Blackberry Production in Mexico

Miguel Ahumada - Sun Belle Berries

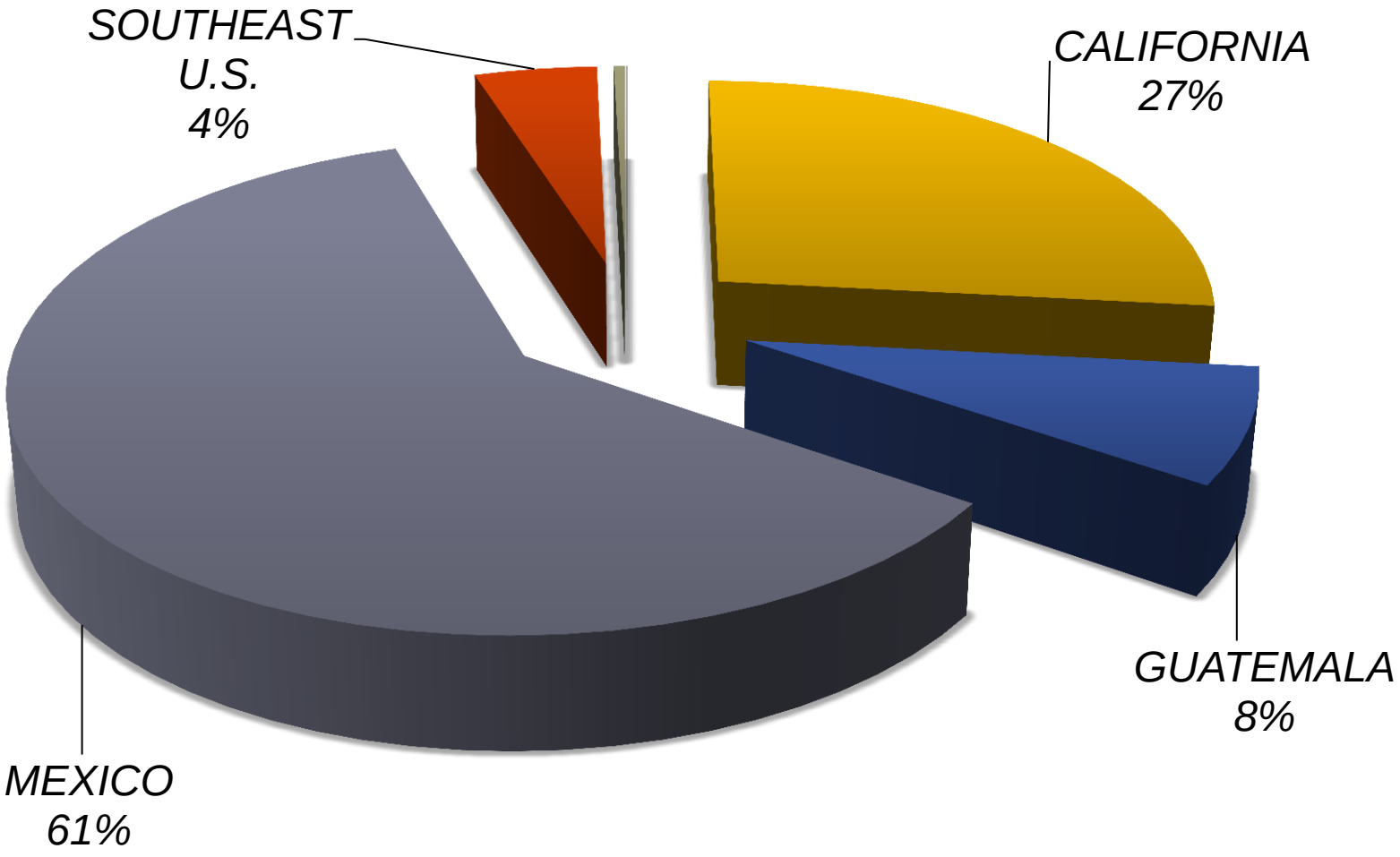
Cane Berry Day, San Luis Obispo, CA. 2016

Michoacan

- Latitude: 19.35 degrees No.
- Altitude: 4,920 ft
- Mild tropical climate
- < 200 chill hours

2014 - US Fresh Blackberry Sales

(crates 12 X 6 oz)



