

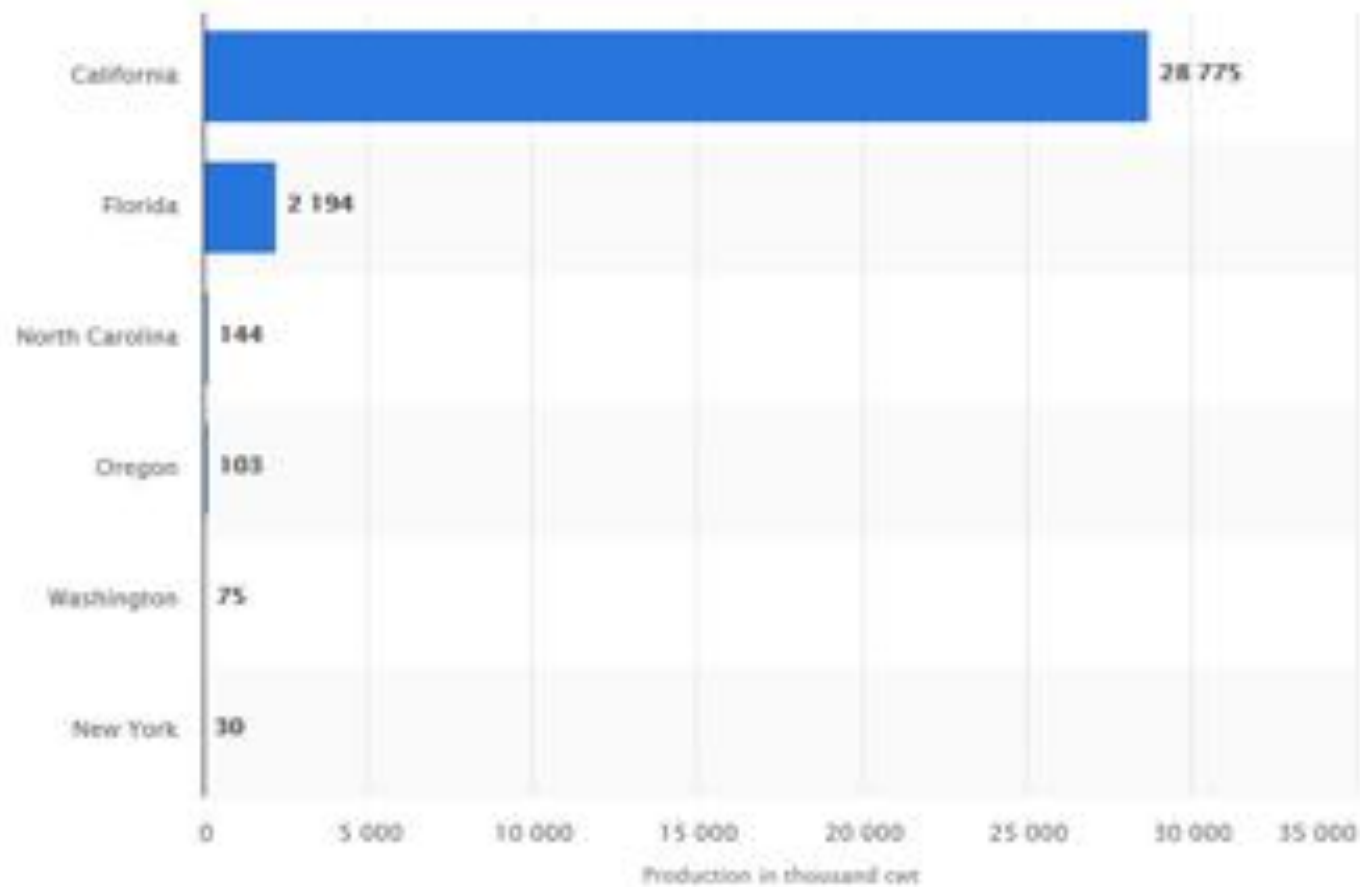
A close-up photograph of a person's hand holding a cluster of ripe, red strawberries. The background is a lush green strawberry field with many leaves and some white flowers. The text is overlaid on the image.

