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THE OHIO STATE UNIVERSITY Newsletter Extension

Fruit ICM News

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August 21: Horticulture Field Night, 6:00 p.m. until dark. Southern State Community College (main campus), 200 Hobart Dr., U.S. Rte. 62 north of Hillsboro, Ohio. Contact Brad Bergefurd at 1-800-860-7232 or Bergefurd.1@osu.edu.

February 19 to March 4, 2001: New Zealand Tour. Dr. Peter Hirst, extension fruit specialist in Indiana, will be leading a tour to New Zealand from Feb. 19 to March 4, 2001. Cost of the tour is $3000. More information regarding the tour can be obtained by calling Peter Hirst at 765-494-1323 or by e-mailing him at hirst@hort.purdue.edu.

Focus on Apple Varieties: "Redfree"

Source: Dr. Diane Miller, Associate Professor, Horticulture & Crop Science, OSU

Redfree is a scab-resistant, cedar apple rust-resistant apple out of the Purdue-Rutgers-Illinois (PRI) breeding program, originally designated as Coop 13. It is also noted to have good resistance to fireblight, mildew, and European red mites; however, in the heavy fireblight pressure at Wooster this year we saw considerable fireblight in this variety (24% infection).

Redfree is harvested in early August. My misconception about Redfree was that it was an "early-

Jonathan" type (maybe because of its shape and the shade of the red color) but Jonathan is not directly in its parentage. It does have Raritan as a parent which introduces some McIntosh-type traits. The flavor is slightly sweet and pleasant. Surely it is a flavor that would be acceptable to almost everyone, but perhaps not highly rated as distinctive by anyone. Fresh slices do brown, but not immediately upon slicing. Texture is crisp at harvest with "commercial apple" skin and flesh characteristics. While Redfree is juicy and crisp, the skin is slightly tough. It is not a long keeping apple, which limits its commercial potential. Redfree has been reported to color well, being 90% red colored. Our Wooster Redfree this year have been 50- 70% red color, with the undercolor being a greenish-cream.

Redfree has not been a high-yielding variety in our planting, consequently individual fruit size has been "big-Jonathan" sized. The trees are semi-vigorous with wide spreading crotch angles, moderately spurry. Trees look somewhat "leggy" with some bare-wood. We will see how these trees come back next season from year 2000 fireblight.

In my opinion, Redfree was a wonderful improvement in fruit quality of disease-resistant apples when no one was paying any attention to disease-resistant apples! Now that the quality of new early-season apples has been improving, Redfree is still a good apple, but not a great apple. The fruit quality of disease-resistant apples is also improving, but Redfree may have a special niche because of its early season. Definitely Redfree should be in backyard and "organic" growers variety packages. It also has a place as an early commercial-quality red apple for roadside and retail markets.

Focus on Apple Varieties: Sansa

Source: Dr. Diane Miller, Associate Professor, Horticulture & Crop Science, OSU

Sansa is such a great early August apple that the first question to be asked is: "Why have an apple breeding program? This apple can't be beat." However, as excited as I am about this apple, there are some questions about the tree. First, though, the history of the variety. Sansa is from the Morioka Fruit Research Station in Japan, in cooperation with Don McKenzie, DSIR Research Station, New Zealand. It is a cross of Gala x Akane (Amori, Japan; Jonathan x Worcester Permain). The cross was made in New Zealand and the variety selected at Morioka Station, Japan; introduced in 1986; received US Plant Patent 1989.

Now, the questions about the tree: Apparently the wood that was used to propagate Sansa for the NE-183 planting was virused. This has resulted in odd reports on Sansa's performance from the many sites around the country that have this NE-183 planting. Sansa was put through the IR-2 "virus cleaning up" program before being made available in this country, but somehow the wood used to propagate these trees was virused (as you would expect, there is considerable confusion on the chain of events regarding this). The virused trees are chlorotic, small and weak. Apparently the viruses present are tomato ringspot and latents. Whether all trees in all sites of the planting are virused is undetermined but the NE-183 committee cannot evaluate the tree growth potential, yield potential, etc. due to this problem. At Wooster, Sansa trees are small (bigger than Honeycrisp, however!) and have yielded towards the bottom of the 21 varieties in the planting (slightly better than Honeycrisp, however!). We are assuming our trees are virused since Sansa trees in so many other NE-183 plantings are virused. How much more vigorous and high yielding non-virused trees are, will have to be determined in the future. Dr. Duane Greene at U. Mass has the variety, virus-free, in another planting and thinks very highly of it.

A big concern we in the Midwest have about this tree is its fireblight susceptibility. The trees showed

25% fireblight in Wooster during the 2000 season. The only varieties showing more fireblight damage were Ginger Gold (54%), Suncrisp (45%) and Golden Delicious on M9 (40%; off the subject but interesting was Golden Delicious on Mark: 7%).