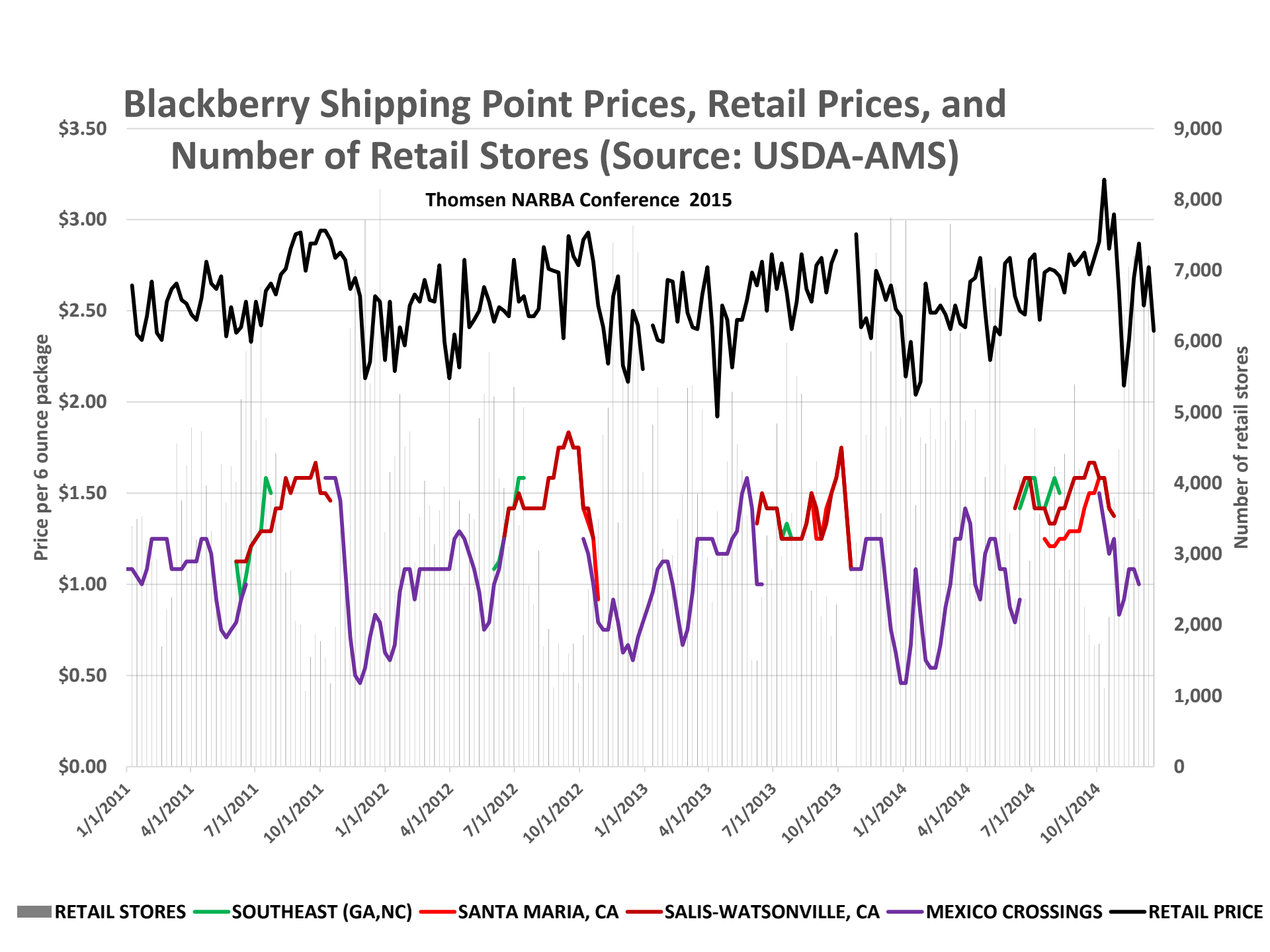
Gaskell, Cane berry day, Jan 2015

Floricane blackberry production in Mexico

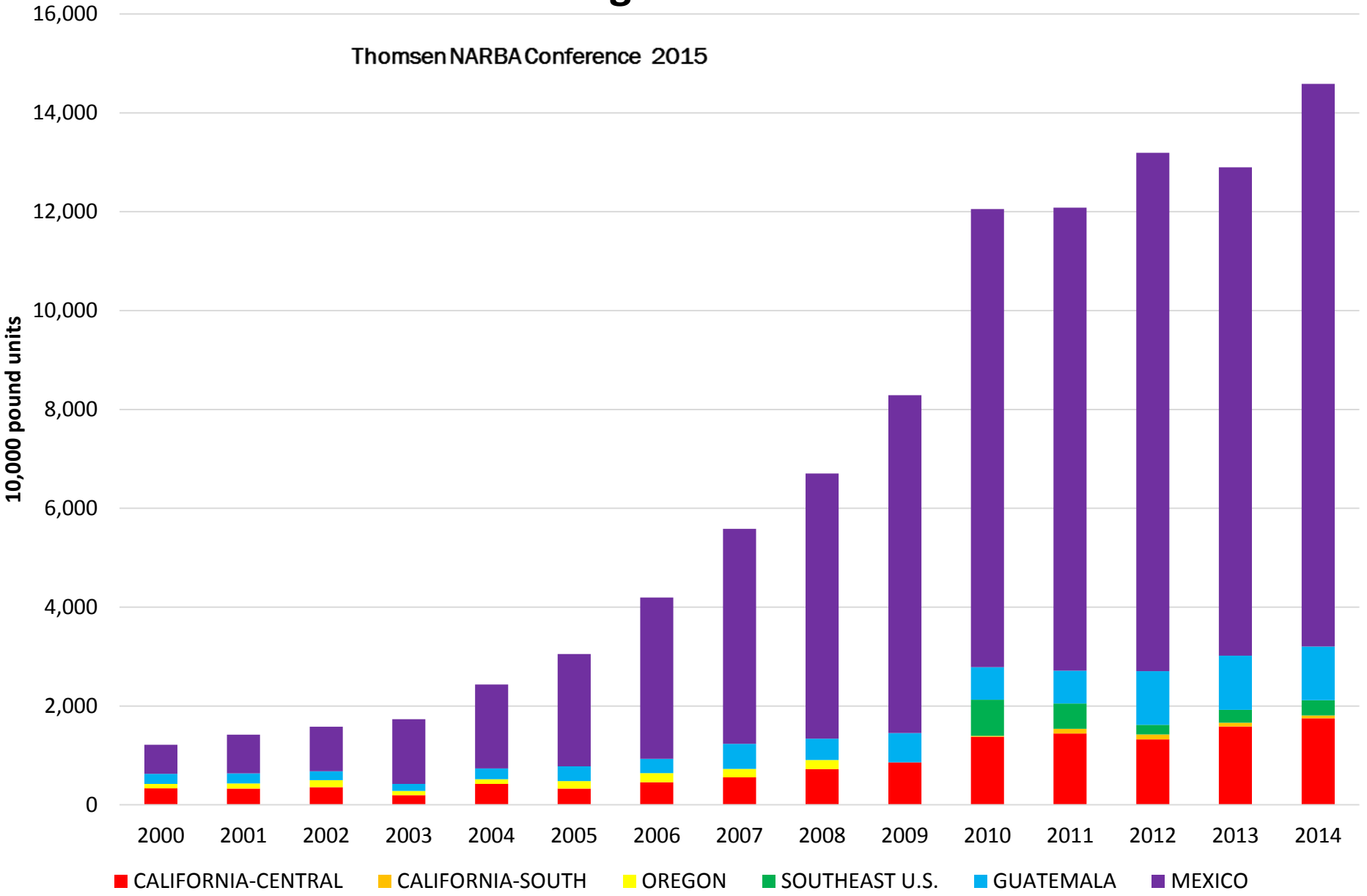
- Largest producer of fresh blackberries in the world; $282.45 millions industry value
- 27,000 estimated acres for 2015
- Michoacan 90% production, | -- Jalisco rapidly expanding
- 80 % of the fruit is exported, mainly to US and EU

