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Inside this issue:

Berries Are Growing, Mostly

In this issue we have interesting research done on consumer willingness-to-pay for blueberries, postharvest quality of southern highbush and rabbiteye blueberries, and an interesting analysis of the growing berry industry in southern states (well, most states). Since many of you also grow blackberries or are interested in growing them, I throw in an article on the very first seedless blackberry! It isn't available yet, but it won't be too long before it hits the market. Can we grow it here? I don't know, but I suspect we can sure try. There are also some upcoming events to make you aware of, including Food As Business and a reminder of the January Blueberry workshops (please attend if you can). The blueberry industry in Mississippi has taken a lot of hits in recent years, but there is still opportunity to be successful. Let's keep a positive mindset on this and work toward a more productive future.

How Close is the Spotted Lanternfly to MS?

The spotted lanternfly, an invasive pest from Asia, has been a problem in the Atlantic states region for a few years. However, it is on the move and was found last year in middle Tennessee. Will it get to Mississippi? Probably. How long until it gets here? Probably not too much longer, unfortunately. It is a serious pest. Keep an eye out for it and report it if found.

Willingness to Pay for Blueberries: Sensory Attributes, Fruit Quality Traits, and Consumers' Characteristics

E. Canales et al. — Mississippi State University Agricultural Economist

Abstract

Understanding consumers' preferences for fruit quality attributes is key to informing breeding efforts, meeting consumer preferences, and promoting increased market demand. The objective of this study was to assess the effect of fruit quality traits and hedonic sensory evaluation on consumers' willingness to pay (WTP) for a selection of fresh northern and southern highbush blueberry cultivars. The WTP was elicited by using a double-bounded contingent valuation conducted in conjunction with a consumer sensory test. Two types of models were estimated using either sensory evaluations (i.e., consumer preference and consumer intensity) or instrumental measurement data (i.e., measures of soluble solids, titratable acidity, sugars, acids, and firmness) as explanatory variables to model WTP. Results using sensory evaluations indicated that flavor liking, flavor intensity, and sweetness intensity are key factors that influence consumers' acceptance and WTP for blueberries. A regression analysis using instrumental measurements indicated that measures related to sweetness and acidity traits are important factors that determine WTP. Higher WTP was associated with higher total sugar content across different levels of total organic acid. The WTP increases with organic acid content, because this is needed for enhanced flavor; however, WTP declines at high concentrations of organic acid. Except for extreme values of firmness, the WTP increased as measures of fruit firmness increased, indicating a consumer preference for firmer blueberries. Overall, the results provided new insights into the relationships between consumer preference and WTP and fruit quality benchmarks to select for improved quality.

https://journals.ashs.org/hortsci/view/journals/hortsci/59/8/article-p1207.xml

There is also a webinar related to this work. It will be held on September 16. Sign up at the link below:

https://uwmadison.zoom.us/meeting/register/tJEkfu-rrzIrHd2mYqBNrxzGGJoCtE8IPcnX#/registration

Postharvest Keeping Quality of Blueberry Cultivars in Cold Storage: Texture and Appearance — R. Itle et al., University of Georgia

Georgia's blueberry industry consists of southern highbush (SHB, *Vaccinium corymbosum* L. and *V. darrowii* Camp complex) and rabbiteye (RE, *V. virgatum* Aiton). There exists a subjective bias in the blueberry industry that SHB has higher fruit quality than RE. Their quality is also compared to northern highbush (NHB, *Vaccinium corymbosum* L.), which is perceived as superior. This often leads to reduced price points received by growers by third party distributers, and has even resulted in cultivar and/or type exclusion from some commercial purchasers. However, there is limited information that supports this preconceived perception at best. The objective of this study was to examine the physicochemical postharvest keeping quality of major SHB, RE, and NHB cultivars in commercial postharvest cold storage (4°C) and determine how each type maintained fruit quality over time.

Take Home Points

Results suggest:

- Fruit firmness: SHB had the highest fruit firmness stability over time in the cooler, with SHB maintaining firmness over storage year one and having the smallest decrease in fruit firmness in year two.

- Fruit skin strength: NHB and SHB maintain their fruit skin strength the best over time in the cooler, and that RE fruit skins experience a larger increase in skin strength (i.e. skin toughness) over time. These trends suggest that RE don't maintain their fruit skin strength as consistently over cold storage as do highbush types.

- Berry size: RE fruit do not change size due to water loss or other factors over cold storage time, and that SHB fruit experience the largest decrease in berry size in 30 days of cold storage.

- Percent healthy fruit: Both highbush types maintain visual appearance and have reduced fruit decay over time, and RE had the highest amount of fruit decay over storage time.

