



Kentucky Fruit Facts

Research & Education Center

P.O. Box 469, Princeton, KY 42445

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Prepared by John Strang, Extension Horticulturist; Ed Fackler, Rocky Meadow Orchard & Nursery; John Hartman, Bill Nesmith, and Paul Vincelli, Extension Plant Pathologist; Tom Priddy, Ag. Meteorologist; John Strang, Editor, Marilyn Hooks and Elizabeth Griffin, Secretaries

Fruit Facts can be found on the web at: <http://www.uky.edu/Agriculture/Horticulture/extension.htm>

Long Range Forecast

The long range weather forecast for Kentucky calls for a wet winter with La Nina winding up in June. After this forecasters are somewhat unsure of what will happen. El Nino could return with a replay of the fluctuating wet weather of 97 and 98. (Priddy)

Meetings

Jan 23-24 - Tennessee Vegetable and Fruit Growers Association meeting. Read House Hotel, Chattanooga, TN. Contact David Lockwood 423/974-7208.

Jan. 24-26 - Indiana Horticultural Congress, Adam Mark Hotel, Indianapolis, IN. Contact Jim Simon 765/494-1328.

Jan. 28-29 - Tennessee Viticultural and Oenological Society Annual Meeting, Meadowview Conference Resort & Convention Center, 1901 Meadowview Parkwah, Kingsport, TN 37660. Contact Jim Thomas 423/323-1660.

Feb. 6-8 - 15th Annual Midwest Regional Grape and Wine Conference. Marriot's Tan-Tar-A Resort, Osage Beach, Missouri. Contact Jim Anderson 800/392-WINE.

Feb.7-12 - Ohio Fruit & Vegetable Congress and North American Farmers Direct Marketing Conference, Cincinnati Convention Center,

Cincinnati, OH. A pre conference tour will begin on Monday Feb. 7, which will include a number of successful and unique farm markets in Ohio, Kentucky and Indiana. Some of the Ohio operations that are scheduled for the tour include Robert Rothschild Berry Farm, Fulton's Farm market, Young's Jersey Dairy, Jungle Jim's, Freshwater Farms, Rhoads Farm market, Caprine Dairy and Big Tree Plantation. The tour will conclude Feb. 9. A tasting event will be held on the evening of Feb. 10. Three days of educational sessions will be held from Thursday Feb 10 to Saturday Feb 12 by the OFVGA and the NAFDMA. More than 40 sessions will be conducted on market basics, value added, management, technology, entertainment farms, garden center/greenhouses, farmers' markets and much more. Contact Sharon Patterson 614/249-2200 for program and registration information.

Feb. 12 - Kentucky Herb Association Meeting, Franklin County Extension Office, Frankfort, KY Contact Mary Peddie 606/759-7815.

Feb. 25 - Northern Piedmont Specialty Crops School, Ramada Inn, Jct. of I-85 and NC 96, Oxford, NC. School will cover asparagus, pumpkin and green edible soybean production. Registration \$25. Contact Carl Cantaluppi 919/603-1350.

Mar. 16 - Commercial Apple IPM Meeting, Robert

Rudd's Orchard, East Bernstadt (Laurel county)
Meeting specifics will be in the February Fruit
Facts.

Jupiter and Neptune Seedless Grapes Released from the Arkansas Breeding Program

Jupiter is fifth in the series of seedless grapes released from the University of Arkansas. Fruit is reddish-blue at early maturity and becomes fully blue when completely ripe. Berries are oval to slightly oblong in shape and berry weight averages 5.5 grams, which is larger than Venus, Mars and Reliance. The fruit are non-slipskin and semi-crisp in texture. Occasionally small soft seed traces are found, but these are usually not considered noticeable. Jupiter has a mild muscat flavor which has been consistently rated only slightly below that of Reliance. Soluble solids have averaged 19.8% in Arkansas. Skin cracking has not been observed on Jupiter in Arkansas and only minor cracking has been observed in Indiana in seasons where cracking has been severe on susceptible varieties.

