

Agricultural Impacts Analysis of the
Proposed Yolo Bypass Conservation
Measure:
Updated Crop Maps,
Prices and Yields

Petrea Marchand, Yolo County
November 17, 2011

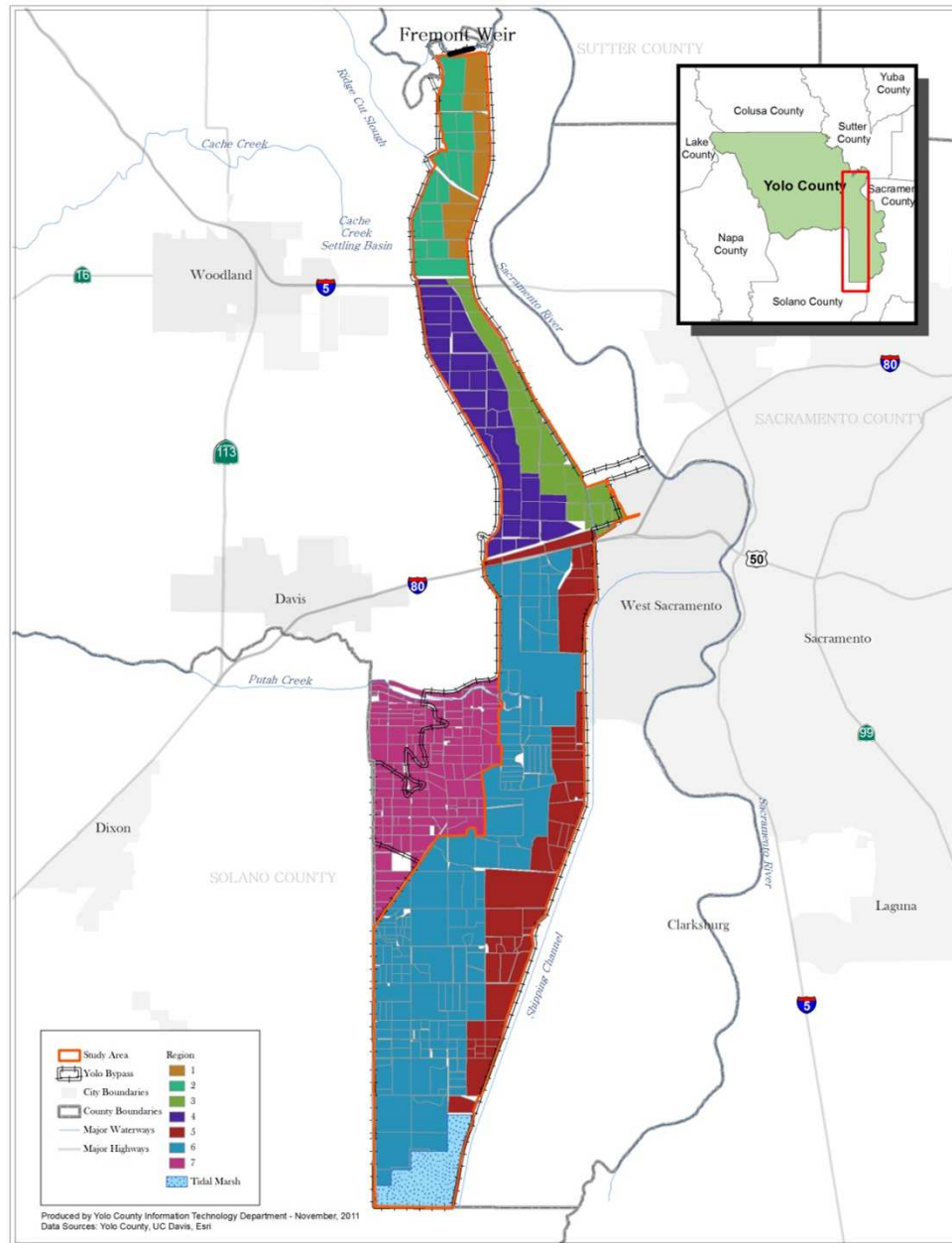
Outline

- Yolo Bypass subregions
- Updated Yolo Bypass crop maps
- 2005-2009 crop prices
- Estimated crop yields
- Next steps

Agricultural Subregion Map

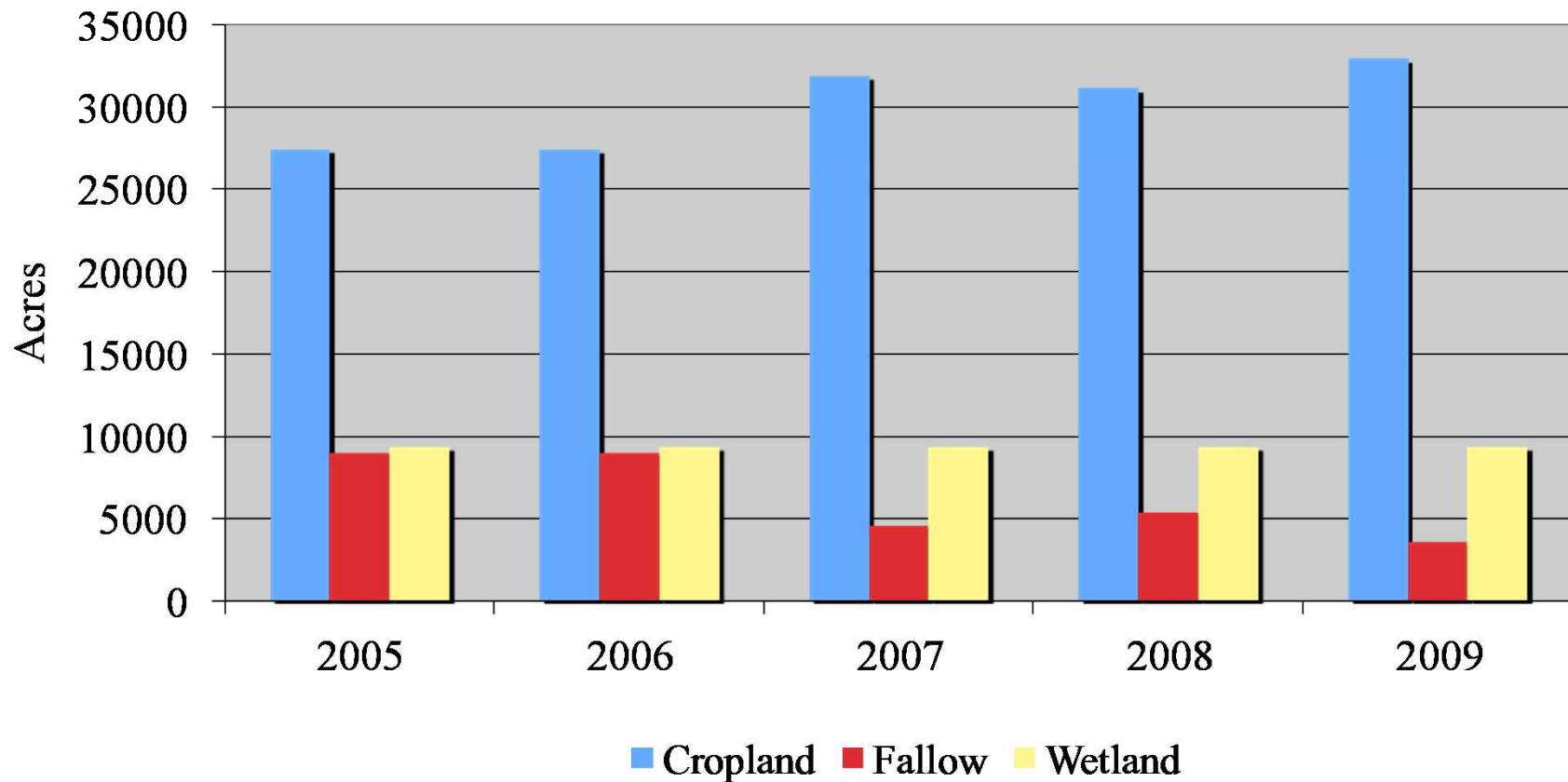
- Criteria used to develop subregion map
 - Meteorology
 - Topography
 - Soils
 - Drainage characteristics
 - Parcel boundaries
 - Input from farmers
- Also includes Study Area boundary, the portion of the Yolo Bypass covered by the analysis

