

The Changing Northern Fresh Market Peach Picture

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New varieties are the lifeblood of a thriving peach industry, especially in those states with a sizeable, wholesale fresh or processing side. In Michigan, we have seen over the last 15 years the rapid replacement of varieties such as 'Cresthaven', 'Glohaven', and 'Redskin' by newer varieties with greater appeal in the local and national fresh markets. 'Red Haven', still the largest acreage variety in Michigan, is losing dominance in the Michigan peach industry. With market demand switching from 2 1/4" to 2 1/2" diameter peaches with over 60% red skin, and tighter profit margins, Michigan growers are always looking for better alternatives.

In looking for better varieties, fruit bud hardiness is always a major concern in Michigan and other northern states. Over the last 30 years, there have been five years where January or February temperatures reached -16° F or lower in the peach growing region along the west side of Michigan. Such temperatures will kill most peach fruit buds. Cold-resistant varieties may have significant fruit bud survival in the -10°F to -12°F temperature range in mid-winter. We consider the Michigan climate to be somewhat harsher than Southern New Jersey where moderately cold-tender varieties such as 'Sentry', 'Loring', 'Bellaire', and 'John Boy' produce crops more reliably.

Good varietal resistance to bacterial spot, caused by *Xanthomonas campestris* pv. *pruni* is important for Michigan conditions, especially in those orchards with sandy soils, frequent rainfall, and considerable exposure to wind. Fruit marked by bacterial spot infections are more prone to fruit diseases such as brown rot and Rhizopus rot. Varietal resistance to bacterial spot (Table 1) is particularly important on disease-prone sites. Varieties with poorer resistance may escape the disease for the early years of an orchard if planted in well-protected, isolated sites with no older trees harboring the pathogen.

White Peach and Nectarine Varieties

White peach and nectarine variety options for northern wet climates depend heavily on whether or not bacterial spot can be kept under control. Many of the newer white peach varieties such as 'Snow King', 'Sugar Giant', and 'Yukon King' and nectarines such as the Arctic series are popular in California and drier climates (Table 2) but have significant bacterial spot susceptibilities that make them a challenge to grow in Michigan. 'Blushingstar' has been the best new white peach for our area in recent years. 'Southern Pearl', from Byron, Georgia has been productive, relatively firm, and has medium eating quality. 'China Pearl' from North Carolina is very productive but medium firm. 'Klondike' is probably the best of the newer California white peaches from the standpoint of bacterial spot resistance in our early tests. 'Saturn' is a white doughnut peach that is productive, sweet, and is becoming popular for direct market sales. There is considerable room for hardy, new, firm, white peach

New peach varieties, which are larger and redder than Red Haven, are rapidly gaining favor in northern peach production areas. White peaches are also popular. The best of these new varieties are assessed for winter hardiness, production and tolerance to diseases in this article.

varieties with better bacterial spot resistance.

Yellow Melting Flesh Peach Varieties

Many new yellow melting flesh peach varieties have been introduced over the past 10 years as possible substitutes to those currently being grown (Table 3). The newest varieties have not been tested long enough to determine their suitability to the wide range of soil types and growing seasons of the Great Lakes region.

For the early July window, 'PF1' has been seen as a less split-pit prone substitute for 'Harbinger'. 'Queencrest' is a very new selection that looks promising at this time. For mid-July, 'PF5B' has much more red skin than 'Harrow Diamond' and appears to have a stronger

TABLE 1

Bacterial spot rating on leaves of yellow melting flesh type peaches
(Four year average at the SW Michigan Research and Extension Center, Benton Harbor, MI). W. Shane, Michigan State University.

Variety	Bacterial spot rating	Variety	Bacterial spot rating
'Allstar'	8.5	'PF1'	8.9
'Blazing Star'	9.0	'PF12A'	8.9
'Bounty'	7.7	'PF15A'	7.7
'Canadian Harmony'	8.3	'PF17'	8.8
'Coral Star'	8.3	'PF20-007'	8.4
'Cresthaven'	8.1	'PF23'	8.6
'Glowing Star'	8.6	'PF24-007'	9.0
'Harbinger'	8.1	'PF27A'	9.0
'Harrow Beauty'	8.9	'Red Star'	8.2
'Harrow Dawn'	8.0	'Redhaven'	8.0
'Harrow Diamond'	9.0	'Rising Star'	8.1
'Harrow Fair'	8.6	'Starfire'	9.0
'John Boy'	9.0	'Suncrest'	7.1
'Laurel'	6.5		

Bacterial spot rating scale range (3=severe to 9=none).

