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NEW CROP OPPORTUNITIES CENTER

2010 Kentucky Produce Planting and Marketing Intentions Grower Survey & Outlook

AEC Extension Publication 2010-05
June, 2010

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Summary
The Kentucky Produce Planting and Marketing Intentions Survey measures the marketing practices and planting intentions of Kentucky fruit and vegetable growers. The survey was conducted each year from 2003-2008 and has resumed for 2010. The 2010 survey was returned by 341 producers representing 1,755 acres of vegetables and melons and 495 acres of fruit. This represents an 18% response rate and approximately 20% of the total commercial produce area in Kentucky.

Gross sales from Kentucky produce continue to increase over 2009 sales of $28-$30 million. In 2010, Kentucky's produce sector will likely exceed $30 million in sales, levels not seen since 2005-06. Commercial vegetable area is estimated to remain steady at 9,965 acres while commercial fruit acreage is estimated to increase slightly to 2,995 acres. Projections for specific acreages of produce items are presented in the Appendix at the end of this report. This survey indicates that Kentucky's produce industry is growing through direct market sales as growers continue to bypass middlemen by selling 1) from the farm; 2) at farmers' markets; 3) through local wholesale deals underpinned by produce auctions. There is also a resurgence of fruit and vegetable production among smaller producers at levels not seen since farmers' market numbers started their dramatic increase in Kentucky in the early 2000s.

2000-2010 Structural Changes: Produce Auctions and Wholesale Markets

The decade from 1997 to 2007 saw substantial changes in the contribution of fruit and vegetable crops to Kentucky's agricultural sector. The market value of fruit and vegetable crops sold from Kentucky farms in 1997 was just $10.4 million. In 2007, according to the US Census of Agriculture, fruit and vegetable sales accounted for $24.025 million, or 2.6% of gross farm sales.

The 2007 Census data actually understated the produce industry's contribution to farm incomes in the mid-2000s. Rapid growth in Kentucky's wholesale produce deal, including the formation of several produce cooperatives, caused Kentucky's produce sector to exceed $32 million during the mid-2000s. However, Kentucky's new produce cooperatives were short-lived and structural changes made it difficult for older co-ops to remain viable. By 2008, produce co-ops in Kentucky were nearly all shuttered. Though a few small cooperatives still function, only 7 of the 334 respondents to this survey indicated that they sold any produce through a co-op in 2009.

The demise of the produce marketing cooperatives was filled by several grower-shippers retaining heavy commercial vegetable volumes. Produce auctions, however, have grown in the wholesale produce deal. The largest auction, the Fairview Produce Auction in Christian County, continues to grow. It is estimated to have marketed 5% of all fresh produce sold in Kentucky in 2006.[1] Produce sales for the Fairview auction totaled $1.1 million in 2008, with an additional $933,000 from nursery and floriculture products. This increased to $2.4 million in produce with over $500,000 in nursery and floriculture in 2009.

Other produce auctions in Kentucky in operation for over five years include the Lincoln County auction in Crab Orchard, and the Bath County Produce Auction in Owingsville. Two newer auctions, the Capstone Produce Market in Henry County and the Hart County Produce Auction, are expanding their sales in 2010.

Over 18% of respondents to this survey indicated that they had sold more than 10% of their produce through a produce auction in 2009. This is the highest percentage of respondents indicating use of produce auctions since this survey began measuring marketing practices of Kentucky's produce growers in 2001.

The value of produce has steadily expanded over the past 10 years in Kentucky and surrounding states. Figures 1 and 2 note the relative sales gains Kentucky has made in the region, although still remaining small in absolute terms.

[1] Matt Ernst. "Kentucky's Produce Auctions." *Rural Heritage,* Winter 2006 (pp. 18-19).