Yolo Bypass Subregions



Major Land Uses in Yolo Bypass Study Area

Major Land Uses in the Yolo Bypass



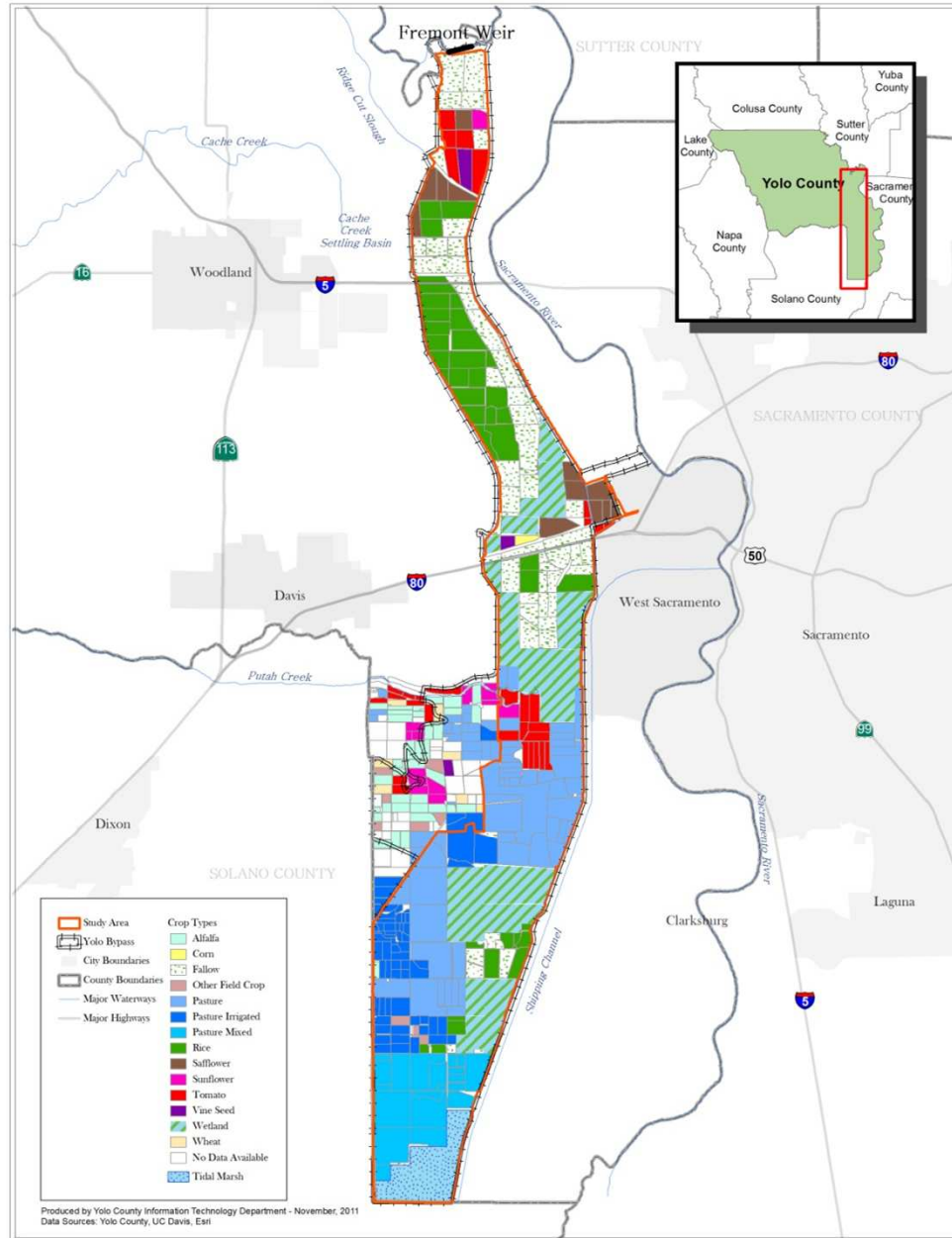
Yolo Bypass Crops: 2005-2009

- Substantially more crop information integrated into current maps
- When data unavailable in study area, fields identified as fallow
- Crop data originated from:
 - Pesticide Use Reports
 - Consultation with landowners/farmers
 - Consultation with SACOG and Mosquito Dist.