Sansa tastes Gala-like. It has excellent quality (flavor, texture, crispness, aroma). The fruit is medium sized (200-250 g), conical-shaped. The skin is bright red on yellow-green ground; eye-catching attractive. We saw considerable russet this year around the basin. Customers are going to like the taste: good sugar/acid balance. The flesh is slow browning. Sansa keeps well in storage through October (although there is no reason to keep them this long). Sansa ripens at least two weeks before Gala. It is an excellent candidate variety for its harvest window.

Last year I thought Sansa just was fantastic. This year, with the fireblight damage to the trees, our Sansa apples are smaller, much more woody-textured, and have too much variability in a crate to be acceptable.

Let's go back to the "Why have an apple breeding program? This apple can't be beat." This variety received high approval from all regions in the NE-183 straw poll. There are certainly questions about whether the Midwest will be able to grow this variety. Are we going to risk growing a variety that is this susceptible to fireblight? Other areas are going to grow Sansa. Maybe this variety ripens too early to be a threat from "grocery store competition" from other regions, but nevertheless it illustrates the problem we are facing. Apple quality is improving in these new varieties ripening in all seasons. It will be hard to sell consumers Jersey Mac after they've tasted Sansa. To remain competitive we've got to have excellent quality new varieties that we can grow. Breeding programs in other apple growing regions are not selecting terrific new varieties on our behalf!

Focus on Apple Varieties: Sunrise

Source: Dr. Diane Miller, Associate Professor, Horticulture & Crop Science, OSU

Sunrise is an early-August ripening apple from the breeding program of the Agriculture Canada Research Station, Summerland, British Columbia, aimed at high fruit quality (not focusing on disease resistance). It was introduced in 1991 by David Lane and Richard MacDonald. Its parentage includes McIntosh and Golden Delicious. Sunrise does have some tolerance to powdery mildew. It exhibited around 8% infection with fireblight in Wooster in 2000.

Sunrise is a part orange/red, part green- colored apple. It is a medium-sized, conic-shaped apple with distinct ribbing on the stem end. The flesh is white with yellow streaks through it. The flesh browns fairly quickly after slicing. The texture is crisp and this is a juicy apple. The flavor is mild and sweet, but perhaps not distinct enough to stand out. This apple has the crispness to "make it" and is a great apple if eaten at the right time. Unfortunately, it doesn't remain "great" long enough, as it has a short shelf life and it is recommended that the fruit be kept cold until eaten.

Yield of Sunrise from the NE-183 planting has been high, equal to Suncrisp and second only to Golden Delicious. In the straw poll vote of NE-183 participants, this apple was equally divided between those "for" and "opposed". In a farm market or retail marketing situation where customers can taste and appreciate the crisp texture and mild flavor, Sunrise probably has a place as an early season, crisp apple. This is especially true if the varieties you are offering now are soft-textured summer apples like Jersey Mac or anything that starts with "earli". Your customers will think this is an incredible apple if you offer

it to them with their other choice being Fenton (Beacon)! On a more serious note, I doubt if grocery stores would keep Sunrise cold enough, and move it quickly enough to make it available to consumers at high quality.

Additional Summer Disease Control

Mike Ellis pointed out that Sovran and Flint are new strobilurins which are quite effective and needed to be included in last week's article about controlling fly speck and sooty blotch. Of these two fungicides, note that Flint has the shorter pre-harvest interval.

Effectiveness of selected fungicides against apple diseases

Fungicide	Pre-harvest interval	Scab	Powdery mildew	Black rot White rot	Bitter rot	Sooty blotch	Flyspeck
Benlate*	14 days	Excellent	Excellent	Good	Poor	Excellent	Good
Captan	0 days	Excellent	None	Good	Excellent	Fair-Good	Fair-Good
Flint	14 days	Excellent	Good	None	None	Excellent	Excellent
Sovran	30 days	Excellent	Good	None	None	Excellent	Excellent
Thiram	0 days	Fair	None	Fair	Poor	Fair	Fair
Topsin M*	0 days	Excellent	Excellent	Good	Poor	Excellent	Good
Ziram	14 days	Fair	None	Poor	Excellent	Fair-Good	Fair-Good

Fruit Observations

Insect Key

AM: Apple maggot
CM: Codling moth
DWB: Dogwood borer
LPTB: Lesser peachtree borer
OBLR: Oblique banded leafroller
OFM: Oriental fruit moth
PC: Plum curculio
PTB: Peachtree borer
RBLR: Redbanded leafroller
SJS: San Jose scale
STLM: Spotted tentiform leafminer
TABM: Tufted apple budmoth
VLR: Variegated leafroller

Site: Waterman Lab, Columbus (8/10-8/16)
Source: Dr. Celeste Welty, OSU Extension Entomologist
Traps used: STLM=wing traps, SJS=Pherocom-V, Others=Multipher-1® traps