Figure 1. Comparative Tree Fruit and Nut Sales: 2000-2010

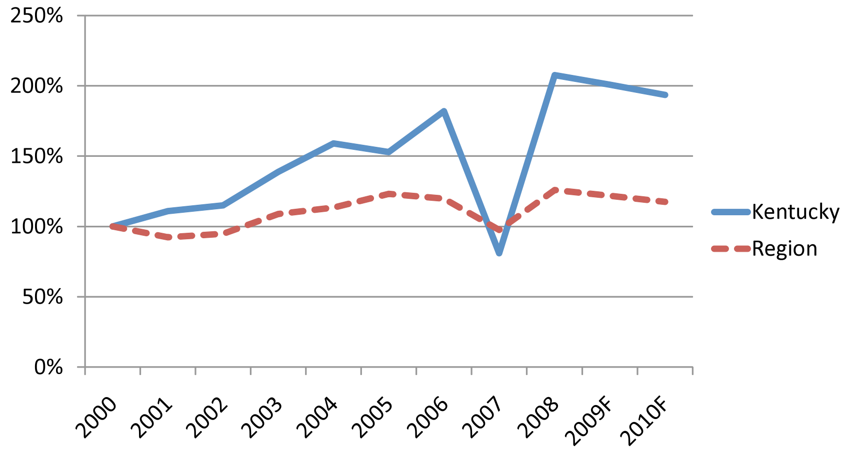
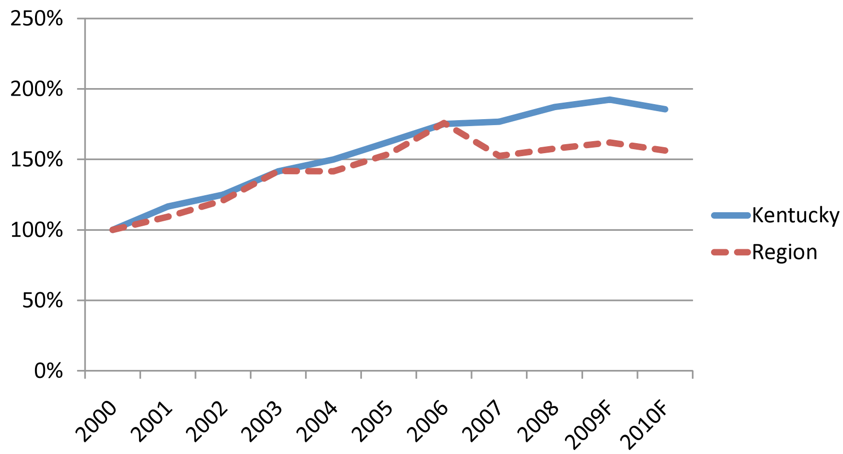


Figure 2. Comparative Vegetable Sales: 2000-2010



Source: Adapted from ERS data, regional sales includes WV, VA, OH, IN, IL, AR, TN

Farmers' Markets

The number of farmers' markets tripled in Kentucky between 1998 and 2008, from about 40 to 120 in 2008.[2] The number of farmers' markets in Kentucky remains around 120, with markets exiting and entering each year. Farmers' market gross sales have grown steadily and account for about ¼ of the gross sales for Kentucky's produce industry ($8 million in 2008, likely exceeding $10 million in 2010). The percentage of respondents to this survey indicating that they sell all of their production at a farmers' market has declined since 2006, when 18% of respondents indicated that they sold all their produce at farmers' markets. Levels for 2007 and 2009 are closer to 12% of respondents selling all produce at farmers' markets. The decline in the percentage of survey respondents selling 100% of their produce at a farmers' market supports survey and anecdotal evidence that producers are branching into multiple direct market channels, including on-farm sales, CSAs, and direct wholesaling to local restaurants and groceries.

Farmers' Markets in Kentucky

There were 120 farmers' markets in operation in Kentucky during 2008 with 1,951 vendors reported. The number of markets increased from 114 to 120, while the number of vendors actually dropped from 2007 to 2008, from 2,015 to 1,951. Of those 120 markets, 42 markets reported enjoying some permanent structure. In addition to fresh produce and herbs, a majority of the markets reported offering other products like honey, eggs, baked goods, and nursery/greenhouse products. Sales under HB 391, which allows for at-home processing of farm products, were reported at more than half the markets. One-quarter (30) of the markets reported selling certified produce.

Source: Janet Eaton, *2008 Annual Farmers' Market Report*, KY Department of Agriculture

Community Supported Agriculture (CSA)

This year's planting intentions survey indicates that between 4% and 5% of producers surveyed are utilizing a CSA to sell their produce. This is a similar proportion of producers indicating CSA participation in the 2008 survey.[3] While the number of producers marketing through CSAs relative to other marketing channels does not seem to have changed during the past five years, the CSAs in Kentucky have been increasing their sales. It appears likely that increased participation in CSAs may help explain some of the decline in farmers' market vendor numbers.