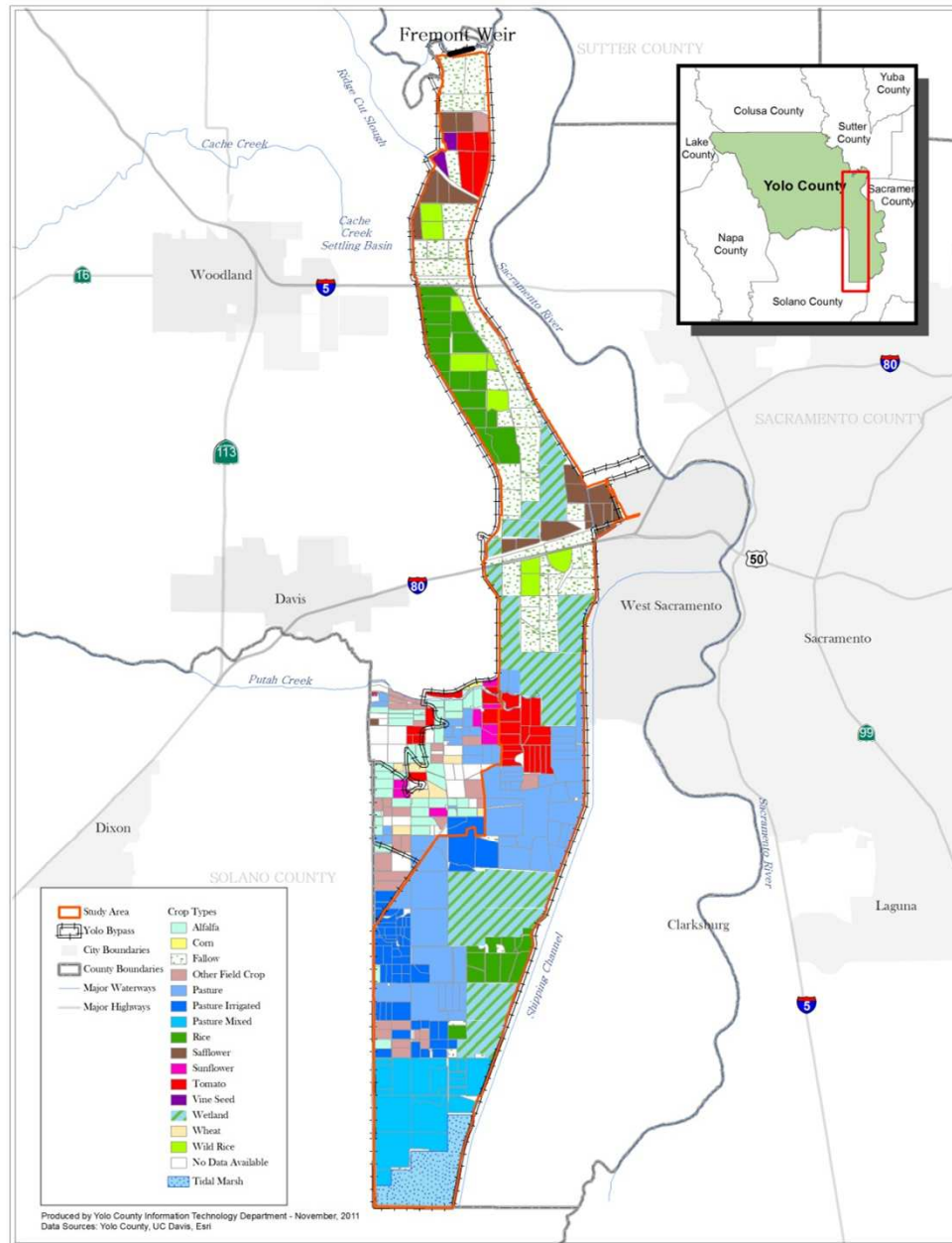
Crop Categories

- Alfalfa
- Corn
- Pasture
- Rice
- Safflower
- Sunflower
- Tidal marsh
- Tomato
- Vine Seed
- Wetland
- Wheat
- Other field crops
- Fallow

