

Comments on the California Drought and the Impact on Fresh Produce

by

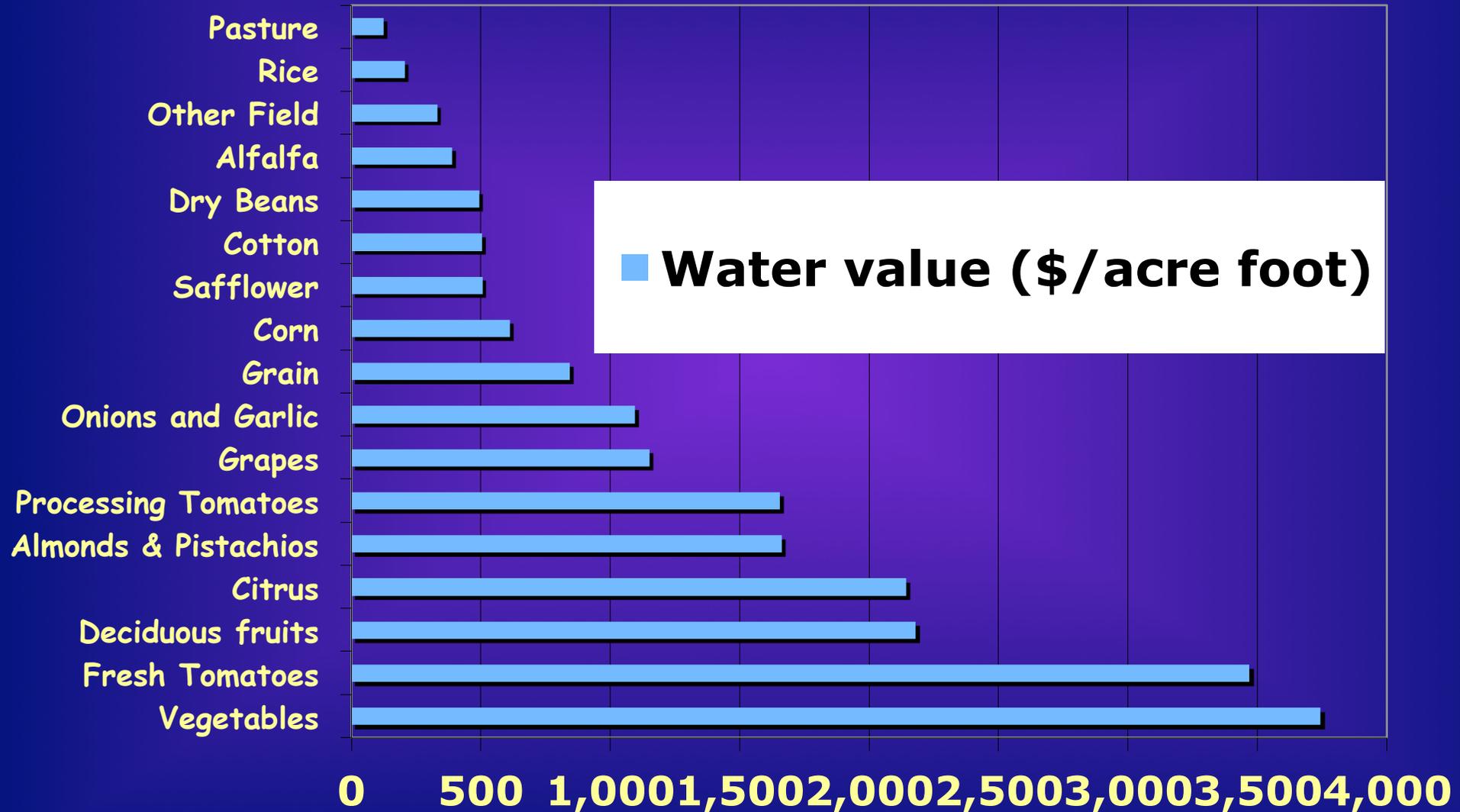
Dr. Roberta Cook

Dept. of Agricultural and Resource
Economics

University of California Davis

March 4, 2015

Average Value of Water Used in CA, Based on Value of Crop Sales, 2012



Source: Labor, Water and California Agriculture in 2014, Goodhue and Martin, ARE Update, Giannini Foundation of Agricultural Economics, University of California

Water and the California Drought

- Growers divert water to higher value crops, which protects fresh fruit and veg crops from major reductions. Alfalfa and other lower value annual crops will experience the largest reductions in acreage.
- The main area affected by the drought is the Central Valley, divided into north and south of the Delta.
- Water availability for the Central Valley depends on winter rains and the winter snowpack in the Sierra Nevada mountains. State and federal water projects supply water to growers from this source through north to south irrigation canals, led by the California aqueduct.
- The California desert, the winter producing region for crops like leafy greens, broccoli, and cauliflower, is not affected.
- The drought effect is worst south of the Delta and leafy greens, celery, broccoli and cauliflower are largely grown elsewhere most of the year. This minimizes the impact on those crops.
- Coastal California, where these crops are grown, does not depend on state and federal water project deliveries. So far, growers have managed around the drought. However, pumping costs are higher and salinity, yields, and quality are becoming more of an issue.

California Drought Impact on Fresh Produce

- Summer production of crops like fresh market tomatoes, melons, peppers, and cucumbers are important in the central valley (not the coast), as well as permanent crops like fruit and nut orchards and vineyards. Growers give permanent crops first priority for water in order to protect their long-term investments.
- South of the Delta most growers have ground water sources which mitigate the loss of surface deliveries.
- North of the Delta is most impacted by the loss in state and federal water deliveries but very little fresh produce is grown north of the Delta.
- In spring 2014, a longstanding UC Davis economic model, the Statewide Agricultural Production (SWAP) model, predicted that about 1% of fruit/nut and veg acreage might be fallowed in the central valley due to the drought.
- According to the NASS/USDA Jan. 2015 Vegetable Annual Report, CA fresh vegetable acreage was down 3% in 2014 with production unchanged relative to 2013.

Conclusions

- Water quality is declining in the Central Valley due to drawdown of ground water and higher salinity levels, potentially reducing yields.
- Groundwater will gradually be regulated statewide by a law passed in 2014.
- Essentially, there were no major changes in 2014 for fresh fruit and vegetable production, except in citrus, where apparently some orchards did come out as higher value alternative crops were more attractive.
- The impact on growers will be felt to a much greater extent in 2015 due to low rainfall and winter snowpack.
- Still, there will be plenty of California fresh produce supply!
- Prices will continue to depend mainly on daily weather - affects yields, quality, TIMING of production, seasonal overlaps, and demand. This is normal for fresh produce!
- Energy, water pumping, and labor costs are higher, but grower-shippers are price takers and have difficulty passing on costs.
- Over time, CA will see major changes in crop mix with acreage reductions in low value crops, but fresh produce will still be the star!

SWAP Estimated Changes in Irrigated Crop Area: 2014

	Sacramento Valley, SD, and ED	San Joaquin Valley	Tulare Lake Basin	Central Valley Total
Feed Crops	-83,481	-39,269	-23,967	-146,718
Vegetables	-3,801	-2,638	-3,838	-10,277
Trees & Vines	-8,931	-7,514	-24,483	-40,929
Grains	-40,785	-20,105	-35,105	-95,995
Other Field Crops	-13,523	-55,883	-45,501	-114,907
Region Total	-150,521	-125,409	-132,894	-408,825

Source: Prelim. 2014 Drought Economic Impact Estimates in Central Valley Agriculture, CDFA Report May 16, 2014