



Newsletter

Extension

Fruit ICM News

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In This Issue:

[Calendar](#)

[Small Fruit Management Farm Planning Part I](#)

[Yellow Raspberries](#)

[Ohio Farmers Market Directory 2001](#)

[Managing Summer Diseases of Peaches](#)

[Obliquebanded Leafroller](#)

[Market Loss Assistance for Apple Growers](#)

[Notable Quotes](#)

[NAA Increases Return Bloom](#)

[Fruit Observations & Trap Reports](#)

[Phenology](#)

[Northern Ohio Scab and Fire Blight Activity](#)

[Ohio Degree-Days](#)

Calendar

June 19: OSU Vegetable Team Sweet Corn Tour & Workshop, southwest Ohio. Tour begins at 4 p.m. and ends around 8 p.m. with stops in Troy, Springfield, and Xenia. Get involved in some detailed discussion on nitrogen management, varieties, insect management, weed control, disease control, and stand establishment. Call Jim Jasinski at 937-454-5002 for more details or visit <http://www.ag.ohio-state.edu/~vegnet>.

June 19-20: Farm Market Tour, Pickaway, Ross, and Pike counties, sponsored by Direct Marketing Assoc. of Ohio and OSU Extension. Contact John Ellerman at the Centers at Piketon (800) 297-2072.

June 30: Ohio Fruit Growers Society Summer Tour and Meeting, Patterson Fruit Farm, Chesterland. For more information, contact John Wargowsky at (614) 249-2424, or e-mail at jwargows@ofbf.org.

Small Fruit Management Farm Planning Part I

Source: Richard C. Funt, Ohio State University

Part I - Short Term Management - Time

Producing small fruit crops is a business; the business of managing resources to provide a living and a profit. Resources are basically time and money. Managing time and dollars takes talent and skill. The use of time that creates maximum satisfaction begins with a farm or management plan.

A short term management plan refers to 1 to 5 years. Starting in 2001, this plan will cover the years 2002 to 2006. Long term management plans are those that have a life of more than 5 years.

Today's small fruit manager must consider marketing strategies in combination with production. Like growers, the consumer is limited in time. Assisting a working mother with small children in a pick-your-own marketing decision can be as equally important a decision as assisting older people with limited physical capacity. Keep in mind that more 'baby boomers' will retire in the next 10 years.

It is expected that more people will become more health conscious. Fresh fruits (particularly berries) and vegetables are showing great promise in preventing and intervening in certain diseases. They are also providing a healthful means of reducing weight gain.

Many experienced and new (non-traditional) berry growers will need to consider removing or increasing small fruit acreage to meet consumer demands in the next few years. Therefore, cash flow or money from previous crops or money from external sources is borrowed in the short term for an expected long term profit (return on investment). Small fruit growers, therefore, face a greater challenge and risk in making short term decisions than other growers who plant annual crops.

It is wise when considering short term decisions to know the time required to accomplish the daily tasks. Knowing the time requirements of your spouse, children, and local hired and migrant work force on a daily basis is necessary for making wise decisions.

Many times our enthusiasm for a new enterprise decreases when we do not have sufficient time to manage that new crop and all of our other investments. Without good data from your present small fruit operation, the number of hours required is only an estimate. These data are going to vary from year to year. Downtime, equipment repairs, and weather will all change. However, having the numbers will allow for a plan to be more precise, and better yet, more valuable to you, the manager of a large, complex business.

The decision to record daily job requirements (hours/task) needs to be made right now! Recording time for spraying, mowing, picking, selling, paying expenses, and ordering material during your busiest season can create your greatest challenge and reward. The reward will be the knowledge of the current time requirement being put into action when making a short or long term decision. Certainly, the time required for spraying an acre of strawberries needs to be recorded only once since it will be the same each time. The question is: Will the removal of or the increase in acreage have a time restraint during the busiest part of the year?

New technology or new systems of production will need to be a part of the short term decision. Investing in a system that requires fewer hours of maintenance, fewer hours of mowing, or fewer passes of pesticides in the field over a 5- to 10-year life of the planting can be significant to the small fruit manager. Information on the advantages of new systems requires time for learning and implementing. Any new high technology system has to be evaluated for risk and profitability.

Currently, small fruit managers are making important decisions for the short and long term planning horizon. To improve returns on long term investments, records on hours worked per job are an important source of information. Keep a daily record on hours required in 2001 to assist in making future decisions. The promise of higher returns on future investments is strengthened by good records. Time is saved for important activities with a plan based on good records. Non-business activities for your family and the workforce need to be in that plan as well.

Our next topic will be Short Term Management - Crops and Cash Flow.

Yellow Raspberries

Source: Candace Pollock, Associate Editor, OARDC Research Services

Looking for a little variety in your red and black raspberry production? Try growing a yellow cultivar. Ohio State University horticulturist Dick Funt said yellow raspberries are slowly becoming hot commodities in Ohio as gourmet or specialty items, and they are not any more difficult to grow than other raspberry varieties.