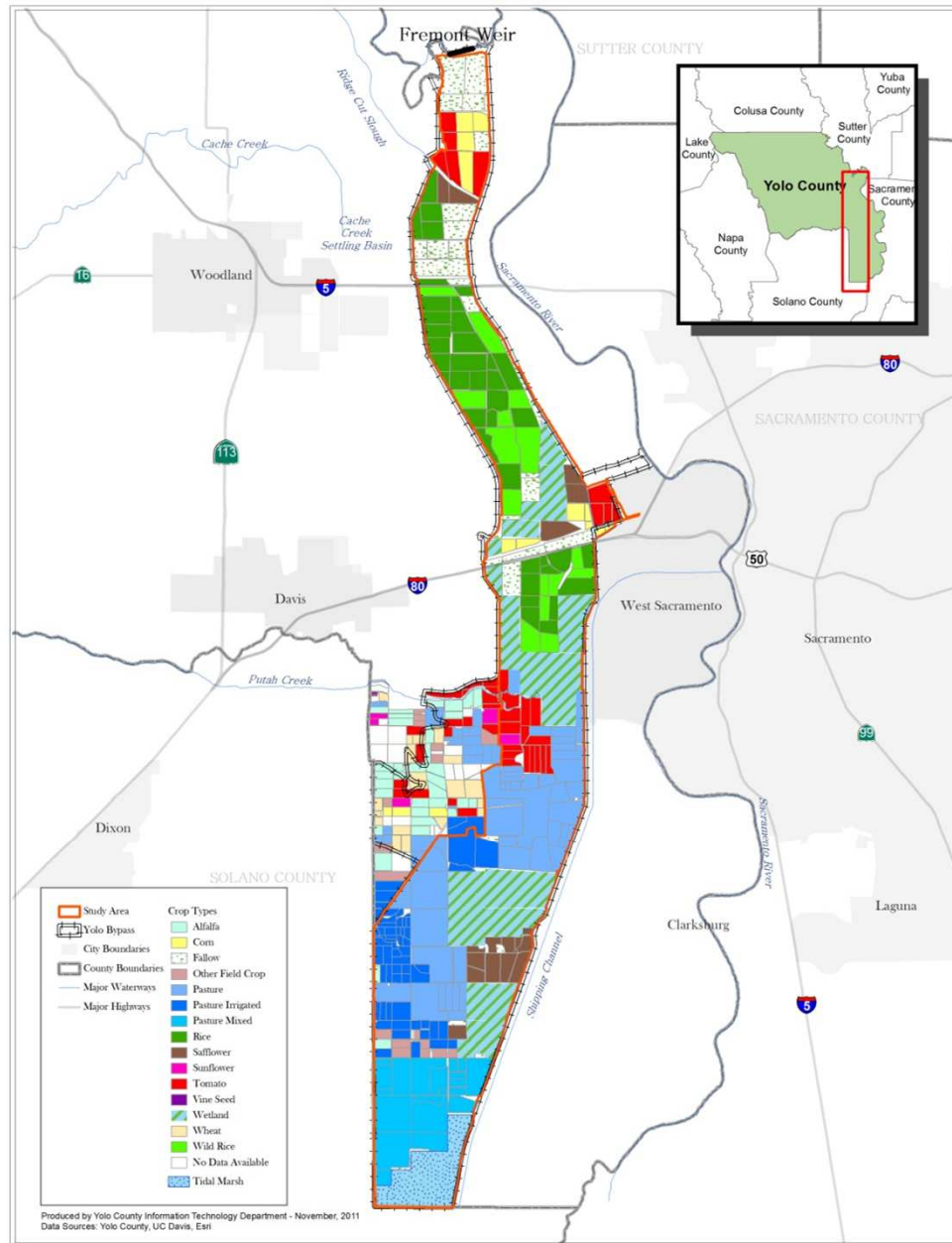
Yolo Bypass Crops - 2005



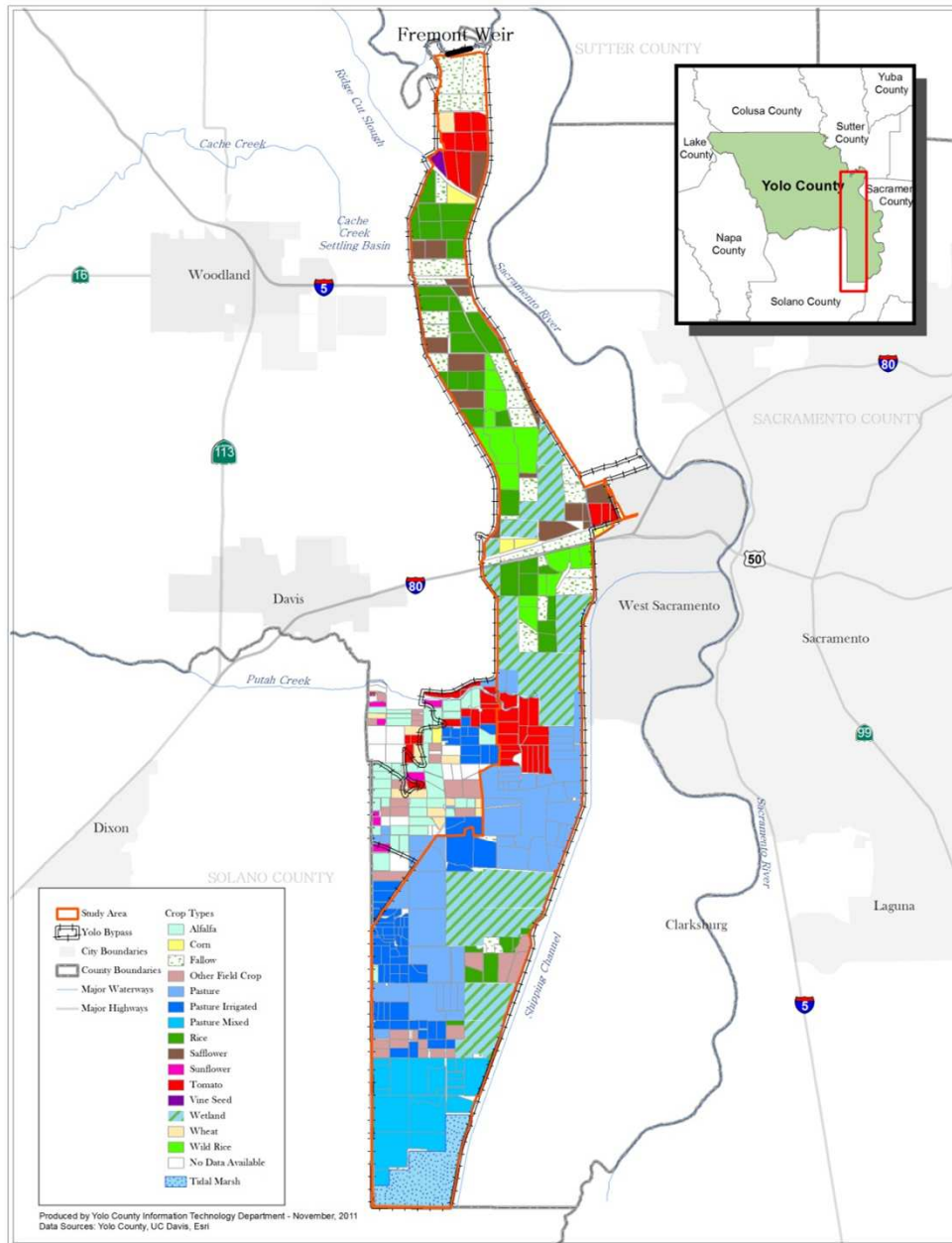
Yolo Bypass Crops - 2006



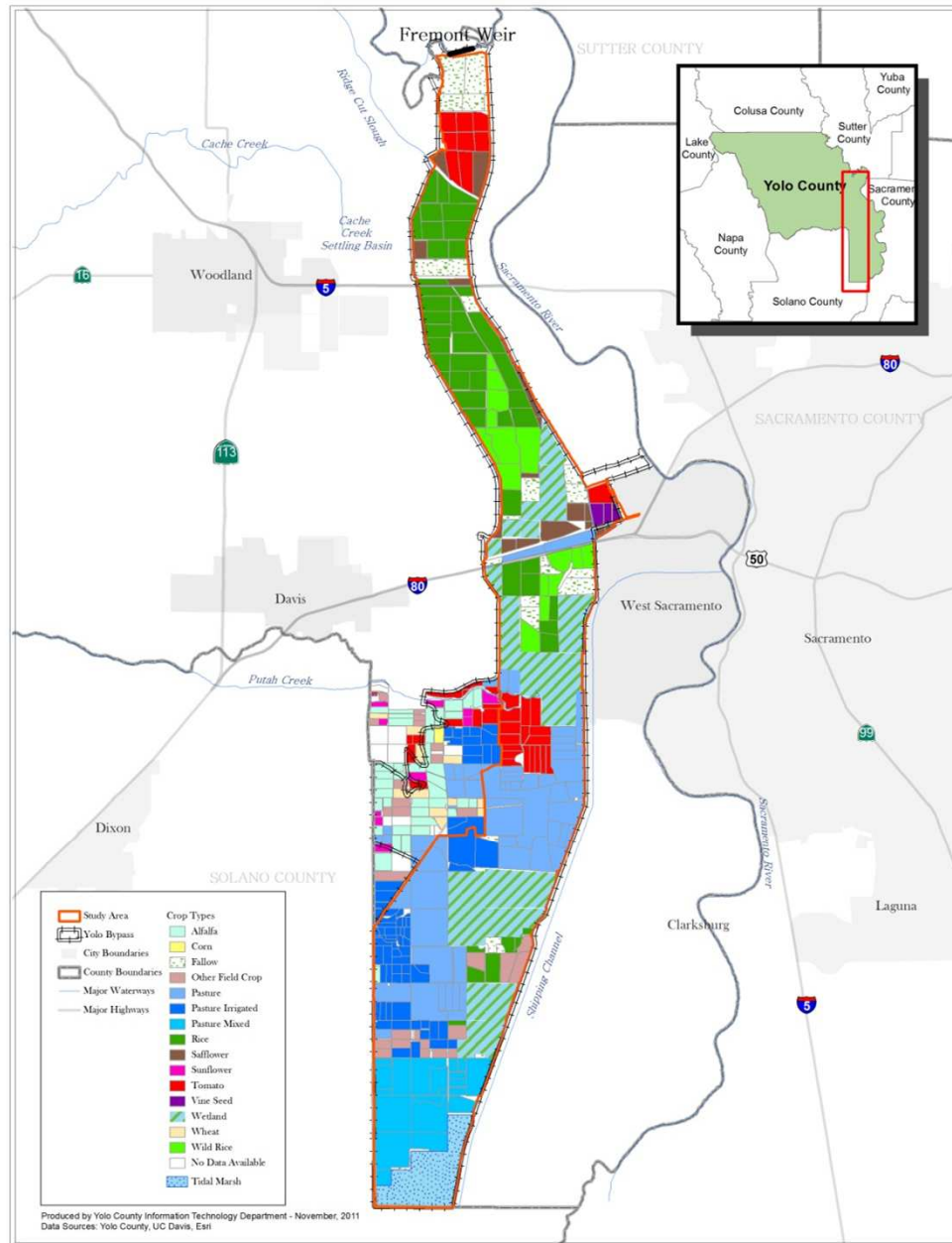
Yolo Bypass Crops - 2007



Yolo Bypass Crops - 2008



Yolo Bypass Crops - 2009



Crop Data: Preliminary Results

- Rice and processing tomatoes highest acreage, as well as highest value crops
- Fallow land decreases significantly in years there is no flooding
- Significant wetlands acreage
- Significant pasture acreage