In a big picture summary: During 30 day postharvest storage, the highest stability observed for texture was by SHB, berry weight was by RE, and visual appearance was by SHB and NHB. These results do not support the subjective bias that NHB has a higher quality that SHB and RE types.
See link below for entire article:

https://smallfruits.org/2024/07/postharvest-keeping-quality-of-blueberry-cultivars/

Southern Berry Farms Continue to Grow

Wendiam Sawadgo — Auburn University

The U.S. Department of Agriculture released data from the 2022 Census of Agriculture in early 2024. The Census of Agriculture provides information on farm-level acres and sales for most crops, and allows us to compare how farm enterprises have changed over time. In this article, we evaluate how southern berry production has evolved over the past 15 years. Overall, there has been growth in the berry industry in terms of number of operations, and average berry farm size across the region.

Berry Area

The area in berries in the South totaled 82,436 acres in 2022, as shown in Figure 1. This figure includes both bearing and non-bearing berry area. Georgia led the way with 30,291 acres in berries followed by Florida at 25,491 acres. All states in the region except for Mississippi and Virginia increased their berry acreage between 2017 and 2022. Texas led the way with a 57% increase in berry area from 2017 to 2022, with Georgia close behind at a 56% increase. The southern region outpaced the U.S. in berry area growth, as the U.S. as a whole increased by 18% over the five-year period whereas berry area in the South increased by 38%. The southern states shown in the map accounted for 23% of U.S. berry acreage in 2022.

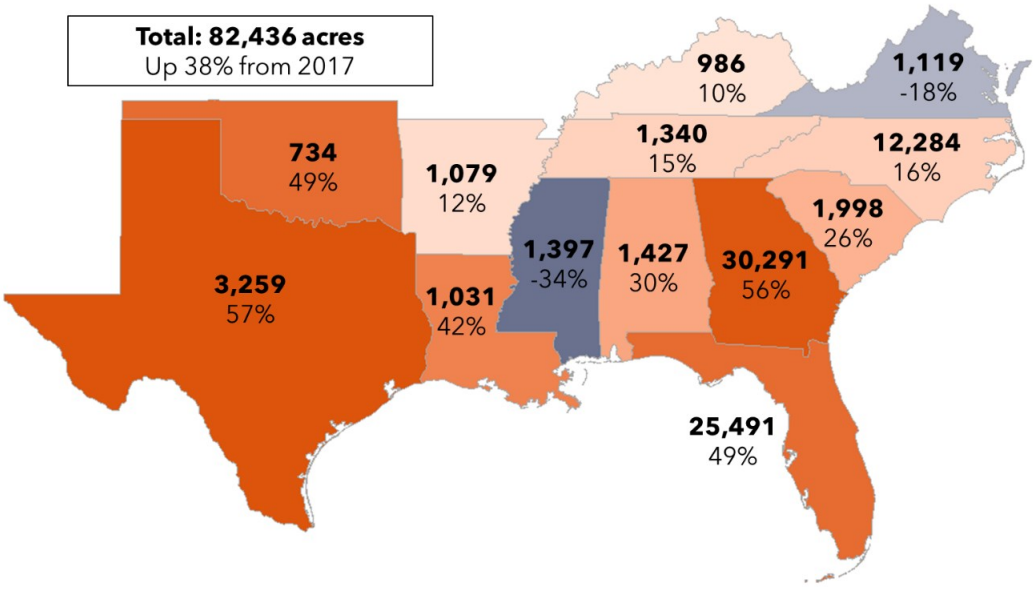

Figure 1: 2022 Berry Acres by State and Percent Change from 2017 Data Source: USDA-NASS.

Southern Berry Farms, cont.

Operation Scale

The number of berry operations has increased by 15% from 2017 to 2022, up to 12,794 operations (Figure 2). This follows the 26% increase that occurred from 2012 to 2017. While both berry acres and operations have increased, acreage has exceeded the increase in the number of farms, which has resulted in an increase in the average size of a berry operation. From 2017 to 2022, the average berry operation in the South increased from 5.3 to 6.4 acres per operation. However, this increase was largely driven by Georgia and Florida, which averaged 19.9 and 15.9 berry acres per operation in 2022, respectively. The majority of the region's states averaged between 1 and 3 berry acres per operation.

This increase in berry operation size is likely due to economies of scale, which occur when the cost per unit of output decreases as the amount of output produced increases. This means that larger farms exhibit a lower cost of production per acre. For example, a grower that invests in a mechanized harvester would decrease the average cost of the machinery by using the harvester on a larger number of acres, hence reducing the cost per acre and per unit of berries harvested. Additional economies of scale may come from hiring labor (e.g. through the H-2A program) or other machinery and input use.

