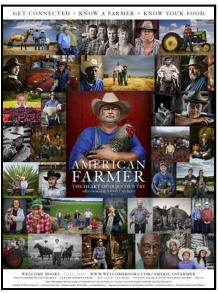


Farm Labor Issues

- · Ag apartheid?
 - Older US-born, white, citizen operators (ave 58)
 - Younger Mex-born, Hispanic, non-citizen hired workers (ave 28)
- How will farms and land be transferred?
 - Farm owners finance trusted hired workers to take over?
 - Fewer, larger, and more specialized farming operations. Retain land, so farm operators not necessarily land owners
- Result: California-style factories in the fields, with layers between workers and beneficiaries, spread throughout US

American Gothic, 1930, Grant Wood, based on Eldon, Iowa









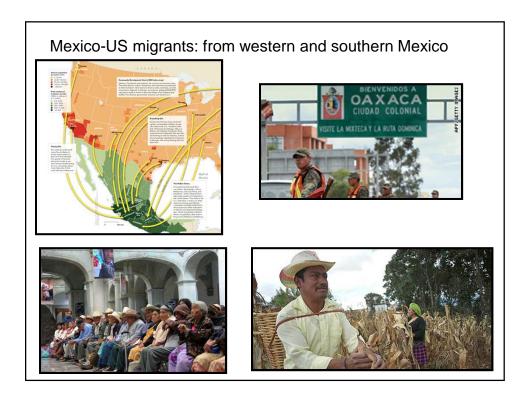


Lamont, CA



NAFTA: Canada, Mexico, US: Integrated cars and TVs

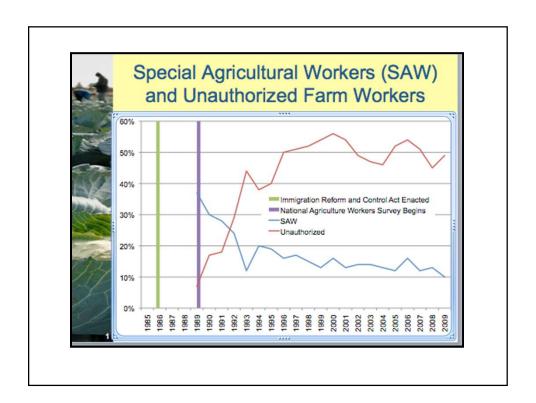
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Dr. Philip Martin, UC Davis - Guest lecture at the Fulbright Economics Teaching Program in HCMC, Vietnam

Immigration 1

- Early 1980s: 20-25% of CA farm workers = unauthorized; enforcement = worker chase; unauthorized share highest in least perishable crops (citrus, not strawberries)
- 1987-88: IRCA legalized 1.1 million unauthorized farm workers (SAWs), H-2A program streamlined, new free-agent RAW
- Expectation: rising farm labor costs
 - 1. So ag can retain newly legalized SAWs OR
 - 2. As farmers build housing to obtain H-2A guest workers
- But farm labor costs fell as unauthorized workers with false documents diffused throughout USA; plenty of farm workers