-- www.aneberry.org

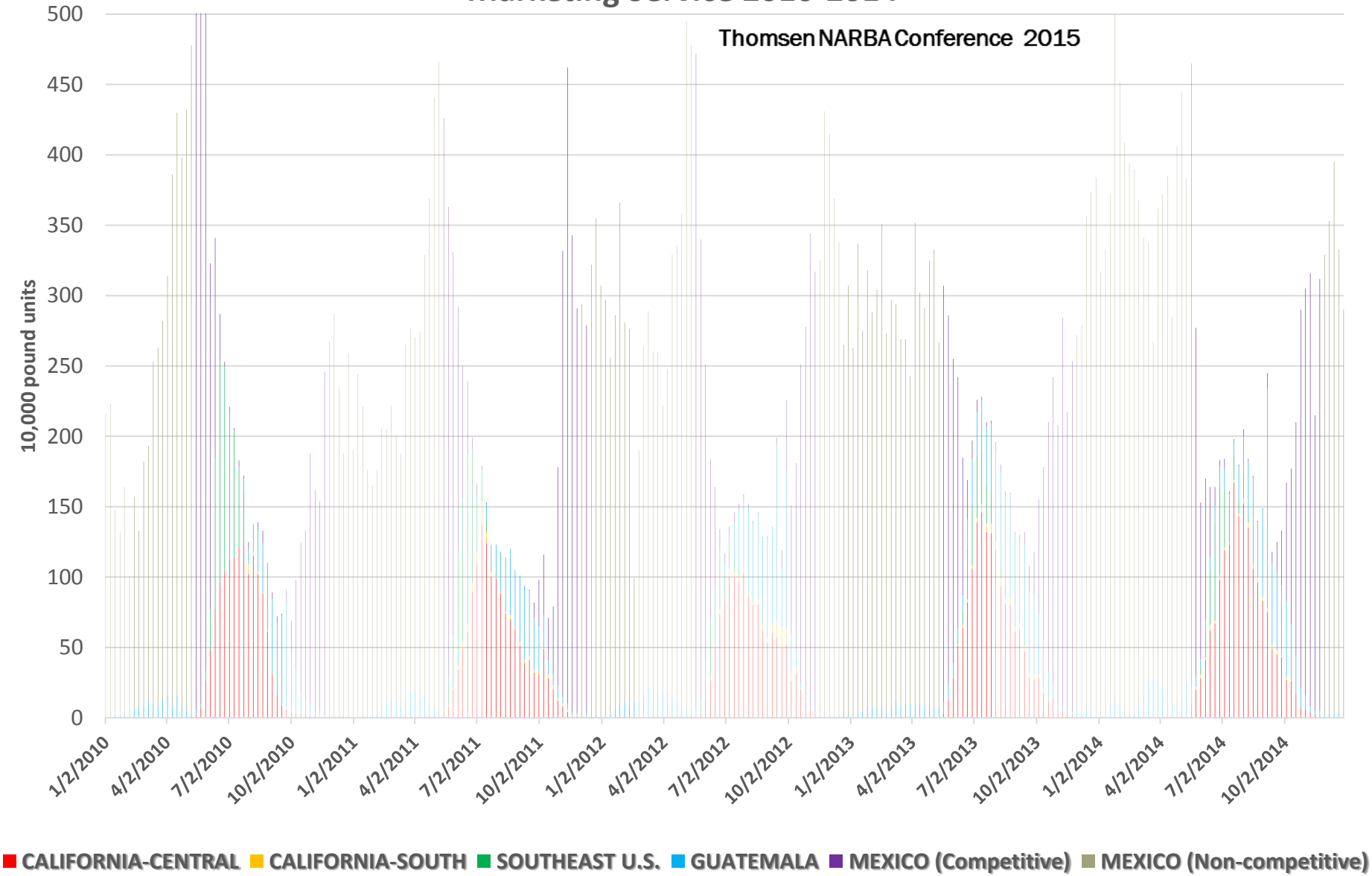
- 17 year - run for Tupy
- Defoliation system, from July to Feb
- Early to late season
- Thorny, erect
- Large berry: 7-9 gram
- 10-20,000 lb./ha
- Flavor, balanced sweetness & acidity, with some bitterness after tested


Blackberry Shipping Point Prices, Retail Prices, and Number of Retail Stores (Source: USDA-AMS)
Thomsen NARBA Conference 2015
Price per 6 ounce package
Number of retail stores
$3.50
$3.00
$2.50
$2.00
$1.50
$1.00
$0.50
$0.00
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
1/1/2011
4/1/2011
7/1/2011
10/1/2011
1/1/2012
4/1/2012
7/1/2012
10/1/2012
1/1/2013
4/1/2013
7/1/2013
10/1/2013
1/1/2014
4/1/2014
7/1/2014
10/1/2014
RETAIL STORES
SOUTHEAST (GA,NC)
SANTA MARIA, CA
SALIS-WATSONVILLE, CA
MEXICO CROSSINGS
RETAIL PRICE