Clusters are conical and may have a shoulder and size has been similar to Venus, but smaller than Reliance. Yields have been equal to or exceeded those of Venus and Mars. Indiana observations suggest that overcropping can occur if cluster thinning is not done.

It is thought that the aromatic muscat volatiles and early ripening make Jupiter more attractive to feeding by the green June beetle and other mammalian predators.

This variety has moderate resistance to black rot, powdery mildew and anthracnose. Slight infections of powdery mildew have been observed in Arkansas under a commercial spray program.

Jupiter is considered to be moderately hardy in Indiana. It is less hardy than Reliance and Mars and more hardy than Einset Seedless, Canadice, Himrod, Marquis, Remaily Seedless, Saturn, Vanessa Seedless, and Venus.

Jupiter looks like a very promising variety for Kentucky growers and should be considered for trial.

Neptune is sixth in the series of seedless table grapes released from Arkansas in 1999. This variety ripens midseason, has a yellow-green skin color and the berries are slightly ovate in shape. Berries average 2.5 grams and are slightly larger than berries of Reliance and smaller than those of Venus. This is a non-slip

skin variety and soft seed traces are only rarely found. The flavor is fruity, pleasant and not foxy. Fruit cracking has not been observed in Arkansas. Cluster weights have been larger than Reliance and Venus.

This variety shows moderate resistance to black rot and anthracnose. It appears to be moderately susceptible to powdery and downy mildew, but these diseases have not presented a problem with a good spray program.

Arkansas tests indicate that the overall hardiness of Neptune is similar to that of Venus. This variety has not been tested in Indiana. We suspect that hardiness could be a problem with this variety at least in the central and eastern parts of the state where Venus has not done well. (Strang)

Disposal of Banned Pesticides

As the years go by, it's not hard to accumulate old pesticides on the farm. Some lose their activity over time and some are banned. Those that have been banned present a particular problem in that they can no longer be used and can't be disposed of on the farm.

In 1994 the Kentucky General Assembly created the Kentucky Department of Agriculture's Farm Chemical Collection Program. This program is funded by revenue generated from pesticide registration fees that are paid by chemical manufacturers and distributors in order to sell their products in Kentucky. Since the inception of this program over 190,000 pounds of chemical waste from almost 500 farms have been disposed of.

At this point there are four field staff who cover the eastern and western Kentucky areas. Two storage facilities are used for the short-term storage of farm chemicals until an EPA-approved private contractor can pick up and dispose of the chemicals.

This program is open to all Kentucky farmers and is free of charge. To dispose of banned pesticides call the pesticide collection hotline at 800/205-6543.

New Publications

ID-92 Commercial Tree Fruit Spray Guide 2000
ID-94 Kentucky Commercial Small Fruit and Grape
Spray Guide 2000
PR-423 Fruit and Vegetable Crops Research Report
1999 This research report is also available on the web
at: <http://www.ca.uky.edu/agc/pubs/pr/pr423/pr423.pdf>

These publications have recently been printed and

will be available in a month or so through local county extension offices. (Strang)