Apple	Peach
RBLR: 37 (up from 27)	OFM: 9 (down from 31)
STLM: 124 (up from 82)	LPTB: 10.5 (up from 2.0)
DWB: 1.5 (up from 1.0)	PTB: 18.0 (up from 8.5)
SJS: 0 (unchanged)	
CM: 19.3 (up from 10.7)	
OBLR: 0 (unchanged)	
TABM: 0 (unchanged)	
VLR: 1 (down from 7)	
AM: 1.3 (down from 1.7)	

Site: East District; Erie & Lorain Counties (8/9-8/15)
Source: Jim Mutchler, IPM Scout
Traps Used: STLM=wing traps, SJS=Pherocon-V, Others=Multipher® traps

Apple	Peach
RBLR: 12.7 (up from 4.9)	OFM: 12.0 (up from 3.3)
CM: 12.1 (up from 10.2)	RBLR: 19.3 (up from 9.0)
SJS: 32.3 (down from 75)	LPTB: 25.3 (up from 15.7)
AM: 3.3 (up from 1.4)	PTB: 7.3 (down from 12.3)

Other pests: green apple aphid, Japanese beetle, scab, OBLR damage, potato leafhopper

Beneficials at work: lacewing eggs, larvae, & adults, orange maggots, *Stethorus punctum,* and other lady beetles

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Site: West District; Huron, Ottawa, & Sandusky (8/9-8/15)
Source: Gene Horner, IPM Scout
Traps Used: STLM=wing traps, SJS=Pherocon-V, Others=Multipher® traps

Apple	Peach
RBLR: 15.2 (up from 18.8)	OFM: 2.3 (up from 3.0)
SJS: 1.0 (down from 4.2)	RBLR: 32.3 (up from 7.0)
CM: 3.9 (up from 1.7)	LPTB: 43.3 (up from 28.3)
AM: 1.7 (up from 0.7)	PTB: 0.5 (down from 3.0)
PC: 0 (unchanged)	
OBLR: 2.3 (up from 2.0)	

Other pests: potato leafhopper, Japanese beetle, plum curculio and bird damage

Beneficials at work: Green lacewing eggs & adults, banded thrips, lady beetles, brown lacewing adults, predator mites, *Stethorus punctum*, black hunter thrips

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Site: Wayne County (8/10-8/16)
Source: Ron Becker, Extension Program Assistant
Traps used: STLM=Wing traps, PC=Circle trunk trap, Others=Multipher® traps

	Apple			
	North	South	East	West
RBLR:	4.3	28.5	34	8.3
STLM:	1267	50	30	268
CM:	11.3	9.0	8	32.2

	Peach		
	North	South	West
OFM:	0	24	44
LPTB:	0	2	2
PTB:	0	1	1

All blocks have been treated for European red mite, mostly with Pyramite. Insect activity includes leafminer and white apple leafhopper damage to leaves, and codling moth and Japanese beetle damage to fruit. More scab is starting to develop on younger leaves. Aphids are also increasing in numbers.

Northern Ohio Sooty Blotch - SkyBit Product

SkyBit based observations: August 1-17; possible infection and damage
Based on Forecasts: August 18-26; possible infection & damage

Degree Day Accumulations for Selected Ohio Sites January 1, 2000 to date indicated

	Actual DD Accumulations August 15, 2000		**Forecasted Degree Day Accumulations August 22, 2000**			
Location	**Base 43° F**	**Base 50° F**	**Base 43° F**	**Normal**	**Base 50° F**	**Normal**
Akron - Canton	2895	1896	3087	3145	2046	2165

Cincinnati	3497	2413	3720	3920	2597	2814
Cleveland	2904	1920	3097	3091	2071	2125
Columbus	3453	2364	3658	3460	2528	2430
Dayton	3375	2310	3583	3537	2478	2506
Mansfield	2908	1918	3099	3118	2068	2145
Norwalk	2982	1993	3171	3071	2142	2120
Toledo	3045	2034	3234	3067	2182	2119
Wooster	3025	2006	3207	2978	2147	2013
Youngstown	2799	1803	2980	2915	1943	1966

Phenology

	Range of Degree Day Accumulations	
Coming Events	**Base 43 F**	**Base 50 F**
Oriental fruit moth 3rd flight peak	2389-3267	1712-2326
Redbanded leafroller 3rd flight begins	2389-3113	1722-2209
Spotted tentiform leafminer 3rd flight peak	2415-3142	1728-2231
San Jose scale 2nd flight subsides	2494-3257	1662-2302
Obliquebanded leafroller 2nd flight peak	2634-3267	1789-2231
Apple maggot flight subsides	2764-3656	1904-2573
Lesser peachtree borer flight subsiding	2782-3474	1796-2513
Codling moth 2nd flight subsides	2782-3693	1796-2635

Thanks to Scaffolds Fruit Journal (Art Agnello)

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adhering to those directions.

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