Community Supported Agriculture is another direct market that has grown rapidly nationwide since 1998. A 2009 survey of CSA producers in a seven-state area identified 55 CSAs operating

[2] Janet Eaton, 2008 Annual Farmers' Market Report, Kentucky Department of Agriculture (September 1, 2008)
[3] Tim Woods. "2008 Kentucky Produce Planting & Marketing Intentions Survey and Outlook." University of Kentucky Agricultural Economics Extension Series 2008-05. July 14, 2008.

in Kentucky.[4] Data on marketing practices was collected from one-third (18) of those CSAs in the 2009 survey. Those CSAs reported growth in customer or share numbers from about 680 total members in 2007 to over 1,000 total members in 2009. According to responses from that 2009 survey, the average Kentucky CSA had been in operation just under four years. Surveyed CSAs ranged in size from less than 10 to over 300 subscribers or members in 2009. Kentucky's CSAs served their members from 12 to 32 weeks in 2009, and many surveyed CSAs indicated that they had added new crops or extended the harvest season to service CSA customers.

Restaurants

At the beginning of the decade, marketing to local restaurants was, at best, a tertiary market for many Kentucky produce growers. Sales to restaurants in Kentucky received a boost in 2005 and 2006 with the advent of a program promoting direct sales of produce to Kentucky's state resort park restaurants. Sales to restaurants have also benefited as restaurants attempt to capture consumer interest in eating locally grown foods when dining out. Kentucky's Market Maker program delivered specialized training materials for growers selling directly to restaurants in 2009.

The percentage of Kentucky growers selling more than 10% of their produce to local restaurants was reported at 8.2% for the 2009 season. This is similar to the proportion of producers selling to local restaurants in 2008 and 2007. Restaurant purchases at farmers' markets and through produce auctions have also likely increased.

Notable Individual Produce Crop Changes Since 2007

Cantaloupe and **watermelon** acreage, as well as some specialty melons, is increasing due to the popularity of fresh melons as produce auction crops and for direct sales at on-farm stands and farmers' markets. The harvested area of cantaloupes and specialty melons was reported at 622 acres in the 2007 Census of Agriculture. Cantaloupe and specialty area for 2010 is estimated at 800 acres. For watermelons, planted area is also estimated at 800 acres for 2010.

Sweet potato area expanded significantly during the 2008 and 2009 seasons due to a large commercial planting in south central Kentucky. There has also been new acreage planted and harvested in Eastern Kentucky, such as in Morgan County where 12 acres of sweet potatoes were harvested in 2009. Total sweet potato acreage planted in 2010 is estimated at 200 acres, almost five times the 2007 Census estimate.

Ornamental corn and vegetables, such as gourds, have increased in popularity among producers for sale at auctions and farmers markets. There are an estimated 179 acres of

[4] Timothy Woods et al. "2009 Survey of Community Supported Agriculture Producers." University of Kentucky Agricultural Economics Extension Series 2009-011. http://www.uky.edu/Ag/NewCrops/csareport.pdf

ornamental corn and 60 acres of gourds and other ornamental vegetables for 2010. Pumpkin area is also forecast to rise slightly from 2009 levels.

Blueberries were a widely planted new crop in the 2000s and that acreage is now maturing to full bearing potential. There are 200 acres estimated to be harvested in 2010, up from 2007 estimates of 124 acres harvested statewide.

Grapes were the most widely planted fruit crop in Kentucky during the 2000s. Kentucky's grape acreage has now matured to full bearing potential, with 450 acres estimated to be bearing in 2010. Kentucky grape growers are now able to supply at least as much of the grapes required by in-state wineries each year.

Other Fruits
The acreage estimate for other fruits in this report include cherries, pawpaw, and minor berries. The 2007 Census reported the harvest of **"Other Fruits"** in the 2007 census as being 34 acres, with an additional 10 acres of cherries specifically reported in the Census. The "Other Fruits" category includes tree fruit like pawpaws and small fruit like gooseberries and currants. Though comparatively minor, the consistent increase in the harvested acreage of this category supports the trend of diversification in Kentucky's locally grown produce industry.