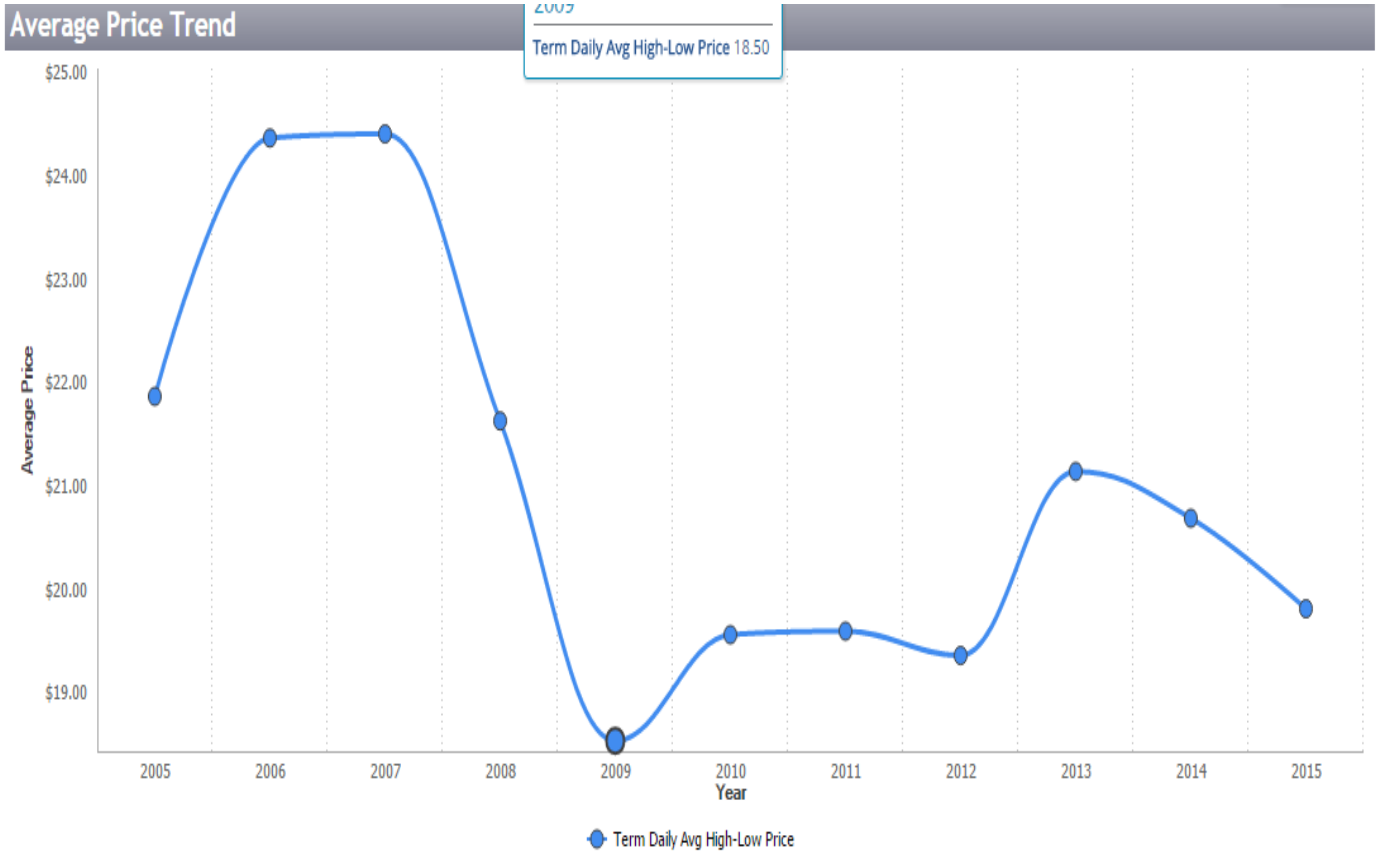
Blackberry Shipments Reported to USDA Agricultural Marketing Service 2000-2014



Weekly Blackberry Shipments Reported to USDA Agricultural Marketing Service 2010-2014



Ten years average USDA prices Blackberry, fruit origin CA-Mexico



“Blackberry Row” in Los Reyes. Michoacan

Typical fields

Defoliation-based system

- Plants are matured in Mexico by the application of concentrated salts to the foliage.
- Typically, growers will mature plants for 22 to 60 days prior to defoliation.
- The time required for defoliation depends entirely on the condition of the plant, which is greatly influenced by the time of year and age.