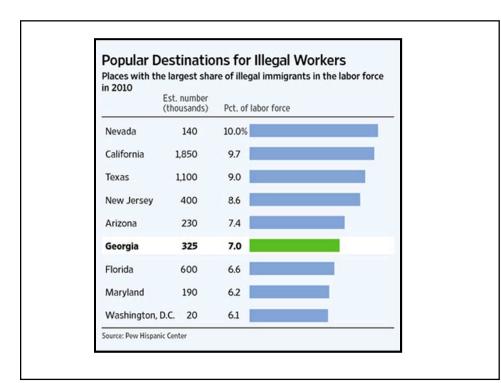
Immigration 2

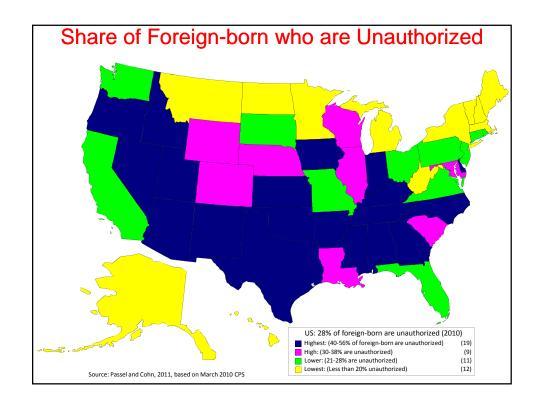
- Since mid-1990s: over 50% of hired workers on crop farms have been unauthorized
- Farm employers: give us RAW #2, a freeaagent program that does NOT require employers to:
 - try to recruit US workers under DOL supervision
 - provide free and approved housing to workers
- December 2000: AgJOBS negotiated between worker advocates and farm employers in expectation that Presidents Bush and Fox would create a new Mexico-US guest worker program
- Legalization for workers; free agents for employers

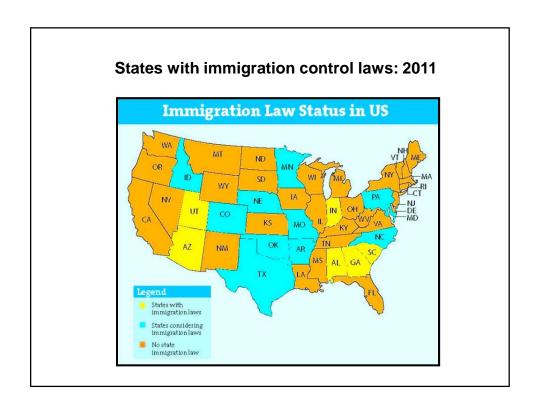


Immigration 3

- AgJOBS would repeat the 1986 IRCA with twists—earned legalization, H-2A changes
- For workers: legalization: up to 1.5 million unauthorized foreigners could become probationary immigrants; earn regular immigrant status with continued farm work
- For employers: guest worker changes:
 - Attestation replaces certification; end of DOLsupervised recruitment of US workers
 - Housing allowance instead of free housing (adds \$1 to \$2 an hour to labor costs)
 - AEWR of about \$10 an hour rolled back by \$1 to \$2 an hour and studied







3 Policy Options

- Status quo: more fences and agents on Mexico-US border, I-9 audits, S&L govt laws
- Enforcement only or enforcement-first: require all employers to use E-Verify to check new hires, issue more secure IDs, step up interior enforcement (I-9 audits, SSN mismatch letters, raids); more S&L govt laws: AZ, AL, GA
- Comprehensive immigration reform:
 - More border and interior enforcement
 - Earned legalization for unauthorized foreigners
 - New or expanded guest worker programs
 - Other provisions: DREAM, AgJOBS
 - Likely over-rule S&L immigration laws

House Repubs: Enforcement

- More Border Patrol agents, more fencing on 2,000 mile Mexico-US border
- All employers must use E-Verify to check the legal status of new hires
 - Submit data on newly hired workers via internet, get response within seconds
 - If "tentative non-confirmation," worker must contact SSA and DHS to clear up discrepancies OR employer must fire
 - Higher penalties for "knowingly" employing unauthorized workers, that is, not using E-Verify or failing to fire tentative non-confirmations

Obama: Comprehensive

More enforcement:

- Require all employers to use E-Verify to check new hires; override state laws
- More border and interior enforcement

• Earned legalization:

- Unauthorized in US register, pay taxes and fines, and become immigrants after 5+ years
- DACA: register, pay fees, and get 2-year renewable work permit

New guest worker programs:

- H-1B, H-2A, H-2B admit 250,000 foreign workers a year, some stay up to 6 years, tied to one employer
- How many more guest workers? What links between worker and employer?









Effects: will labor costs rise?