TABLE 2

White peach and nectarine varieties for the Great Lakes growing region. W. Shane, Michigan State University – 2004

Variety name	Alias	Harvest days before/ after 'Red Haven'	N =nectarine P = peach	Comments
'Spring Snow'		-20	P	Small to medium, good size for season with light load, round, firm, dark red skin, attractive, hangs well, sweet subacid, few split pits, light cropper, somewhat susceptible to bacterial spot
'Sugar May'		-10	P	White-fleshed peach, early evaluation, lot of red in flesh, medium-sized fruit, significant bacterial spot, light crop 2001, dark red blush color, attractive, very firm, and texture, freestone when ripe, usually nice flavor
'Saturn'		-5	P	White flesh 'Peento' (flat/doughnut-shaped fruit), freestone, sweet mild flavor, 40 to 70% pinkish skin, prone to brown rot, appears to be productive, 2 1/2" or more diameter, tears at petiole when ripe, softens quickly, small pit, some bacterial spot noted on fruit
'Southern Pearl'	BY84P1807	2	P	White peach, relatively firm, generally okay bacterial spot resistance, acidic with moderate sweetness, good flavor, attractive 60% to 70% red skin on white, slight green background, red in flesh, productive, decent size, split pits some years if light crop
'Snow Bride'		5	P	80% red/pink blush, round/oval, white flesh, freestone, significant bacterial spot on leaves and fruit, low fuzz, medium size, low acid, light crop 2000 & 2004, nice flavor
'Klondike'		6	P	Large to very large, 90% to 100% pink purplish red, round, attractive, very firm flesh, semi-freestone, sweet and subacid, productivity has been so-so, ripen 1 week after 'Red Haven', some bacterial spot noted
'Crystal Red'		7	N	Early evaluation, 100% dark red skin, white flesh, round/oval, good size potential, some bacterial spot on leaves and fruit, range of flavors
'Carolina Belle'		8	P	White flesh, freestone, red skin on white slight green background with little fuzz, fairly resistant to bacterial spot, attractive, large size fruit, maybe not large cropper, flavorful generally most years, too soft for wholesale shipping
'White Lady'		8	P	White-fleshed peach, medium-sized, rounded fruit, firm flesh, bacterial spot susceptible, 90%+ dark skin, many pickings as it ripens over long period, aromatic fruit on tree some years, split pits significant some years
Roseprincess	BY80N384	10	N	White-fleshed nectarine, candy red skin on pink/white background, medium to large, essentially freestone, some white peach aroma, prone to surface marks, flavor variable from year to year, high acidity, juicy
'Arctic Sweet'		10	N	Early evaluation, white nectarine, showy large bloom, round/oblong, bright cherry red on bright white background, attractive, sweet, freestone, 2.5", significant bacterial spot on leaves and fruit
'Arctic Jay'		10	N	Early evaluation, white flesh, severe bacterial spot on fruit, solid dark red skin, small fruit
'Blushingstar'		12	P	White-fleshed, freestone, 80-90% red skin on white background, generally good resistance to bacterial spot, moderately sweet with significant acidity, somewhat tender skin, medium to large, productive, red around pit, hangs well for white peach.
'Arctic Rose'		12	N	White flesh nectarine, bright red skin with pink highlights, significant bacterial spot problems
'Crimson Snow'	Bradcrim	12	N	White-fleshed nectarine, freestone, bright 90% ruby red skin, attractive, round, some white speckle/rough texture, significant bacterial spot seen on leaves, mild, sweet, relatively firm flesh, melting, juicy, good taste, medium size
'Red Rose'		15	P	40-60% red skin on green/yellow background, not really attractive, blush area soften earlier, white/slight-green flesh, uneven halves, okay flavor, medium-sized fruit, vigorous tree
'Summer Pearl'	NJ 252	22	P	White-fleshed peach, medium to large fruit, 40-70% dull red skin on white/light-green background, leaves and fruit are moderately susceptible to bacterial spot
'Sugar Giant'		25	P	White-fleshed peach, early evaluation, okay in Washington, very large, round, subacid sweet, medium sweetness, significant bacterial spot on leaves and fruit

TABLE 2, continued.

White peach and nectarine varieties for the Great Lakes growing region. W. Shane, Michigan State University – 2004

Variety name	Alias	Harvest days before/ after 'Red Haven'	N =nectarine P = peach	Comments
'China Pearl'		28	P	Round/oblate, medium to decent size, somewhat fuzzy, attractive, ripens early on blush, sweet, moderate acidity, 50% red/pink on white/slight-green back, good bacterial spot resistance, softens quickly, productive
'Lady Nancy'		31	P	White peach, ripening with 'Encore', good firmness, very firm, large, round/oval, with 80% red over yellow/white ground, bad bacterial spot, yellow suture line in flesh, poor winter fruit bud hardness
'Snow Giant'		35	P	Very large fruit, 60 to 70% pinkish purple-red skinned over cream green, very firm, significant, bacterial spot on leaves in 2002 and 2003
'Snow King'		35	P	Medium-large peach, very firm, partially dark pinkish-red over cream green, flesh is crunchy, subacid, significant susceptibility to bacterial spot, initial evaluation indicates fruit bud hardness may be poor
'Yukon King'		35	P	Early evaluation, bad bacterial spot on leaves and fruit in 2004

TABLE 3

Yellow melting flesh peach variety harvest windows for Michigan – W. Shane – 2004.

