

Strawberry and Raspberry Season Extension on the Delmarva Peninsula



Naveen Kumar Dixit
 Associate Professor of Horticulture & Extension Specialist
 University of Maryland Eastern Shore
 Email: fnaveenkumar@umes.edu



Abstract

Historically, the Delmarva (Delaware-Maryland-Virginia) Peninsula was a major hub for strawberry and raspberry production. However, current commercial production is negligible on the Eastern Shore (Somerset-Wicomico-Worcester) of MD. Similar situations exist in Delaware and Virginia. The cultivation of June bearing (JB) strawberries using the traditional matted row system is the only source of farm income during the spring season and thereafter most of the produce is imported from distant states. Similarly, growers in these areas are heavily depended on floricanne fruiting type raspberries (FFTR) that too on small acreage. The cultivation of FFTR requires two year for fruit production and consume time and resources for pruning and disease management. In fact, cultivation of both the berries is negligible on the Eastern Shore with no information available on raspberry acreage in 2017 USDA Census of Agriculture. Most of the local growers have no idea about the existence of day neutral strawberries (DNS) and primocane-fruiting type raspberry (PFTR) varieties, which can extend the harvest season. This proposed extension outreach work will demonstrate sustainable approaches to extend the growing season using multiple JB and DNS under low and high tunnels and open bed regimes. Similarly, our sustainable approach to complement the existing FFTR cultivation system by PFTR under high tunnels regimes will accelerate the local berry production with more profit at farm. Our extensive extension plan (multiple hands-on training) will initiate the rejuvenation of strawberry and raspberry cultivation on the Eastern Shore of MD to benefit socially disadvantaged farmers, women farmers, small farmers, veteran farmers, and BIPOC (black indigenous and people of color) growers. The advisory board of this extension program is highly diverse, comprises extension agents, local growers, veteran farmers, BIPOC organizations, consumers, and faculty members to incorporate holistic education, and subsequently reaches to farmers from all the strata of the farming community.

Situation

History of Strawberry (*Fragaria ×ananassa*) Production in the Tri-County Area

April 3, 1920, The Chicago Packer.

Shipment of railroad car as follows

Fruitland (100)

Marion Station (200)

Pittsville (160)

Salisbury (160)

Princess Anne (100)

Crisfield Maryland Railroad Station 1919



Marion, in MD was regarded as a strawberry capital of the world

A glimpse of 1925 USDA-NASS Census of Agriculture showed the strawberries acreage in MD, DE, & VA

	1925	2012	%Decline
MD:	7000	220	97
DE:	2570	53	98
VA:	5798	290	95

Local Inclement Weather:

A: Excessive rainfall during the harvest of June Bearers (JB) and sowing of day neutral strawberries (DNS; Mar.-May)

B: Drought in association with high temperature during summer (July-Aug.)

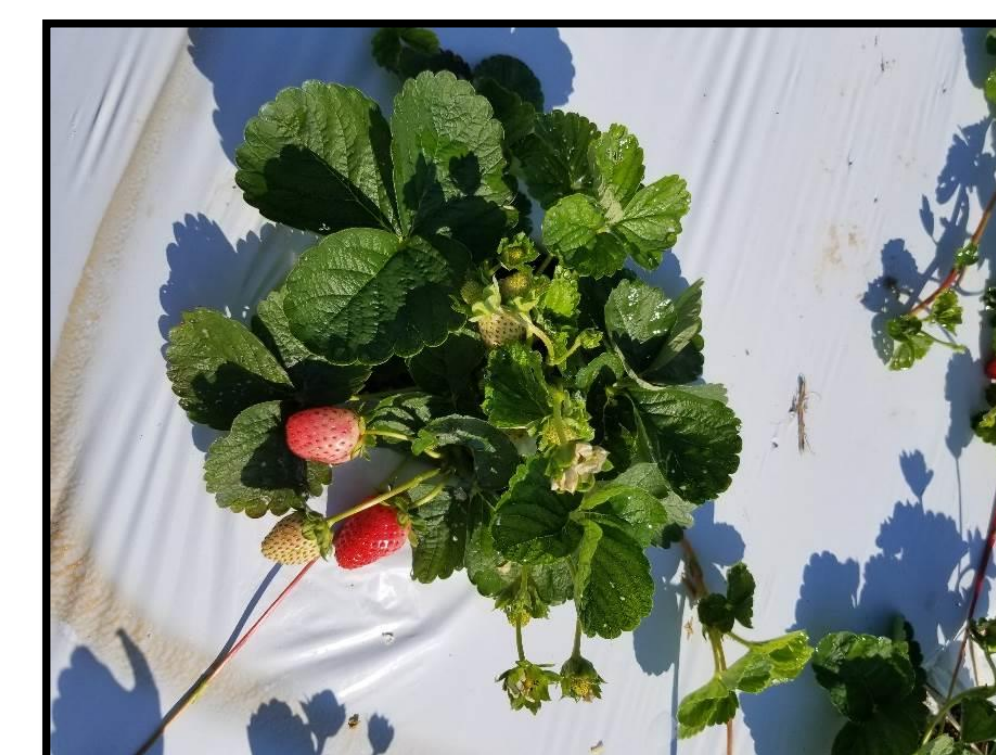
C: Excessive rainfall during DNS harvest (Sep.-Oct.).

Raspberries are also grown in the NE USA and Mid-Atlantics, but this production is not sufficient to fulfil the local demand. Raspberry production is negligible in the Tri-county area (Wicomico, Somerset, and Worcester) on the Eastern Shore of Maryland (USDA, NASS, 2017). There are only 4-small farms in Wicomico and Worcester County, which occupy a total area of less than 1 acre with raspberry cultivation (USDA, NASS, 2017).