- If yes, demand for labor down; will supply of labor rise? More flexibility with demand, but some supply response from existing workers
- Labor-saving demand changes:
 - Mechanization: harvesting, herbicides for weeds, transplant and precision plant to reduce thinning
 - Pick less often, more use of bulk bins and fork lifts
 - Result: fewer, larger, and more specialized farms
- Labor-increasing supply changes:
 - Mechanical aids enlarge the labor pool: older & women with conveyor belts, pruning platforms, raise prody??
 - What could retain current and experienced workers longer? More hours of work? Wages & benefits? Respect?
 - Invest in worker housing and hire more H-2As?







Washington Apples

- WA produces almost 60% of US apples; 80% sold fresh; 25% exported
- Trends:
 - traditional red and golden delicious varieties down (from 80 to 40% 1990-2010) Gala, Fuji etc up
 - Newer and higher-value varieties have longer picking season, hand pick despite dwarf trees, trellising etc
- Mechanization?
 - traditional varieties easiest to shake —variety change makes mechanization harder because of repicks
- Labor changes:
 - Saddle-demand for labor: cherries, gap, apples
 - H-2As as loyal workers; invest in housing for H-2A
 - Mech aids in non-harvest pruning and thinning

Hand and machine picking





Florida Oranges

- Processed into FCOJ; Brazil = low-cost producer
- Most oranges hand-picked by workers: ladders into bags, dump into bins. Piece rate: almost \$0.01/lb for oranges worth 5-6 cents/lb
- Mechanization?
 - Best with smaller trees planted for machine harvesting
 - Newer plantings in southwestern FL=10% mechanical harvesting; abscission chemicals hasten mechanization of late-season valencias?
- Labor:
 - FLCs—more in FL than any other state; slavery cases
 - More housing and more H-2A workers
 - What interaction of trade, wages, and mechanization to shape demand for and supply of farm labor?

Machines picking Florida oranges



California Lettuce

- CA: 8 months; AZ: 4 months-little trade
 60% of lettuce = iceberg; contracts and bagged salad
- Very large producers: top 10 = 2/3 or more of total prod; history of innovation, stormy unions
- Mechanization?
 - 1970s: gamma rays to selectively harvest—real effort or union busting?
 - About ¾ of iceberg harvested in 1st pass; uniform ripening and mow?
 - Baby-leaf lettuce easier to mechanize: band-saw
- Labor:
 - Generally higher-than-average wages reflecting large farms, profits, nonfarm unions in packing etc
 - Yuma: aging green-card commuters & BP agents

Conveyor belts: make work easier







Farm Work = Job, not career

- Best way to help a farm worker is to help him/her get a nonfarm job; earnings up
- About ¾ of all hired farm workers & 99% of new entrants were born abroad (immigrants); most foreign-born farm workers = unauthorized
- Farm employers say: open border gates and admit workers eager to fill seasonal farm jobs
- Worker advocates: there is no shortage of US workers, only a shortage of wages and benefits to attract and retain US workers
- Government listens to both: admits or tolerates migrants & provides \$1 billion a year for MSFW assistance programs

Conclusions

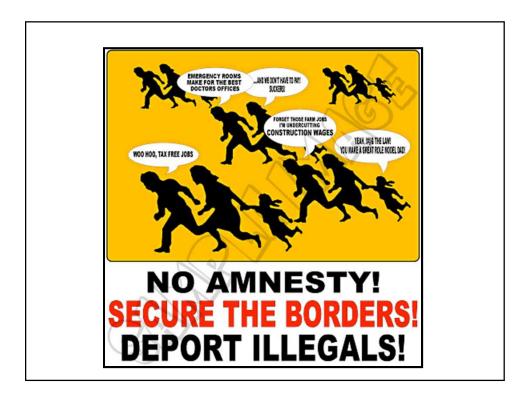
- Hired workers do most of the work in US agriculture
 - Large FVH farms and dairies most dependent on hired workers
 - Hired are mostly unauthorized Mexican men
 - FLCs act as risk-absorbers in a labor market with violations
- Immigration reform MAY raise labor costs:
 - Accelerate labor-saving mechanization: DOV raisin grapes, dairies with robotic milkers
 - Mechanical aids that raise productivity and lengthen work lives—field conveyor belts
 - Slow current expansion if wages rise: strawberries
 - Increased imports: fresh asparagus, tomatoes