# Strawberry Production Industry Overview for So. MD

**Ben Beale**

**University of Maryland Extension**

- United States Production:
  - Over 60,000 acres in production
  - Approximately \$3 billion in total revenue
  - California produces majority, followed by Florida and North Carolina



- Local Production:

- Approximately 220 acres of strawberries on 187 farms in Maryland
- Approximately 30 growers in Southern Maryland
- Average grower is producing 1 acre or less of berries



# Market channels

- Pick your own,
- Farmers market,
- Direct pre-pick farm sales,
- Produce auction
- Wholesale to grocery stores or regional distributors.
- Often the centerpiece of spring agritourism operations



# Current drivers of strawberry profitability

- market availability
- labor costs
- production management
- price
  - national average per pound price paid to farmers for fresh market strawberries is \$1.02 per pound
  - So MD growers must get more to be profitable

# Two Primary Production Systems

**Plasticulture**



**Matted Row**



# Two Primary Production Systems

## Plasticulture

- plugs planted in September at a high density
- raised beds with plastic mulch and drip
- plants are covered during the winter with row cover
- requires higher management and per acre input cost of approximately \$16,000
- yields 12000-16000 quarts per acre with gross income potential of \$30,000 + per acre

## Matted Row

- dormant bare root strawberries planted in the spring on wide spacing
- Plants are allowed to produce runners and fill in the row with daughter plants
- harvest in June and July in the second and proceeding years
- Matted row system yields less than half of the plasticulture system, but have much lower establishment cost

# Annual Plasticulture Production Calendar:

May/June: Order plugs for fall planting. Chandler is the most widely used variety. Sweet Charlie is often used for early season production and Camarosa as a substitute for Chandler

August: Prepare soil for bed laying. Fertilize with 50 lbs. N and P and K according to soil test. Form 8-10 inch raised beds, fumigate if needed, and lay embossed plastic tightly to bed.

September: Hook up irrigation system to drip and prepare for planting. Plant disease free plugs 12 inches apart in a staggered double row. Plant on time September 10-15 at 15,000 plants per acre

October: Prepare to apply a floating row cover. Scout for mites, aphids and crown rot or root rot diseases. Apply crop protectants as needed.

November: Apply floating row cover. Monitor plants for blooms.



# Annual Plasticulture Production Calendar:

December: Clean beds, remove runners.

February: Uncover strawberry plants and clean beds of dead leaf material. Monitor temperature and reapply floating row cover as needed. Inject 15-25 lbs. N through drip tape. Set-up irrigation for frost protection and apply if needed.

March: Continue to monitor temperature and blooms. At bloom, apply critical fungicide and insecticide sprays as needed. Irrigate as needed. Inject 15-25 lbs. N through drip tape.

April: Tissue sample. Scout, spray fungicides and insecticides as needed-expect at least 4 applications. Prepare supplies for harvest.

May: Harvest begins in early to mid-May most years. Per acre harvest labor is estimated at 1200 hours per acre. Deliver and market strawberries.

June: Finish harvest. Kill plants with herbicide and double crop with squash, pumpkins, or other crop. May consider carrying plants for a second year, though generally not recommended due to berry size, renovation costs and disease concerns.

# Matted Row Production Calendar (Establishment Year) :

Prior Year: Eliminate any perennial weeds and reduce annual weed seed bank. A major limitation of the matted row system is the ability to control weeds. Soil test and adjust pH to 6.5.

March: Prepare soil for planting. Apply herbicide to kill existing vegetation. Order certified dormant bare root plants. Fertilize with 30 lbs. N and P and K according to soil test.

April: Plant bare root strawberries in rows spaced 3 to 4 foot apart. In row spacing is typically 18 to 24 inches. A 3 foot row to row and 24 inch in-row spacing will require 7300 plants. Apply residual pre-emergent herbicide.

May: Remove any flowers or fruit during the first year. Scout for insect pest and weeds. Side dress additional N fertilizer at rate of 20-30 pounds per acre.

June-August: Irrigate as needed. Promote the establishment of daughter plants through the matted row. Daughter plants establishing in the row middles can be removed.

September: Renovate row middles.

December: Apply a thick layer of weed free straw over the entire planting area. Laves should just be visible under the straw.

# Matted Row Production Calendar (Harvest Years) :

April: Pull back straw into row middles. Fertilize with 30 lbs. N and P and K according to soil test

May/June: Prepare for harvest. Scout for mites, aphids and crown rot or root rot diseases. Apply crop protectants as needed. Bloom sprays are the most critical. Harvest fruit regularly.

June/July: Renovate immediately after harvest. This involves applying a post emergence herbicide (2,4-D), mow closely to the ground, and narrow the bed row to a width of 8 to 12 inches. Apply 30 lbs. of N to stimulate new growth and apply a pre-emergent herbicide for weed control.