Commercial and Home Horticulture Fungicide Update

John Hartman, Bill Nesmith, and Paul Vincelli, Extension Plant Pathologists

New Fungicides

Fungicide	Chemistry	Crops	Diseases caused by:	Caution
Abound	strobilurin -azoxystrobin	grapes	several fungi, see spray guide	Managing fungicide resistance is very important. Efficacy can vary from one crop to another. Reduced-risk fungicides such as these are on the "fast track."
Heritage		turf, greenhouse and outdoor ornamentals	downy and powdery mildews, Botrytis, several root rots	
Quadris		tomatoes, potatoes, selected cucurbits	several fungi, see spray guide	
Compass	strobilurin -trifloxystrobin	greenhouse ornamentals and interiorscapes, nurseries	rust, scab, powdery and downy mildews, Botrytis	
Flint		selected cucurbits, apples, grapes	multiple fungi, see spray guide	
Cygnus	strobilurin -kresoxym- methyl	greenhouse ornamentals	powdery mildew	
Sovran		apples, grapes	multiple fungi, see spray guide	
Contrast	flutolanil	greenhouse and nursery ornamentals	basidiomycetes such as rust and Rhizoctonia	Managing resistance.
Decree	fenhexamid	greenhouse ornamentals	Botrytis	Managing resistance.
Elevate		grapes, strawberries	Botrytis	
Elite	tebuconazole	grapes	black rot, powdery mildew	Managing resistance
Medallion	fludioxonil	greenhouse ornamentals	Botrytis, Rhizoctonia, Fusarium, Sclerotium, Thielaviopsis, Cylindrocladium	Protectant fungicide.
Immunox	myclobutanil	backyard apples, grapes and ornamentals	scab, powdery mildew	Systemic, eradicant for home use.
Vorlan	vincolzolin	greenhouse ornamentals	Botrytis	Managing resistance

Reduced Risk Fungicides are on the "Fast Track"

- Fungicide products with reduced impact on the environment and on human health are rushed to market faster than they were previously.

- Fungicides are cleared for use with less efficacy data than in the past.
- Fungicides may be not available for testing by researchers until they are already on the market, or perhaps the year before they are available to the growers.

Strategies for Fungicide Resistance Management

- Alternate with fungicides having a different mode of action.
- Limit the number of times that a fungicide may be applied in a cropping season.
- Reduce the need to apply fungicides by using IPM cultural practices, etc.
- Do not use a fungicide in the greenhouse if that same fungicide will be needed later on that crop in the field.

Greenhouse Uses of Fungicides

- If the label does not specifically state that the chemical is for greenhouse use, it cannot be used in the greenhouse even though it may be allowed on the same crop in the field.
- Greenhouse use is often prohibited for reasons of resistance management or for safety.
- Most fungicides used on ornamentals are not cleared for use on greenhouse vegetables, fruits, and tobacco transplants.

Crop Groupings

- The fungicide label often lists specific crops within a group. The cucurbit group, for example, would include pumpkins, winter squash, cucumbers, cantaloupes, and many other vine crops. Just because some cucurbits are listed doesn't mean that the manufacturer will take responsibility for all cucurbits. Many fungicides are closely related to herbicides and may be phytotoxic on one crop, but not another.

Proper Application of Fungicides

- The vegetable industry in Kentucky is new and mostly unprepared to manage diseases.
- Farmers should use sprayers equipped with drop nozzles and high pressure pumps. Good spray equipment will be easily paid for with increased disease control and yield.
- Broadcast herbicide sprayers are not sufficient for applying fungicides to plant foliage.

IR-4 Activity

- The National IR-4 Committee is becoming very active in labeling new chemicals (500 new labels in the past two years) for uses on minor (e.g., horticulture) crops.

Future Fungicide Prospects

- Actiguard, (known as Bion in Europe) which induces systemic resistance to some diseases, will be registered for downy mildew and bacterial leaf spot control in some crops in early 2000.
- The idea of inducing systemic resistance in plants originated with Dr. Joseph Kuc, a plant pathologist working here at U.K. In Europe, Dr. Kuc is known as "the father of Bion."
- Other compounds such as Harpin, a plant resistance gene product are being tested.

Exploring the Antique Apple Market - What is an Antique Apple?

The best definition of an antique apple is simply one that has become **obscure**, or one the consumer refuses to buy, or refuses to plant.

Rome Beauty, **Red Delicious** and **McIntosh** are rapidly moving toward this classification. Even **Golden Delicious** is much closer than many of us believe.

Age or number of years a variety has been available has little to do with this classification. An example is the relatively "new" variety, **Granny Smith**. It was discovered in Australia in the late 1800s, but did not become a commercially acceptable type until the mid 70s.