Producer Marketing Practices and Characteristics

Table 1.
Kentucky Produce Marketing Channels: Farms Selling More than 10% into One Channel (2009)

Direct markets (community or on-farm retailing, excludes restaurants & grocery)	80.6%
Farmers' markets	51.9%
On-farm markets	41.1%
Cooperatives	1.8%
Non co-op wholesale	14.7%
Internet	2.1%
Direct to grocery	14.7%
Direct to restaurant	8.2%
Auction	18.5%
CSA	3.5%

2009 vs. 2006 Sales

The respondents to this survey appear to comprise a more recent wave of entrants into marketing fresh produce in Kentucky. Survey participants were asked to compare their fresh produce sales from 2009 to 2006. A surprising 22% of respondents indicated that they had not sold fresh produce in 2006. There were 21% of respondents indicating their production was less in 2009 than in 2006, and 12% said sales were about the same. About 21% of respondents said sales were slightly more in 2009 than in 2006, while almost 25% of respondents indicated that sales for 2009 were substantially greater than in 2006.

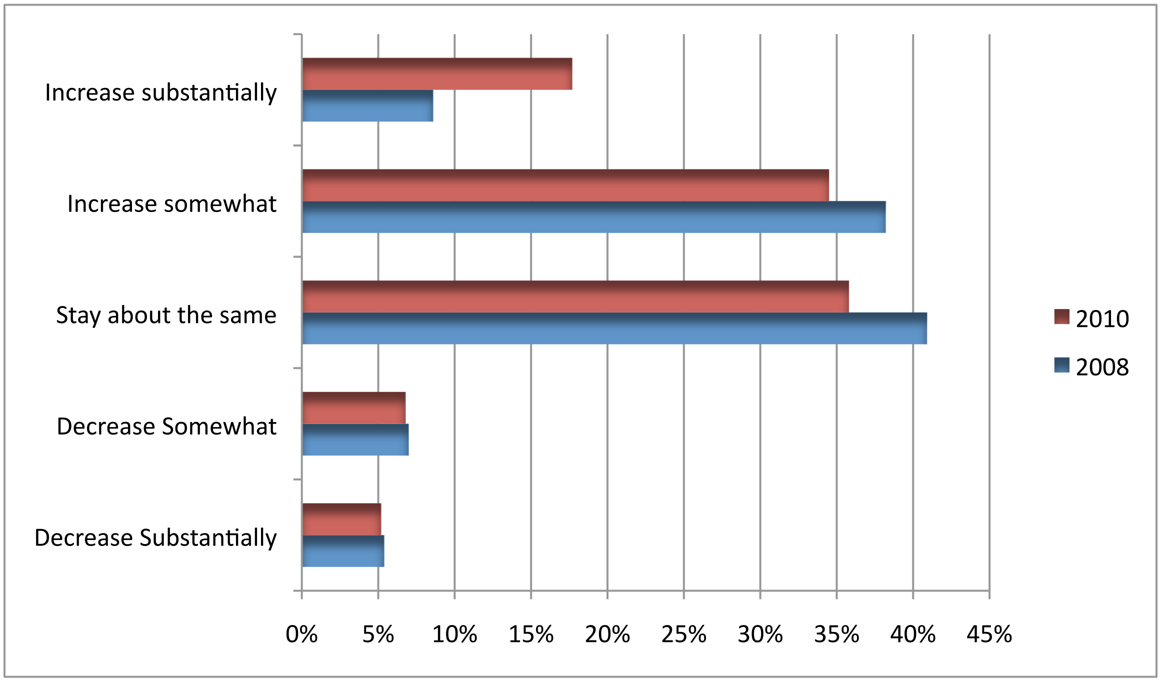
Table 2. Produce Sales in 2009 (compared to 2006)

Did not sell in 2006	Substantially less in 2009	Slightly less in 2009	About the same	Slightly more	Substantially more
22%	10%	11%	12%	21%	25%

Producer Sales Outlook from Produce for the Next Three Years

Kentucky's produce growers remain optimistic about the possibility of sales increasing over the next three years. Only 12% indicated their produce sales would decrease, and 36% expected their sales to "stay about the same." There were 35% of respondents that expected sales to increase somewhat, while about 18% said they expected their sales to increase substantially. The amount of producers indicating that they expected their produce sales to increase substantially over the next three years was more than twice the percentage of those producers surveyed in 2008.