Summer/Fall: Continue to irrigate as needed. Scout for mites, aphids and crown rot or root rot diseases. Apply crop protectants as needed.

December: Apply a thick layer of weed free straw over the entire planting area. Leaves should just be visible under the straw.

## Resources for Southern Maryland Producers:

### Annual Events:

Strawberry Twilight Field Days held at the WYE Research and Education Center in May of each year. Program Bulletins with production schedules, variety trial updates, research results and pest information can be found here: <http://agresearch.umd.edu/wye/extension-programs-wyerec>

Mid-Atlantic Vegetable and Fruit Conference: Held each year in Hershey, PA during the last week in January.

Virginia Strawberry Conference: Held each year in Virginia Beach, VA during the 1st week of February. Normally includes a field walk, convention and conference. Sponsored by Virginia Cooperative Extension

# Southern Maryland Equipment and Supplies:

## Plasticulture and Irrigation:

Westham Produce Supply: plasticulture supplies, soluble fertilizer, irrigation equipment, row covers

Zimmerman's Irrigation and Produce Supply: plasticulture supplies, soluble fertilizer, irrigation equipment, row covers

Nolts Produce and Irrigation Supplies: <http://noltsproducesupplies.net/>

# Irrigation Supplies

- Zimmerman's Irrigation
- Stoltzfus Produce Supplies
- Nolt's Produce Supplies





Zimmerman's Produce and Irrigation Supply  
25860 Friendship School Road  
Mechanicsville, MD 20659



Westham Produce Supply  
37808 Westham Lane  
Mechanicsville, MD 20659



# **NOLT'S PRODUCE SUPPLIES**

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*Vegetable Seeds, Onion and Garlic Sets*

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<http://www.noltsproducesupplies.net/>

# Local Farm Supply Stores

- Southern States of Charlotte Hall
  - Bulk or bagged fertilized
  - Custom Fertilizer Spreading
  - Seed
  - General Farm Supplies
  - Chemicals

(301) 884-3722



# Local Farm Supply Stores

- Kirby Agri in Mechanicsville, MD
  - Bulk or bagged fertilizer
  - Fertilizer buggy rental
  - Seed
  - Chemicals

Kenny King, Manager  
301-884-4604



# Local Farm Supply Stores

- R&D Cross Southern States
  - Bulk or bagged fertilized
  - Seed
  - General Farm Supplies
  - Chemicals
  - Delivery Service Available

Brandywine, MD

(301) 579-2449 or (301) 888-2507



# Local Farm Supply Stores

- La Plata Farm and Home Supply, Southern States
- *Feed, seed, fertilizer, small farm supplies*

La Plata, MD 20646

(301) 934-4361



# Lime and Bulk Fertilizer

- Cullins Lime & Fertilizer
  - Spread lime
  - Custom fertilizer application
  - Trucking services
  - Seed corn and forage seeds
- Located in Clements
- (301) 769-3674, Cell: (301) 904-3352

## Nurseries for Strawberry Plants

Commonly used nurseries for this area: Aarons Creek Nursery, Nourse Farms, Jersey Asparagus (Walker plants)

## Websites listing plant nurseries:

North Carolina Strawberry Growers Association: <https://ncstrawberry.com/growers>

Cornell Nursery Guide: <https://blogs.cornell.edu/berrynurseries/strawberries/>



**Aaron's Creek Farms**  
Wholesale Plant Nursery

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### Strawberry & Vegetable Plugs