The best definition, in my judgement, is one that is obscure regardless of reason.

In most all cases, apple varieties that became obscure did so with very good reason. The advent of commercial refrigeration (in the 1930s) rapidly made an overwhelming number of commercial apple varieties obscure within a few

years. This was due simply to the vastly improved storage technology that allowed better quality varieties to be commercialized.

Most of these varieties are inferior in a number of ways when compared with those available today. The primary reason why a number of them were grown then was due simply to their ability to withstand non-refrigerated shipping and because of their culinary (cooking or processing) qualities.

From 1979 through 1994 some 1,200 apple varieties were evaluated on our farm in an effort to find any antique varieties which may have been overlooked. Of those, the following have proved to be the best for this **very narrow (small) market**.

Variety	Season	Brief Description
Adam's Pearmain*	mid (early Sept.)	Great quality, ugly
Arkansas Black	late (mid Oct.)	Beautiful, nearly tasteless
Newtown Pippin	late (mid Oct.)	Excellent quality, delinquent
Esopus Spitzenburg	late (early Oct.)	Good quality, very shy bearer
Ralls Genet	late (early Oct.)	Good quality, heavy prod.
Orleans	mid (early Sept.)	High quality, Red Delicious look-alike
Freyberg	mid (early Sept.)	High quality, very shy bearer
Zabergau Reinette*	mid (mid Sept.)	High quality, ugly
Ashmead's Kernal*	late (early Oct.)	High quality, ugly
Razor Russet*	mid (Sept.)	Golden-like quality
Russet Beauty*	mid (Sept.)	Complex flavor, productive

*These varieties are among the many so-called "russet" apples. They are unusual enough and possess enough quality to be used in mail order Holiday Gift Boxes. Over the years, we've had more positive response on russet apples (and Asian pears) than others used for this market outlet.

Recommendations for planting.

I'd plant only a very limited amount of any of the above. Probably, this number should not exceed 10% of your total planting. An on-going consumer education program (nice word for "marketing related bull") regarding their uniqueness is mandatory. One must tap into the apparent public craving for the nostalgic "good-old-days".

All of these varieties listed, except **Orleans**, **Freyberg** and **Zabergau** possess an interesting history, which can and should be used in the marketing process.

Where is this "niche" consumer?

Although you'll have a few folks come to your farm that'll buy them, it will not generate enough sales to justify their maintenance.

Some of the outlets have already been described (such as mail-order). Another small outlet is through brokers who specialize in unusual food products. One of the best is run by:

Ms. Gayle Harvey
Amerifruit-Kings Creek

N. Canton, OH 44721
Ph. 330-494-9780

Her standards and prices are quite high. To give an example, we shipped a load of loose-packed (40 lb.) boxes of apples recently at \$38.50 per box. The customer was very satisfied and Gayle recently told me that she was looking for more **quality** suppliers of these apples.

If you are growing for commerce, special attention must be paid to the definition of 'niche' market. It is incredibly **small and extremely fickle**.

Another use for these older varieties is simply the educational and marketing process. During school tours these trees can be used as an adventure in history. When we did this, the one single surprise (to us) was the common ignorance among adults (teachers and parents) about horticultural history.

During these tours, the group would be guided to trees of **Ralls Genet**, **Hawkeye** (the original Red Delicious) and **Fuji**, all of which were planted very close to each other.

This small exercise did two things. Firstly, it gave living examples of older apple varieties and secondly, it gave a living example of modern plant breeding. Sometime in the 1950s, Japanese plant breeders crossed **Ralls** with **Hawkeye** that resulted in the new, **Fuji** apple.

Lastly, if you are growing for horticultural pleasure, one can gain great insight into the evolution of apple culture. Some of these antiques have been around for hundreds of years and a few over 1,000 years. (Ed Fackler, Rocky Meadow Orchard & Nursery, New Salisbury, IN)

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John Strang, Extension Horticulturist