Figure 3. Producer Sales Outlook, 2008 and 2010



Participation in KDA Marketing Programs

Respondents were asked about their awareness of, and participation in, two marketing programs coordinated and promoted by the Kentucky Department of Agriculture. The **Restaurant Rewards** program is a program for producers selling fresh produce to restaurants while the **MarketMaker** program includes a Web-based directory of producers selling local farm products in Kentucky.

Survey respondents indicated greater familiarity and participation in the MarketMaker program than the Restaurant Rewards Program, with 22% indicating that their farm was listed as a source of produce on MarketMakerKY.com. Only 4% of respondents indicated that they had sold to customers using the Restaurant Rewards program.

Table 3. MarketMaker and Restaurant Rewards

	Yes	No	Don't Know
Do you sell to customers using the Restaurant Rewards program?	4.4%	81.5%	14.1%
Is your farm registered as a source of produce on MarketMakerKY.com?	22.9%	58%	19.1%

As noted above, this year's survey may reflect a younger and less-experienced grower base for produce grown in Kentucky. The highest percentage of respondents since 2002 (18%) indicated they were 40 years or younger in age. The percentage of respondents 51 years or older (62%) was similar to the growers surveyed in 2008 (Table 4).[5]

Table 4. Surveyed Producer Age

	Under 30	31-40	41-50	51-60	>60
2001	7%	14%	31%	24%	23%
2002	5%	14%	29%	27%	25%
2003	6%	10%	30%	26%	27%
2004	4%	9%	31%	26%	27%
2005	4%	9%	26%	29%	31%
2007	4%	7%	26%	29%	34%
2009	7%	11%	20%	27%	35%

During this survey's first year (2001 data), one-quarter of the Kentucky produce growers surveyed had less than three years experience growing produce. Growers presumably became more experienced over time, as evidenced by less than 10% of respondents to this survey indicating less than three years experience growing produce between 2004 and 2007. This year, reflecting the 2009 growing season, 17% of growers indicated less than three years experience growing produce.

Table 5. Years Experience Growing Produce, 2001-2005, 2007 & 2009

	Less than 3	3 to 6	7 to 10	Over 10
2001	25%	23%	14%	38%
2002	15%	32%	15%	38%
2003	15%	33%	13%	38%
2004	6%	28%	15%	48%
2005	9%	28%	19%	42%
2007	8%	23%	20%	49%
2009	17%	23%	14%	46%

Organic/Sustainably Grown

Since this survey began measuring producer interest in organic production systems, more producers have indicated interest in marketing organic and sustainable than were actually marketing produce using such labels. According to the US Census of Agriculture, there were 113 acres of certified or exempt vegetables, potatoes and melons harvested from Kentucky farms in 2008, 11 acres of fruit and tree nuts, and 8 acres of berries. Although tiny by national standards, the certified organic sector has grown significantly in Kentucky during the 2000s.

Of the producers surveyed, 13% responded that they had marketed produce as "organic" or "sustainably grown" in 2009.

[5] The data for 2007 and 2009 in Tables 4 & 5 indicate the surveys dated 2008 and 2010.

Produce Gross Sales

The largest percentage of respondents (32%) indicated that they sold less than $2,500 in gross sales from produce crops. The next largest percentage indicated that they sold between $20,000 and $49,999 in produce crops. This is consistent both with the large number of new produce growers since 2006 responding to this survey and with the presence of a large amount of small "hobby farms" at Kentucky's farmers' markets and other produce marketing channels. Respondents to this survey accounted for about one-quarter of Kentucky's produce production.

Table 6. 2009 Gross Sales from Produce Crops (310 respondents)

$1-$2,499	32%
$2,500-$9,999	16%
$10,000-$19,999	9%
$20,000-$49,999	24%
$50,000-$99,999	15%
$100,000 and more	4%

Because the Produce Planting Intentions survey is an optional mail survey, it is difficult to compare responses over the years other than as a snapshot of produce marketing for each year. However, it is interesting to note that the 2009 category of $20,000 to $49,999 was nearly 10% greater than the responses for the 2006 year. The total responses with sales under $10,000 also decreased for 2009 as compared to 2006. This may indicate that more of Kentucky's produce growers have moved from the startup or hobby phase to gross sales from produce becoming a more substantial portion of household or farm income.