Crop Prices: Overview

- Price data from Yolo County Agricultural Commissioner reports
- Prices identified over 5 Years for almost all crops
- Adjusted to 2008 \$ for comparison
- Wide variability in crop prices

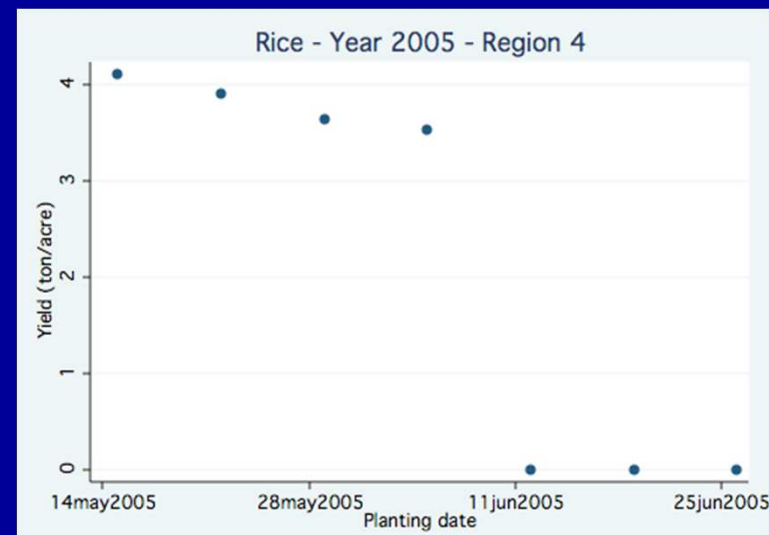
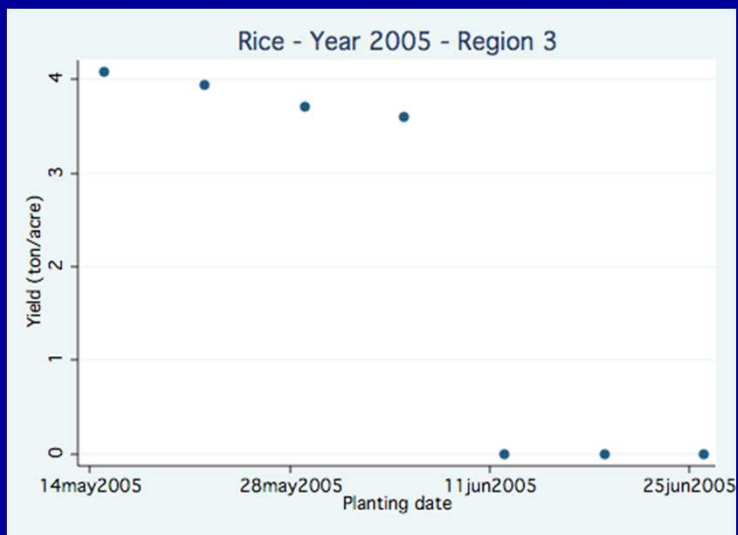
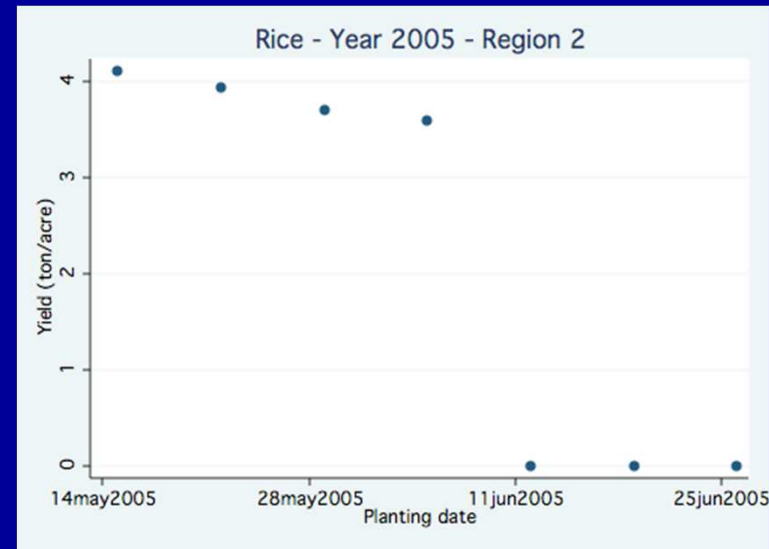
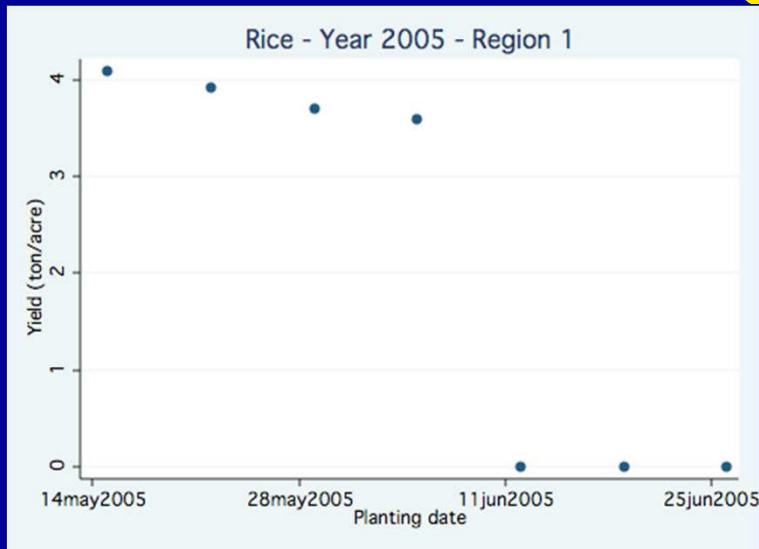
Sample Crop Prices

- Tomatoes
 - Low \$63.90 per ton (2005)
 - High \$90.40 per ton (2009)
 - Average \$73.22 per ton
- Rice
 - Low \$266.70 per ton (2005)
 - High \$513.11 per ton (2008)
 - Average \$357.40 per ton

