The Economic Contribution of Agriculture to Yuma County

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COOPERATIVE EXTENSION
1914-2014
SMITH-LEVER ACT
EXTENDING KNOWLEDGE CHANGING LIVES
Yuma ranks highly among US counties in agricultural sales

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Yuma’s rank among US counties in sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables &amp; Melons</td>
<td>Top 0.1%</td>
</tr>
<tr>
<td>All Crops</td>
<td>Top 0.5%</td>
</tr>
<tr>
<td>All Agricultural Products</td>
<td>Top 1%</td>
</tr>
<tr>
<td>Other Crops &amp; Hay</td>
<td>Top 1.2%</td>
</tr>
<tr>
<td>Nursery, Greenhouse</td>
<td>Top 23%</td>
</tr>
<tr>
<td>Grains, Oilseeds, Beans &amp; Peas</td>
<td>Top 28%</td>
</tr>
</tbody>
</table>
Yuma ranks highly among US counties in crop acreage

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Yuma’s rank among US counties in acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables</td>
<td>Top 0.1%</td>
</tr>
<tr>
<td>Lettuce</td>
<td>Top 0.2%</td>
</tr>
<tr>
<td>Durum Wheat</td>
<td>Top 9%</td>
</tr>
<tr>
<td>Forage</td>
<td>Top 9%</td>
</tr>
</tbody>
</table>
## AZ Cash Rents ($ / acre)

<table>
<thead>
<tr>
<th>County</th>
<th>Rent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yuma</td>
<td>$584</td>
</tr>
<tr>
<td>La Paz</td>
<td>$182</td>
</tr>
<tr>
<td>Maricopa</td>
<td>$157</td>
</tr>
<tr>
<td>Pinal</td>
<td>$120</td>
</tr>
<tr>
<td>Other Counties Average</td>
<td>$118</td>
</tr>
<tr>
<td>Cochise</td>
<td>$111</td>
</tr>
<tr>
<td>Graham</td>
<td>$108</td>
</tr>
<tr>
<td>Pima</td>
<td>$99</td>
</tr>
<tr>
<td>Mohave</td>
<td>$98</td>
</tr>
<tr>
<td>Navajo</td>
<td>$68</td>
</tr>
<tr>
<td>Greenlee</td>
<td>$60</td>
</tr>
</tbody>
</table>
## Cash Rents: Yuma vs. Colorado Basin States

<table>
<thead>
<tr>
<th>Region</th>
<th>$/acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>YUMA</td>
<td>$ 584</td>
</tr>
<tr>
<td>SOUTHERN CALIFORNIA</td>
<td>$ 457</td>
</tr>
<tr>
<td>CALIFORNIA</td>
<td>$ 365</td>
</tr>
<tr>
<td>ARIZONA</td>
<td>$ 225</td>
</tr>
<tr>
<td>NEVADA</td>
<td>$ 155</td>
</tr>
<tr>
<td>NEW MEXICO</td>
<td>$ 145</td>
</tr>
<tr>
<td>COLORADO</td>
<td>$ 125</td>
</tr>
<tr>
<td>WYOMING</td>
<td>$ 89</td>
</tr>
<tr>
<td>UTAH</td>
<td>$ 82</td>
</tr>
</tbody>
</table>
Gross Cash Crop Receipts per Acre-Foot of Water Withdrawn, 2010

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>$ / Acre Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mohave County</td>
<td>$162.50</td>
</tr>
<tr>
<td>La Paz County</td>
<td>$190.22</td>
</tr>
<tr>
<td>Pinal County</td>
<td>$211.09</td>
</tr>
<tr>
<td>Maricopa County</td>
<td>$368.70</td>
</tr>
<tr>
<td>Pima County</td>
<td>$519.91</td>
</tr>
<tr>
<td>Yuma County</td>
<td>$680.81</td>
</tr>
</tbody>
</table>
Net Farm Income, 2012

Yuma
La Paz
Pinal
Maricopa
Pima
Cochise
Greenlee
Apache
Coconino
Navajo
Santa Cruz
Yavapai
Graham
Gila
Mohave

Mohave
Gila
Graham
Yavapai
Santa Cruz
Navajo
Coconino
Apache
Greenlee
Pima
Maricopa
Pinal
La Paz
Yuma