Approaches

Cultivars: June Bearers and Day Neutral (Strawberry)/Primocane and Floricanne (Raspberry)

2019 Spring Harvest yields: JB	
Cultivar	Per Plant Yields Marketable yields (lbs) *
Yambu	1.74 a
AC Valley Sunset	1.65 a
Darselect	1.50 a
Flavorfest	1.38 ab
RubyJune	1.33 ab
Mayflower	1.26 b
Record	1.25 b
Chandler	1.16 bc
Jewel	1.13 bc
Camarosa	1.12 bc
Rutgers Scarlet	1.11 bc
Strawberry Festival	1.10 bc
Allstar	1.03 c
Galette	0.75 d
Malwina	0.32 e
Wye Research, 2022	* Similar letters within this column are not significantly different



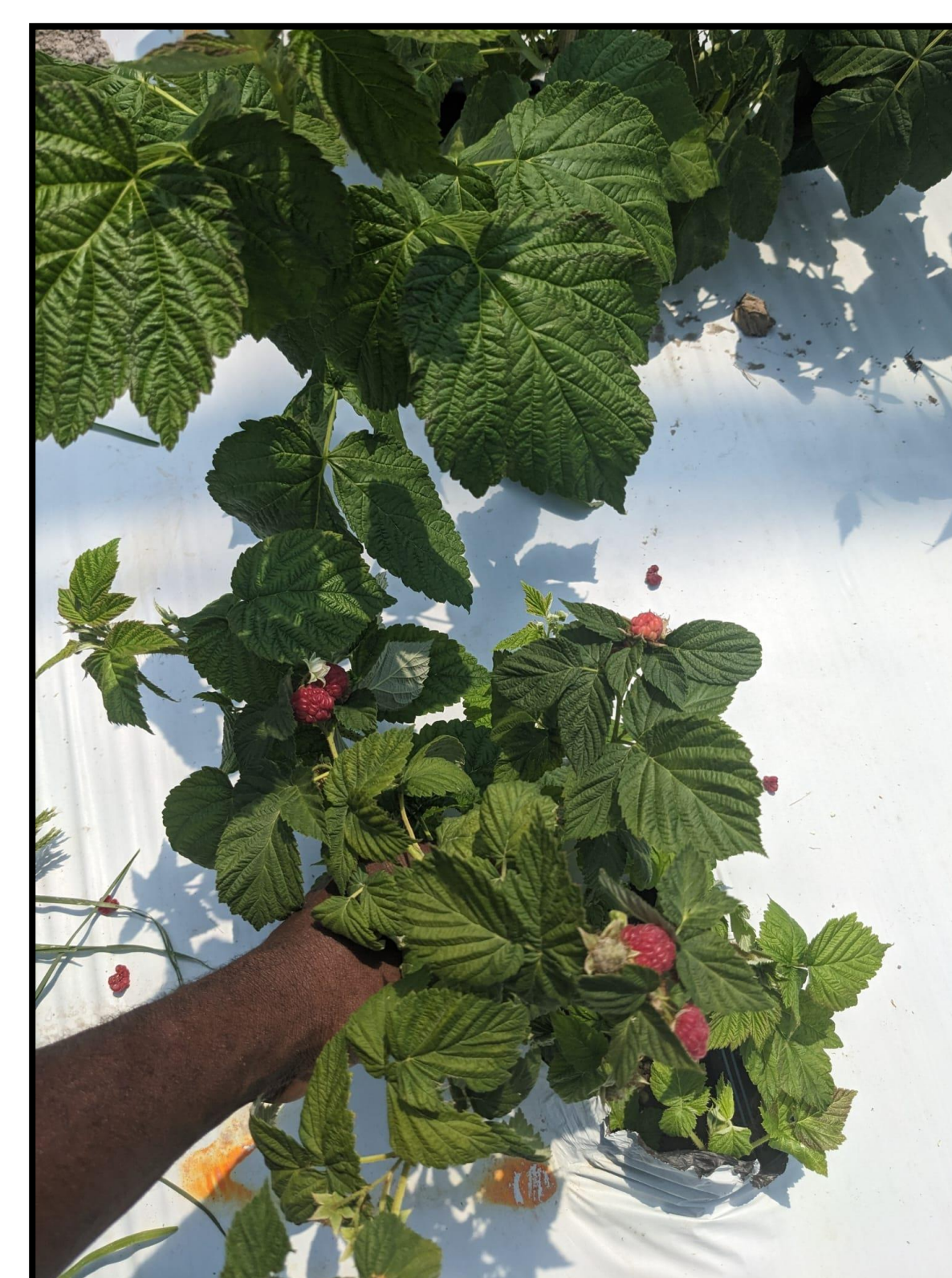
DNS

Portola
 Seascape
 Albion
 San Andreas
 Monterey
 Mara Des Bois

Primocane

Polana
 Polka
 Caroline
 Joan J
 Himbo Top
 Heritage

Protective Structures: Low and High Tunnels



Primocane Raspberry

Extension Outreach: NE SARE PDP Workshops (2023-2025)

- I: Understanding of DNS and PFTR phenology.
- II: Selection of JB, DNS, FFTR and PFTR varieties suitable for the Delmarva Peninsula.
- III: Raised bed preparation and use of raised bed machine.
- IV: Construction of low tunnels and microenvironment within the high tunnels.
- IV: Trellis design for raspberry cultivation within high tunnels and open bed regimes.
- V: Fertigation, irrigation, and pest management.
- VI: Harvesting stages and marketing approaches.
- VII: Popular recipes and value added products from strawberry and raspberry fruits.
- VIII: Developing enterprise budget and record keeping.
- IX: Information will be provided on USDA/NRCS grants for HT purchase. Local sources of construction material for HT/LT will also provided to growers.