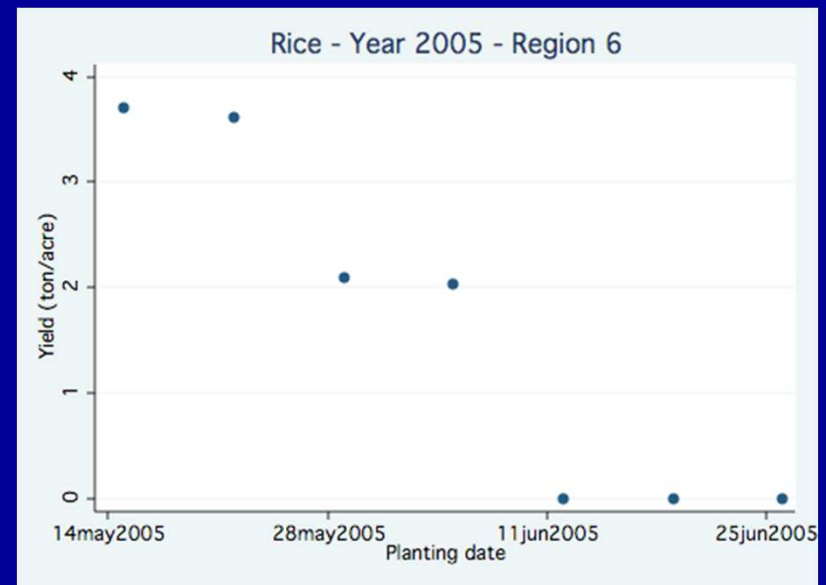
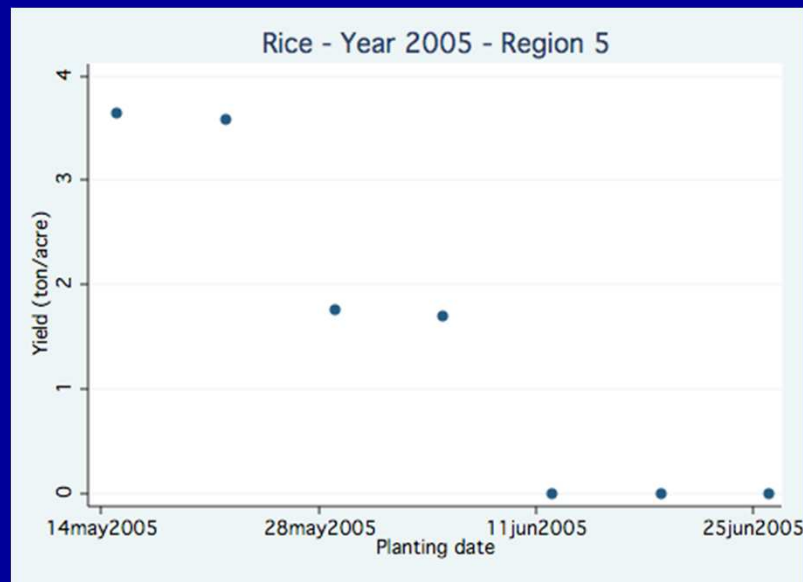
Crop Prices (\$ per ton)

CROP	2005	2006	2007	2008	2009
Alfalfa	\$162.40	\$142.60	\$154.60	\$189.20	\$110.30
Corn	131.40	150.60	151.40	152.20	181.30
Melons	315.10	384.50	323.30	296.10	321.00
Pasture dry	49.20	49.2	49.2	49.2	49.2
Tomato process.	63.90	75.60	67.40	68.80	90.40
Rice	266.70	282.90	292.60	513.11	431.70
Safflower	315.00	314.60	378.80	432.60	384.40
Sunflower	-	1,019.90	1,164.80	-	-
Wheat	128.00	138.60	161.10	206.70	190.10
Wild rice	1,705.10	1,233.50	1,842.80	1,684.20	1,023.70

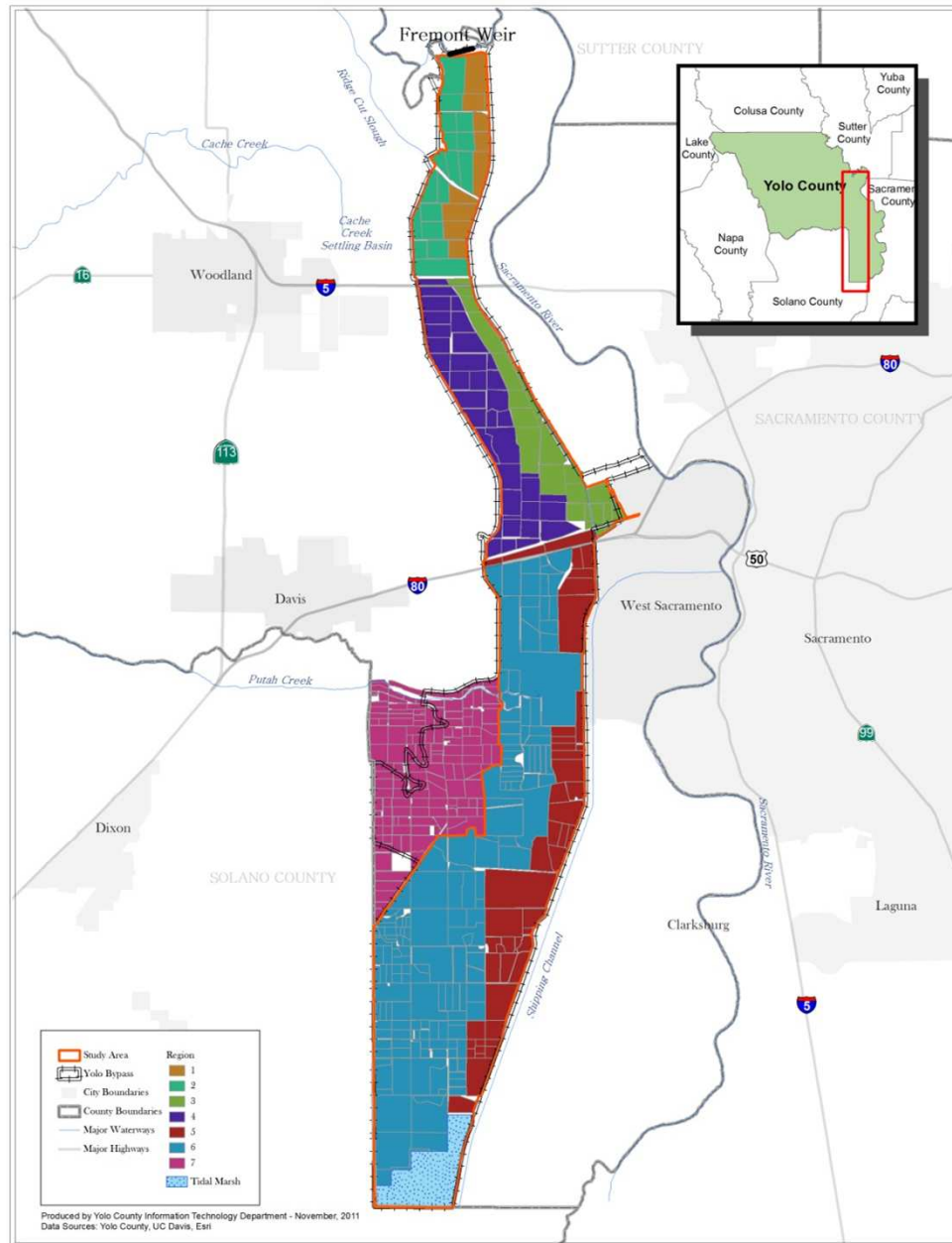
Rice Yield By Planting Date and Subregion - 2005