-100,000 $0 $100,000 $200,000 $300,000 $400,000 $500,000 $600,000
Yuma Has High Labor Costs

Hired & Contract Labor as a % of Total Production Expenses

Yuma

US Average

Yuma US Average
Economic Base Analysis

Local industries can be divided into “basic” and “non-basic” sectors

Basic sectors
- Produce for more than the local market
- Bring money into local economy from outside

Non-basic sectors
- Provide inputs & services for basic sectors
- Provides goods & services for those employed in basic and other non-basic sectors
Location Quotients measure in industry’s relative importance

- Location Quotient (LQ): a local industry’s share of local jobs relative to that industry’s share of total, national jobs

- Industries with LQs > 1.25 usually considered part of a region’s economic base

- LQs can identify national centers of certain types of production
Location Quotient (LQ) examples

- Napa Wine & Spirit Merchant Wholesalers
  LQ = 13.3

- Silicon Valley Computer and Electronic Product Manufacturing
  LQ = 13.4

- Detroit Motor Vehicle Manufacturing
  LQ = 16.3
Combining crop, livestock & agricultural support sectors ...

... Combining sectors, Yuma’s LQ = 24.5

Yuma is to agriculture what ...
- Napa is to wine
- Detroit is to cars
- Silicon Valley is to computer technology
Yuma GDP?

► US Bureau of Economic Analysis calculates a GDP (Gross Domestic Product) for Yuma

► Yuma’s GDP would rank 151 out of 192 countries

► GDP is the monetary value of all **finished** goods and services produced within a region’s borders.

► At state or local level, GDP is usually called “value added”
Yuma 2012 GDP

- Nearly $5.4 billion
- Private industries: $3.8 billion
- Government: >$1.5 billion
- Let’s look at agriculture in relation to other private industries . . .
Agriculture is the single largest private sector contributor to Yuma GDP (2012)

This does NOT include agricultural input industries or food processing industries.
Input-Output Model

► Describes flows to and from industries and institutions in a local economy

► Provide a “snapshot” of relationship between sectors in that economy

► Is an accounting framework
  ▪ State data must add up to national statistical totals
  ▪ County data must add up to state statistical totals
  ▪ Flow of all goods and services accounted for
What Are Economic Multipliers?

An initial change in spending has ripple effects throughout the economy.
What Are Economic Multipliers?

Supplying new demands creates further new demand for inputs

Salaries and proprietors’ income are sources of demand for local goods and services
Three Input-Output Model Effects

- **Direct:** Agricultural sectors

- **Indirect:**
  - Triggered by changes in demand for production inputs
  - Main sectors will be production-oriented

- **Induced:**
  - Income changes trigger changes in household demand
  - Main sectors will be consumer-oriented
Agricultural & Related Sectors Contribute $2.8 Billion in Output

<table>
<thead>
<tr>
<th>Output (2014 current)</th>
<th>Induced Effect</th>
<th>Indirect Effect</th>
<th>Direct Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.26</td>
<td>0.36</td>
<td>0.18</td>
<td>1.80</td>
</tr>
</tbody>
</table>

Chart showing the breakdown of output into induced, indirect, and direct effects.
Agricultural & Related Sectors Contribute Nearly $1.5 Billion to Value Added

Value Added

$ billions (2014 current)

Induced Effect
Indirect Effect
Direct Effect

0.22
0.10
1.16

0.25
0.5
0.75
1
1.25
1.5

$ billions (2014 current)
Contribution of Agricultural Sectors to Yuma’s Economy: Employment

► Direct Effect: 1 in 5 jobs

► Total Effect: 1 in 4 jobs
Contribution to Employee Compensation and Business Owner Income

- 15% of County Employee Compensation
- 36% of Proprietor and Other Property Income
Recap

- Yuma is a unique, national center of agricultural production

- Farm and related industries part of county’s economic base bringing injection of funds into the county from outside

- Yuma is to agriculture what Silicon Valley is to computers and electronics
Economic Contribution of Agricultural Sectors to Yuma County: Total Effects

1 in 4 Jobs

$2.8 Billion in Total Output

$1.5 Billion in Value Added

$34 Million in State & Local Taxes
Questions?

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