Maturing plants prior to defoliation

Cycles

- Plants are defoliated in July, harvest from October to December
- Second defoliation, harvest from end of March to early June
- Follow by a mowdow: September – October, one harvest that year
- Plants stays in the ground for 10 - 12 years in average , depending of soil pathogens

Maturation

Mixture	Chemicals	Concentration	Frequency
M-K	Potassium sulfate	8.8 # / 50gallons	1 / week
	Vegetable oil	1 liter / 50 gallons	
M-A	Ammonium sulfate	12 # / 50 gallons	1 / week
	Copper sulfate	4.4 # / 50 gallons	
	Spray oil emulsion	2 liter / 50 gallons	
M-U	Urea	13.2 # / 50 gallons	1 / week
	Copper sulfate	4.4 # / 50 gallons	
	Spray oil emulsion	2 liter / 50 gallons	
D-K	Potassium sulfate	88# / 50 gallons	once
	Vegetable oil	10 liter / 50 gallons	
D-A	Ammonium sulfate	88# / 50 gallons	once
	Copper sulfate	11# / 50 gallons	
	Spray oil emulsion	5 liter / 50 gallons	
	Urea	88# / 50 gallons	once
	Copper sulfate	22# / 50 gallons	
	Spray oil emulsion	10 liter / 50 gallons	

Defoliation and Pruning

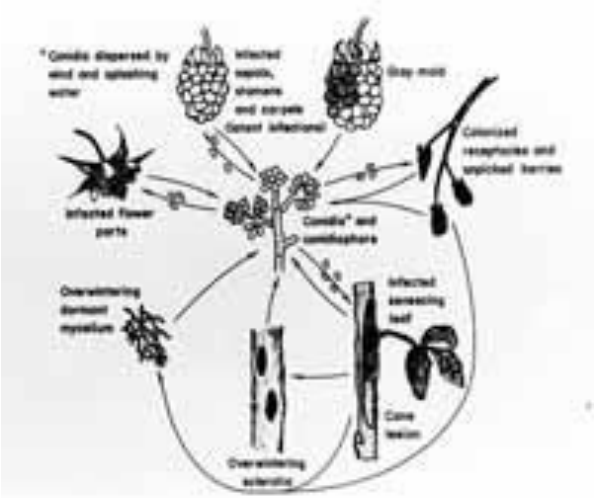
Feb MD every two years

Hormones are use to increase fruit set

Tupy

Pest and Disease incidence contributing to uncertain future for Tupi

- Diseases
  - Downy Mildew
  - Fusarium
  - Crown gall
  - Powder Mildew
- Insects
  - Broad mite
  - Red Berry mite
  - Two spotted mite
  - Western Flower Thrip



Botrytis gray mold on raspberry fruit.

Challenges

- Labor shortages
- Soil diseases > fusarium
- New pests >
  broad mite and red berry mite
- Cultural practices;
  tunnels, drip irrigation
- Lack of University Extension Service
- Need for a new variety

Need for Innovation: 17 years of ‘Tupy’

- Reversion main problem of Tupy

- Flood irrigation still being used in many fields, causing an increase of reversion

Tunnel use on the increase

Some production cost from Mexico

- Ag workers average paid US$10.90 a day or US$19.44

($ 10 pesos per bucket harvest, average 35 bucket a day)

- Land rent US$ 1,010 per acre
- Urea 110 Lb US$ 17.77
- Captan 2.20 lbs US$ 10
- Tunnels cost US$ 6,312 per acre

Future trends?

- 10 fold growth since 1995
- Growth slowing
- Challenges to future growth
    - - Labor,
      - Rising costs,
      - Unseasonal weather / climate change
- Multinational companies on both sides of boarder and complementary production windows with US