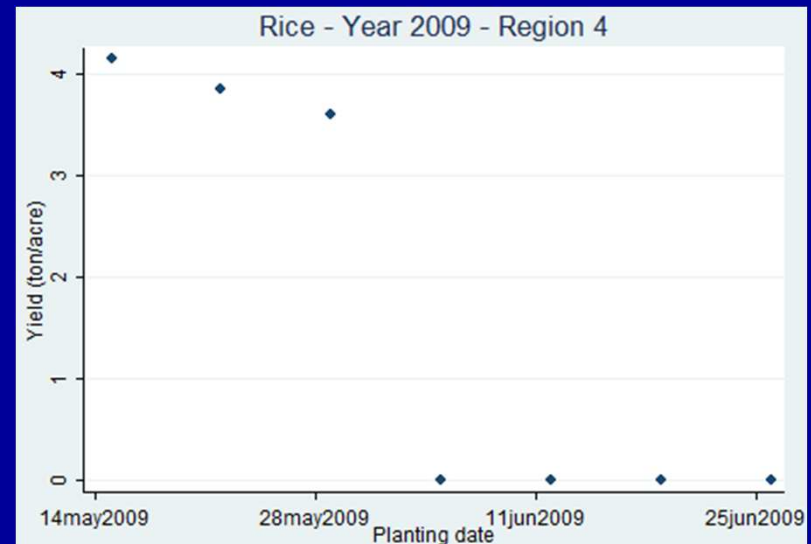
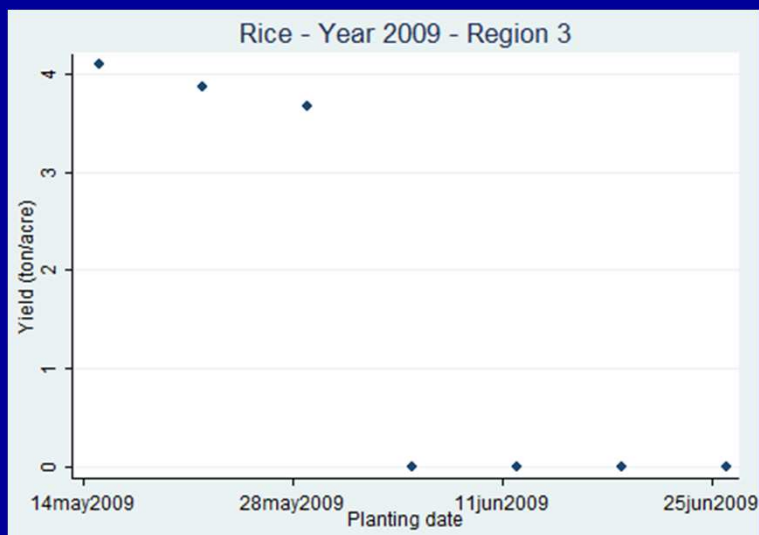
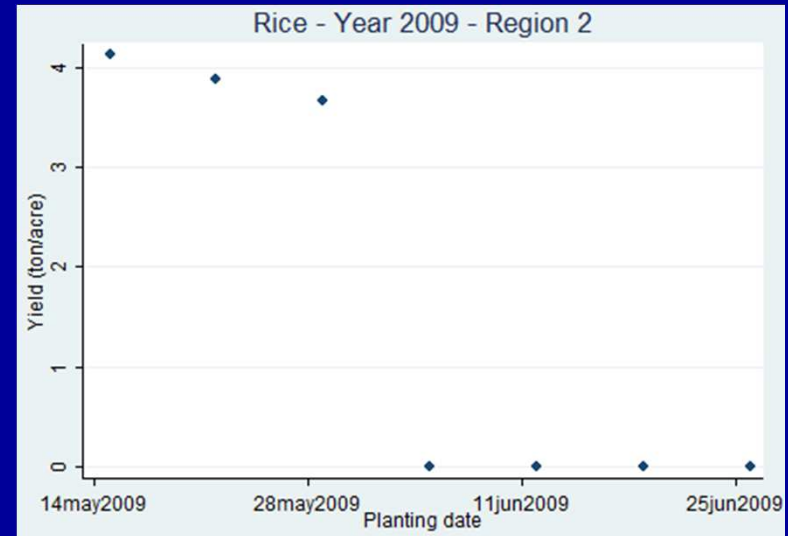
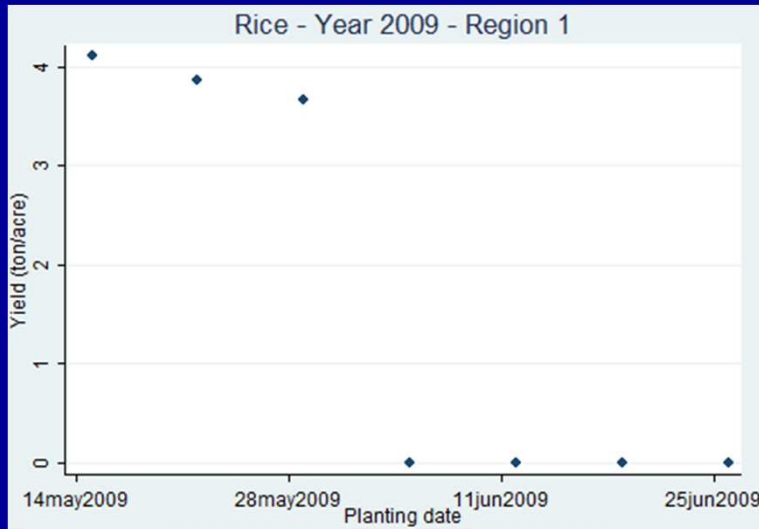
Rice Yield By Planting Date and Subregion - 2005