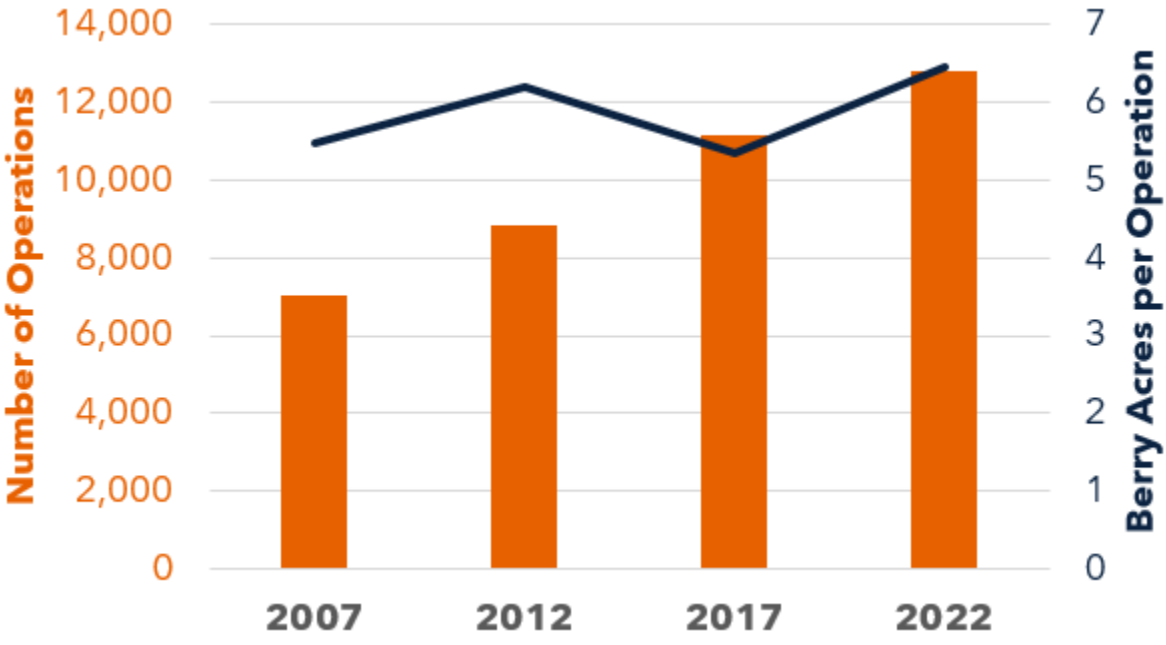

Figure 2: Southern Berry Operations and Average Area per Operation, 2007-2022
Data Source: USDA-NASS

Southern Berry Farms, cont.

Berry Sales

Berry sales for the region totaled $1.12 billion in 2022, up 120% from 2017 (Table 1). Over half of the region's berry sales were from Florida, which accounted for $634.95 million. However, all states in the region had increases in sales over the period.

Table 1: Berry Sales by State and Year, 2012-2022 (million dollars)

State	2012	2017	2022
Alabama	4.11	4.08	12.39
Arkansas	3.21	3.38	7.02
Florida	233.16	285.48	634.95
Georgia	74.90	98.11	215.59
Kentucky	2.60	2.62	8.94
Louisiana	3.48	—	9.32
Mississippi	12.69	10.24	10.79
North Carolina	54.42	69.96	125.95
Oklahoma	0.44	1.03	2.48
South Carolina	7.29	13.04	44.35
Tennessee	3.90	5.75	12.92
Texas	7.61	7.31	19.77
Virginia	4.67	7.47	15.10
Total	412.48	508.47	1,119.55

Several states observed increases in the average percentage of farm sales that come from berries, suggesting a growing importance of berry enterprises. Farms with berries in Florida had 6.2% of their sales come from berries, almost double the figure from 2017. Georgia had a similar increase from 1.0% in 2017 to 1.6% in 2022, and South Carolina increased from 0.6% to 1.0% over the same period. The other states in the region had berry sales account for less than 1% of their berry operations' total farm sales.

Conclusion

There has been continued growth in the number of berry operations, the average size of berry operations, and total area in berry production in the South. Florida and Georgia lead the region in these categories, but most states have had growth. Overall, the region has increased its presence in the U.S. berry market, and berry enterprises make up a larger proportion of farms' total sales.

However, high input prices pose a challenge for small-fruit operations, similar to other specialty crop farms. High labor costs have precipitated demand for mechanization and automation and increased reliance on the H-2A guest-worker program. Given the nature of these programs, it is likely that berry operations will continue to exhibit economies of scale and become larger to benefit from the cost advantages.