*** Note: These are not necessarily recommended varieties. The purpose is to indicate best-guess harvest season.**

Ripening order (Southern MI)*	Traditional	Newer	Very New
Early July	'Harbinger' -33	'PF1' -30	'Queencrest' -34
Mid July	'Harrow Diamond' -20'	'PF5B' -25'	'PF5D Big' -25'
Late July	'Garnet Beauty' -6 'Early Red Haven' -6	'Rising Star' -8' Glenglo' -7 'PF7' -6 'Summer Serenade' -6	'Early Star' -12 'Bright Star' -10' PF-7A Freestone' -9 'PF-8A' -8 'PF9A-007' -7
Late July to Early August	'Red Haven' +0 'Vivid' +2 'PF12A' +3 John Boy' +3 'Bellaire' +3		'PF11' +0
Early August		'Starfire' +5 'Blazingstar' +5 PF12B' +5 PF15A' +5 'Redstar' +3	'PF Lucky 13' +8
Mid August	'Glohaven' +10 'Loring' +12 'Suncrest' +12 'PF17' +12 'Canadian Harmony' +10'	'Coralstar' +12'	
Late August to Early September	'Contender' +18 'PF23' +20 'Cresthaven' +24 'Redskin' +25	'Allstar' +18 'PF20-007' +20 'PF24-007' +20 'Glowingstar' +24 'PF25' +25	'PF Lucky 21' +15 'PF22-007' +17 'Beaumont' +20 'PF Lucky 24B' +24 'PF-24C' +24'
Early to mid September	'Harcrest' +28 'Fayette' +28 'Encore' +31'	'PF27A' +30'	'PF28-007' +33 'PF30-007' +31 'PF35-007' +33 'Autumnstar' +33'

* Note: Estimated harvest dates for typical year. Cooler year will delay harvest dates. Sites in more northern areas are generally later.

tree and equal or greater productivity. Very little is known about 'PF5D Big'.

For the late July window, 'Garnet Beauty' and its slightly redder-coloring counterpart 'Summer Serenade' are productive and have good quality flesh but still insufficient skin color. 'Rising Star' is medium-red colored with a pretty background and good flavor, but it softens quicker than desired at times. 'Glenglo' has good reports from Pennsylvania, has looked good on the few trial trees on the Michigan State University research farm, but we have no other experience with it in Michigan. 'PF7' has been not been tested much in Michigan, and there are three brand new Flamin' Fury selections ('PF7A', 'PF8A', and 'PF9A-007') aimed at approximately the same window. So far, there are no clear winners in this time frame.

For the late July to early August window, there are several traditional types, such as 'Red Haven', 'Vivid', 'PF12A', 'John Boy' and 'Bellaire' and one very new selection 'PF11'. 'Red Haven' is a reliable producer and has excellent flavor but suffers from split pits, excessive bud numbers and small fruit size at times. 'Vivid' also has nice flavor and better color and generally less split pits than 'Red Haven', but it softens quickly, especially at the tip. 'Bellaire' and sometimes 'John Boy' appear to be a bit more prone to light crops, but have more red skin coloration, than 'Red Haven'. 'PF12A' has nice quality flesh and good red skin coloration, but it can be a little small with moderate cropping some years.

For early August, both the Stellar and the Flamin' Fury series have several

relatively new varieties. 'Starfire' seems to be emerging as the favorite of the three Stellar varieties and 'PF-15A' is the most widely planted 'Flamer' in that season, although 'PF Lucky 13' looks really nice in early tests.

For mid August, 'PF17' is probably the leader, based on total fruit quality, productivity, and better skin color than the older 'Glohaven', 'Loring', 'Suncrest', and 'Canadian Harmony'. 'Coralstar' has very nice size and flavor but medium coloring.

Late August to early September has many options in the old 'Cresthaven' and 'Redskin' windows. 'Glowingstar' and 'PF25' are attractive, hardy, and nice quality and are my choices over 'Allstar',

'PF24-007', and 'PF20-007' for various reasons. 'PF23' is also very attractive with great shelf life but not as large as some of the other options. There are four very new options in this window, 'PF Lucky 21', 'PF22-007', 'PF Lucky 24B', and 'PF-24C' plus a Michigan State University release 'Beaumont' that are being tested by growers, nurseries, and universities.

Finally, in the early to mid-September window, 'PF27A' is an attractive alternative to 'Fayette' and 'Encore', but seems to struggle a bit with size at times. Three new varieties 'PF30-007', 'PF35-007', and 'Autumnstar' are being tested in the field as possible replacements with better color and nice fruit size.



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