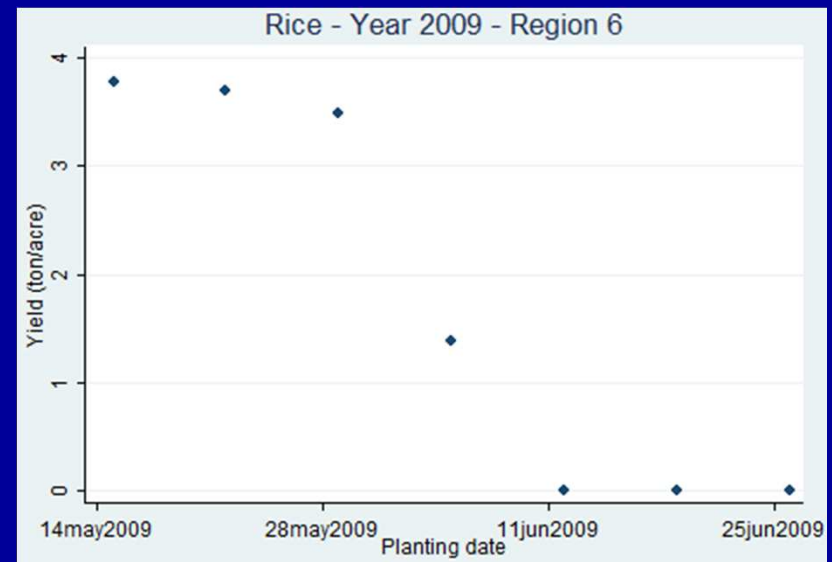
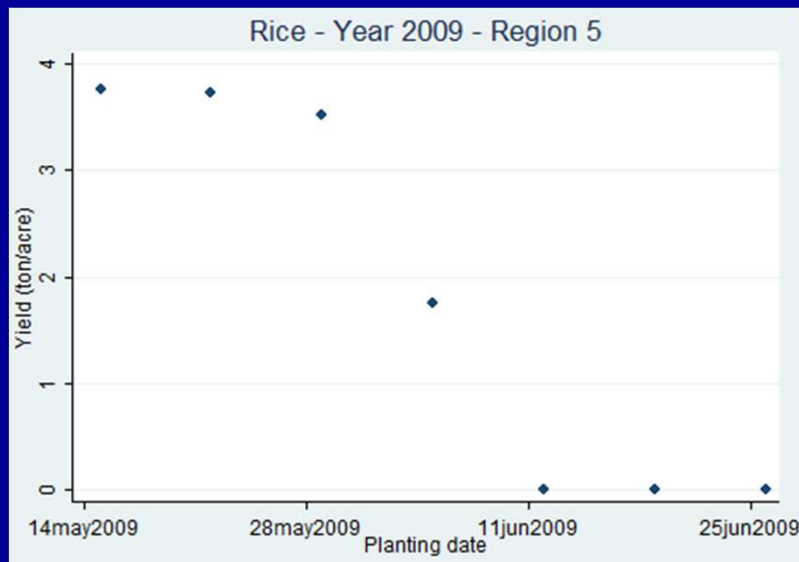
Yolo Bypass Subregions



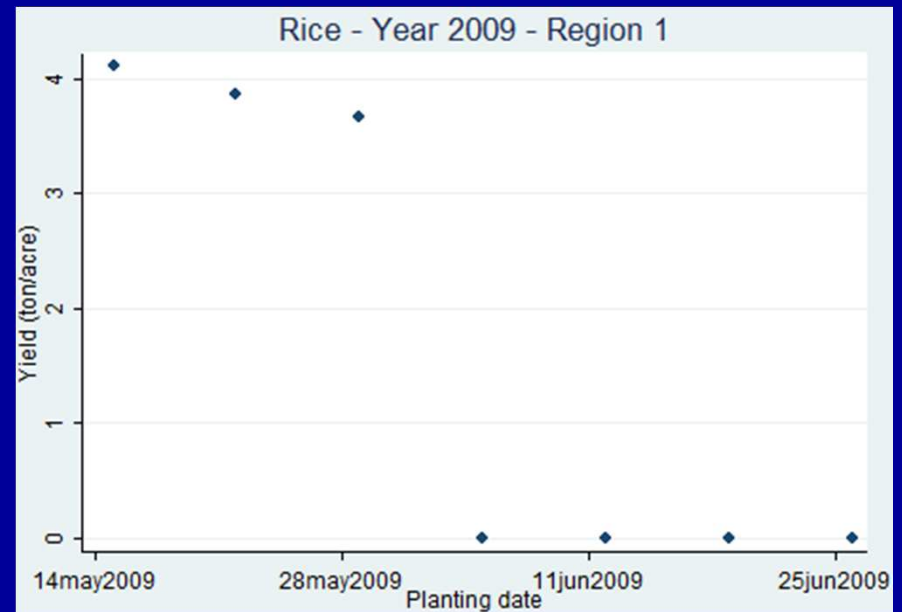
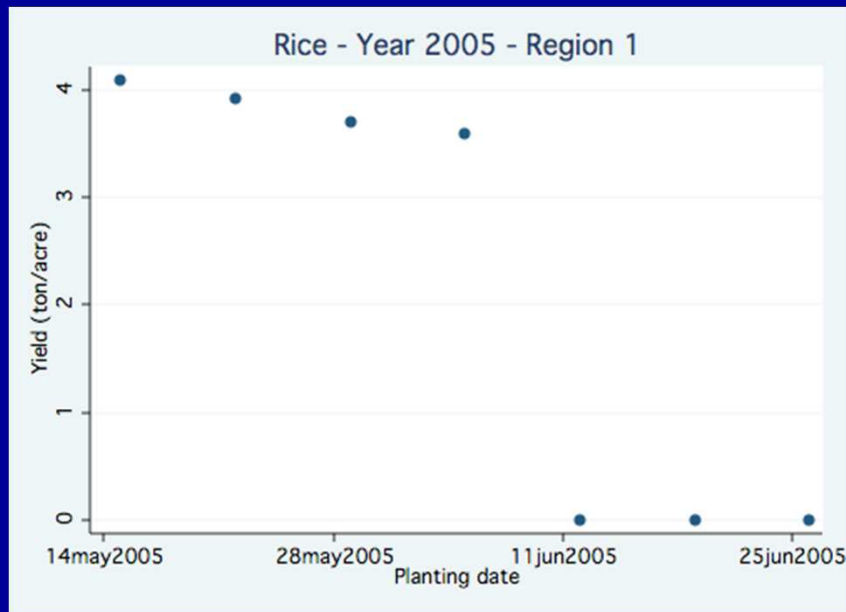
Rice Yield By Planting Date and Subregion - 2009



Rice Yield By Planting Date and Subregion - 2009



Rice Yield Comparison 2005 vs. 2009 in Subregion 1



Yield Data Preliminary Results

- Yields along east side of Bypass equivalent or greater than west side without flooding
- Crop yields decrease as Fremont Weir overtopping date extends past Feb 15
- Yields decrease most along east side of Bypass with extended flooding because of longer drainage times
- Variability in yield among years

Next Steps and Timeline

Next steps:

- Secure HEC-RAS GIS information
- Run model analysis
- Continue stakeholder outreach
- Estimate impacts
- Prepare report

Timeline:

- Run analysis (late-November)
- Preliminary results (end of November)
- Public draft (mid-December)
- Comment period (mid-December to January 31)
- Final draft (mid-February)

Questions?