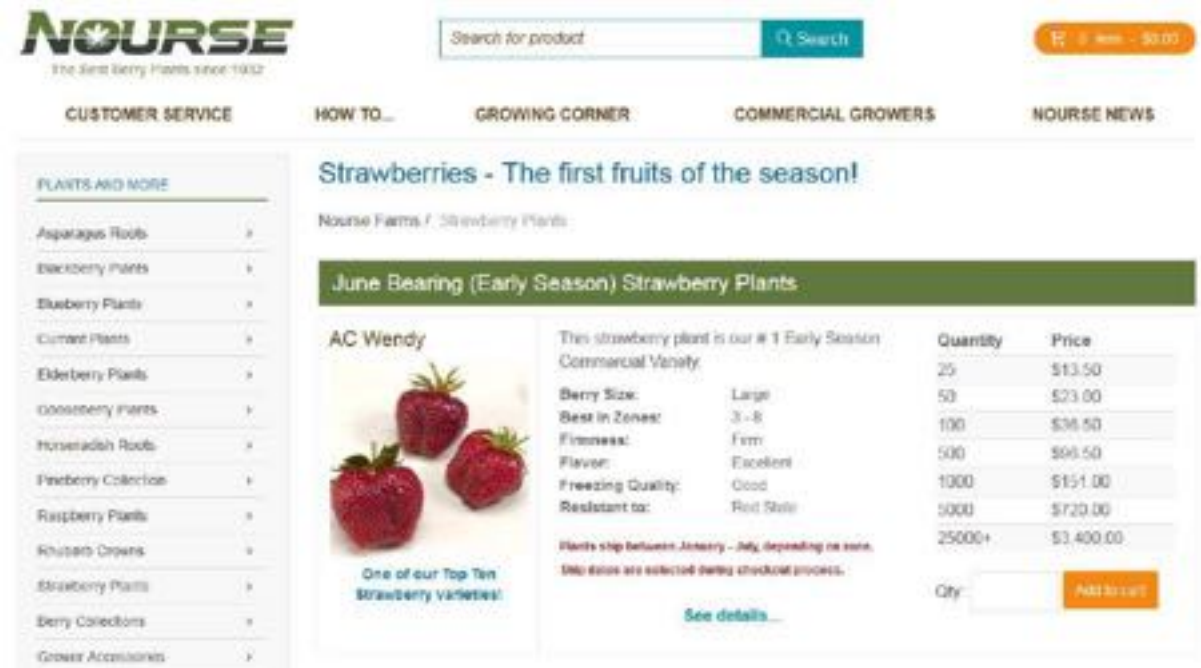
We've been growing plugs in-house for the past 20 years, ever since the concept was first introduced. We hate to sound boastful and use the "expert" word, but it more than likely does apply. What really sets us apart is that we are also growers of these crops ourselves. We keep up to date on the latest and greatest techniques, but we're also the first to be testing these new strains and methods. We know first hand what really works, and what doesn't.

We can offer custom orders of our plugs, which can be shipped anywhere by Fedex. We can also deliver within a 150 mile radius of our southside Virginia location. Customer pickups are also welcomed.

We don't attempt to be the cheapest supplier around. The quality of our plants and our customer service add value that will in the end speak to your bottom line.

Another things that sets us apart is that everybody here is one phone call away. We try very hard to share with you all the knowledge we have.

We also work very hard to stay abreast of the latest trends. Anything you read about in the trade magazines you can get from us.



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### Strawberries - The first fruits of the season!

Nourse Farms 7 Strawberry Plants

#### June Bearing (Early Season) Strawberry Plants

**AC Wendy**

This strawberry plant is our #1 Early Season Commercial Variety.

Quantity	Price
25	\$13.50
50	\$23.00
100	\$36.50
500	\$95.50
1000	\$151.00
5000	\$720.00
25000+	\$3,400.00

Plants ship between January - July, depending on zone.  
Only those are selected during checkout process.

Qty:

See details...

## Information Sources for Strawberries

- UMD Small Fruit Website: <https://extension.umd.edu/smallfruit>
- North Carolina Strawberry Information Portal: <https://strawberries.ces.ncsu.edu/>
- UMD WYE Research and Education Center: <http://agresearch.umd.edu/wye/extension-programs-wyerec>
- PennState Strawberry Factsheet: <https://extension.psu.edu/strawberry-production>
- Southeast Small Fruit Consortium: [www.smallfruits.org/](http://www.smallfruits.org/)
- Strawberry Diagnostic Key: <http://diagnosis.ces.ncsu.edu/strawberry/>
- Mid-Atlantic Small Fruit Guide for Commercial Growers: <https://extension.psu.edu/the-mid-atlantic-berry-guide-for-commercial-growers>
- Mid-Atlantic Commercial Vegetable Production Recommendations: <https://njaes.rutgers.edu/pubs/publication.php?pid=e001> *or hardcopies are available at county extension offices for \$15*





NORTH CAROLINA  
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MEMBER LOGIN



FARM LOCATOR CONSUMERS **GROWERS** MEMBERSHIP ABOUT CONTACT

## Grower Information

Promotional Catalogue Items 2017

Promo Order Form 2017

Membership Form 2017



▶ Safety - Food Safety - Crisis Management

▼ Resources

<https://ncstrawberry.com/growers>