Not Blueberries but Interesting Nonetheless

What To Know About the World's First Seedless Blackberry

Don't like blackberries because of seeds? Those days might be over. Biotech company Pairwise has announced development of the world's first seedless blackberry. According to the company, it was created using its proprietary Fulcrum Platform, a suite of unique tools for CRISPR application in food and agriculture. This is the first time seedlessness has been achieved in any caneberry.

In addition to creating the first seedless blackberry, Pairwise has successfully edited the same variety to eliminate thorns and create a more compact plant. The thornless and compact traits enable more efficient fruit harvesting and improved productivity and profitability for growers. A compact trait means crops can be planted at a higher density per acre.

Early data from Pairwise-led trials indicate the potential to greatly increase yield per acre while necessitating only a minimal increase in inputs.

"Our high-density compact and thornless traits contribute to a more sustainable food system," says Haven Baker, Pairwise Co-Founder and Chief Business Officer. "The absence of thorns and reduced height of the compact plants allow berry harvesters to better access the fruit and leave less on the plant, reducing food waste and further improving the growers' economics. With the precision of CRISPR, we're able to develop these thornless and compact traits without sacrificing consistency in flavor and quality for consumers."

Baker says the next phase of development includes outdoor field trials with an eye on making the variety available to consumers in a few years' time.

For more information, visit www.Pairwise.com.

To see original article go here: https://www.growingproduce.com/fruits/berries/what-to-know-about-the-worlds-first-seedless-blackberry/

Upcoming Workshops

FOOD AS BUSINESS WORKSHOPS

Scaling up from the Market: Take Your Food Business to the Next Level

Join us for a workshop designed to equip participants with tools and knowledge to scale up their farm and food business and to expand their market channels.

FOOD AS A BUSINESS

Features topics:

- Navigating market outlets opportunities and key marketing considerations
- Deciphering regulatory, labeling, and food safety requirements to sell in new markets
- Strategic marketing for farm and food businesses
- Harnessing online tools for social media marketing for farmers and food businesses
- Navigating loans, credit readiness, and loan programs
- Understanding programs and services offered by state agencies.

Who should attend?

Farmers, agricultural and food entrepreneurs, and anyone who owns and/or is interested in operating an ag-based business.

TO REGISTER

Scan the QR code, or visit the following link: http://msuext.ms/wk3js

Dates and Locations

Time: 8:30am— 3:00pm

STARKVILLE, OCTOBER 11
Mississippi State University
190 Bost Drive, Mississippi State 39762

VERONA, NOVEMBER 6
North MS Research & Extension Center
5421 Hwy 145 S, Verona 38879

Registration fee: $15.00
You can pay fee at workshop (exact change or check payable to: MSU BNHP).

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SOUTHERN EXTENSION RISK MANAGEMENT EDUCATION

MISSISSIPPI STATE UNIVERSITY EXTENSION

Upcoming Webinars

FOOD AS A BUSINESS

SEPTEMBER 5 Morris McDonald USDA FSA - MS	Unlocking Farm Financing: Navigating Loans, Credit Readiness, and USDA Farm Service Agency (FSA) Loan Programs
SEPTEMBER 12 Dr. Courtney Crist MSU	Scaling Up Production: Deciphering Regulatory, Labeling, and Food Safety Requirements to Sell in New Markets
SEPTEMBER 19 Dr. Rachael Carter MSU	Growing Together: Collaborating with Local Organizations and Government for Farm and Food Business Expansion
SEPTEMBER 26 Dr. Lauren-Colby Nickels MSU	Leveraging Canva-Graphic Design Software for Effective Digital Marketing
OCTOBER 3 Dr. Lauren-Colby Nickels MSU	Harnessing Innovative AI Tools for Effective Social Media Marketing
OCTOBER 17 -Elizabeth Canales, MSU -Panel of producers representing fruit, dairy, and meat operations	Unlocking Farm Financing: Navigating Loans, Credit Readiness, and USDA Farm Service Agency (FSA) Loan Programs

TO REGISTER

- **Scan QR Code**

-- Or --

- **Use Link: http://msuext.ms/w7waq**

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SOUTHERN EXTENSION RISK MANAGEMENT EDUCATION

MISSISSIPPI STATE UNIVERSITY EXTENSION

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Upcoming Events

Eric Stafne

Early next year (January) I will again plan to do the Mississippi Blueberry Education workshop. Also, there will be an online webinar like we have done the last 4 years. If you have any suggestions for speakers and/or specific topics I would love to hear them. The great thing about online webinars is that a speaker can come from anywhere in the world! So, keep it in mind.

As far as the field day goes, we had a nice one this spring in Wiggins at Bounds Blueberry Farm. Hopefully we will have another one next year as well.

Again, if you have any suggestions please contact me anytime.

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