Table 7. What percentage of your household income (before taxes) in 2009 was from farming?

0-10%	39%
10-20%	13%
20-50%	21%
Over 50%	27%

The largest part of respondents (39%) growing produce commercially in Kentucky account for farming as less than 10% of their household income. This indicates a heavy concentration of hobby farmers and, likely, smaller acreage farms in Kentucky's produce sector.

Conclusion and Implications for Future Survey Research

- Direct market channels continue to remain vital for Kentucky's diversifying produce industry.
- In spite of economic downturn, producers surveyed remain very optimistic about their prospects for increasing produce sales and farm profitability compared to two years ago.
- Producers appear to be adopting the Kentucky MarketMaker program (22%) while less than 5% of producers report utilizing Kentucky's Restaurant Rewards.
- Crop acreage estimates reports indicate continued diversification of vegetable crop mix as well as some increase in commercial fruit acreage harvested.
- This 2010 survey indicates that there may be an influx of younger, less-experienced producers into Kentucky's commercial produce sector. Future research could document the changes in marketing practices of these growers.

Acknowledgments

Ag Econ Reviewers:
Craig Infanger

Horticulture:
John Strang

Special thanks for assistance provided by
Nick Wright (former Extension Associate): Survey design and data collection
Elydia Thomas: Survey data collection and data entry
Matt Ernst: Writer/analyst

Appendix 1. 2010 Kentucky Estimated Produce Acreage

	2002 Census Acreage	2007 Census Acreage	2008/09 UK Estimate	**2010 Acreage Forecast**	Change From 2008/09
Asparagus	44	61	65	**65**	0%
Beans, Snap	541	441	455	**470**	3%
Beets	8	7	N/A	**10**	-
Broccoli	49	16	75	**60**	-20%
Cabbage*	262	219	150	**160**	7%
Cantaloupes & Honeydew	575	622	749	**800**	7%
Corn, Sweet	2010	2369	3100	**3100**	0%
Corn, Ornamental	N/A	N/A	179	**179**	0%
Cucumbers, Fresh	146	183	266	**275**	3%
Eggplant	2	17	17	**20**	18%
Garlic	8	11	28	**35**	25%
Greens	81	62	79	**85**	8%
Lettuce	14	23	54	**60**	11%
Lettuce (Greenhouse)	N/A	N/A	18	**18**	0%
Okra	12	20	32	**39**	22%
Onions (Dry & Green)	13	25	59	**60**	2%
Ornamental Vegs. (Gourds)	N/A	N/A	56	**60**	7%
Peas	6	13	52	**55**	6%
Peppers, Bell	348	214	425	**500**	18%
Peppers, Jalapeño	52	72	72	**75**	4%
Peppers, Other	N/A		103	**103**	0%
Potatoes	N/A	291	300	**300**	0%
Pumpkins	1524	1081	1400	**1400**	0%
Squash, Summer	136	140	185	**185**	0%
Squash, Winter	N/A	40	57	**60**	5%
Sweet Potatoes	59	44	170	**200**	18%
Tomatoes, Field	911	899	600	**600**	0%
Tomatoes, Greenhouse	N/A	N/A	31	**31**	0%
Watermelons	450	641	800	**800**	0%
Herbs	12	15	30	**30**	0%
Other Vegetables	69	311	130	**130**	0%
Apples	1920	1268	1000	**1050**	5%
Apricot	3	5	N/A	**5**	-
Blackberries	86	103	151	**150**	-1%
Blueberries	61	35	124	**200**	61%
Grapes**	175	407	394	**450**	14%
Nectarines	6	19	N/A	**20**	-
Peaches	602	584	649	**650**	0%
Pears	74	114	115	**100**	-13%
Persimmons	10	24	N/A	**25**	-
Plums & Prunes	27	29	N/A	**30**	-
Raspberries	20	17	43	**45**	5%
Strawberries	216	181	195	**215**	10%
Other Fruits	--	47	40	**55**	38%
Total Produce Acres	**10,551**	**10,711**	12,448	**12,960**	4%
Total Fruit Acres	3,219	2,874	2,711	**2,995**	10%
Total Vegetable Acres	7,332	7,837	9,737	**9,965**	2%

**Estimated bearing acreage