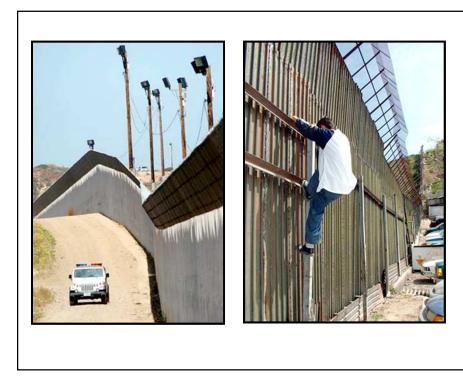
More Information

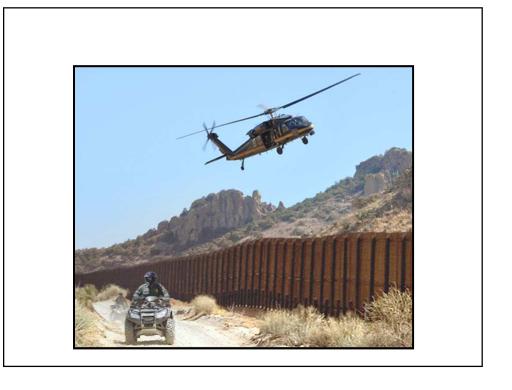
- http://migration.ucdavis.edu esp Rural Migration News and Changing Face
- Martin, Philip. 2009. Importing Poverty?
 Immigration and the Changing Face of Rural America. Yale University Press.
- Calvin, Linda and Philip Martin. 2010. The US Produce Industry and Labor: Facing the Future in a Global Economy. USDA. Economic Research Report No. (ERR-106). November.
- Immigration and Agriculture, May 12-13, 2011 at UC-DC











Dr. Philip Martin, UC Davis - Guest lecture at the Fulbright Economics Teaching Program in HCMC, Vietnam









US deports 400,000 foreigners a year







		Export Va		Change in Value 2010 to	
2011				2011	
Rank	Product	2010	2011	(Percent)	
1	Almonds	2,392	2,828	18	
2	Dairy and products	1,150	1,420	24	
3	Wine	1,007	1,226	22	
4	Walnuts	820	1,060	29	
5	Rice	797	877	10	
6	Pistachios	720	778	8	
7	Table Grapes	641	733	14	
8	Oranges and products	566	666	18	
9	Tomatoes, processed	492	574	17	
10	Cotton	368	435	18	
11	Raisins	327	399	22	
12	Beef and products	293	366	25	
13	Lettuce	331	346	4	
14	Strawberries	327	336	3	
15	Seeds for sowing	296	326	10	
16	Hay	208	203	-2	
17	Dried Plums	174	174	0	
18	Peaches and nectarines	141	149	5	
19	Lemons	148	146	-1	
20	Raspberries and blackberries	116	137	18	

	\$ Millions	Percent Total
Canada	3,049.0	18.1%
uropean Union-27*	2,412.2	14.3%
China/Hong Kong	1,722.4	10.2%
Japan	1,415.2	8.4%
Mexico	830.6	4.9%
South Korea	781.4	4.6%
India	359.8	2.1%
United Arabs Emirates	341.1	2.0%
Turkey	320.9	1.9%
Taiwan	248.9	1.5%
Australia	248.1	1.5%
Vietnam	196.6	1.2%
Indonesia	153.1	0.9%
Malaysia	147.7	0.9%
Philippines	132.2	0.8%
Top 15	12,359.3	73.2%

4,513.6

26.8%

Rest of World