"It takes a while for people to get used to the sight of a yellow raspberry," said Funt. "But the fruit is becoming somewhat of a specialty item for bakeries and markets that may use the berry to decorate cakes and pastries or promote an unusual jam." Only a handful of producers grow yellow raspberries in Ohio and only four fall cultivars exist for producers to choose from, but Funt said the berries produce size and taste qualities to rival black and red raspberry varieties and are just as easy to grow.

"The big thing right now is to get as big a berry as possible and as sweet tasting as possible," said Funt. One cultivar, known as Anne, produces a large berry, four to eight grams, compared to a typical red raspberry's two to three grams, and has a high sugar content. Funt said the one disadvantage to a bigger berry is that it is more susceptible to molds because it's a softer fruit. Anne and another big-berry cultivar, known as Fallgold, are susceptible to Botrytis blight, or gray mold. "But the cultivars excel at winter hardiness, and as long as you keep the soil drained, you can grow yellow raspberries just about anywhere in the state."

Other fall yellow raspberries include Golden Harvest, which produces moderate yields but with small berries, and Goldie, a medium-sized, firm fruit that turns pink when ripe. For more information on growing yellow raspberry cultivars, consult bulletin 782 on Ohioline at <http://www.ag.ohio-state.edu/~ohioline/>, or contact your local OSU Extension office for a copy of the bulletin.

Ohio Farmers Market Directory for 2001

Source: ODA via Sandra Kuhn, Ohio Berry Coordinator, Centers at Piketon

The 2001 Ohio Farmers Market Directory will be available for distribution on June 18, 2001. This directory was designed to help consumers purchase fresh produce close to home, allowing them to support their local economy. Consumers of the Buckeye state can also look for the distinctive green and black OHIO PROUD logo when they shop as a quick and dependable way to identify products raised,

grown, or processed in Ohio.

The Farmers Market Directory is lists, by county, various markets located throughout the state of Ohio. Each market is individually cited with contact information including the name, location, telephone number, hours and days of operation, and products available. Each market is also categorized as either a farm market (where the product is available at the farm of origin), farmers' market (where a number of farmers gather at one central location to offer a variety of fresh produce), pick-your-own establishment (which allows consumers to pick their products directly from the plant), roadside market (conveniently located so customers can purchase produce on the drive home), or Christmas tree farm (for consumers to purchase trees for the holidays as well as trees and shrubs for landscaping purposes).

The OHIO PROUD Program is the signature marketing program of the Ohio Department of Agriculture, which promotes food and agricultural products that are at least 50 percent raised, grown, or processed in the state of Ohio. To receive a free copy of the Ohio Farmers Market Directory or for more information on this publication and the OHIO PROUD Program, consumers can contact the Ohio Department of Agriculture's Division of Markets at 1-800-467-7683.

A Word To the Weather-Wise: Managing Summer Diseases of Peach

Source: Bill Turechek & Cathy Heidenreich, Plant Pathology, Geneva, Scaffolds #13

Warm, wet weather after shuck split may result in disease problems for stone fruit growers caught off-guard. Be sure to keep a weather eye open to avoid potential problems with bacterial spot of peach, and possibly peach scab.

Bacterial spot is a disease that affects virtually all stone fruits, but is particularly damaging to peaches, nectarines, and apricots. The disease is caused by the bacterium *Xanthomonas arboricola* (previously known as *Xanthomonas campestris* pv. *pruni*). Temperatures above 65 F and wet conditions favor disease development. Bacterial spot may particularly be a problem in orchards that have a history of disease. Some of our western New York orchards were hit hard last year with bacterial spot, increasing the potential for repeat infections this season. Primary fruit and leaf infections occur as a result of frequent wetting events from full bloom to 4 weeks after shuck split. Wind-driven rain or debris can damage leaves and developing fruit, creating small wounds that the bacteria can enter, and significantly affecting the occurrence and severity of fruit and leaf infection. Disease does not develop under hot and dry conditions.

Bacterial spot affects the fruit, foliage, and young, woody growth (twigs). Severe foliar infections result in leaf drop, which may significantly reduce tree vigor and winter hardiness. Bacteria from leaf infections may move into the current year's twig growth, leading to canker formation and providing an overwintering site for the bacteria. On fruit, the bacteria cause unsightly, dark brown lesions and/or blemishes. Lesions often become sunken, and the skin of the fruit cracks, causing deep pits that leave the fruit unmarketable.

Peach scab, caused by the fungus *Cladosporium carpophilum*, is more of a problem downstate, and on later peach varieties. It is capable of infecting all cultivars of peach, and is known to affect apricots, plums, and nectarines. Once established, this disease can be extremely damaging to trees. The fungus

overwinters in small, slightly sunken, grayish twig lesions on the previous year's growth. Spores (conidia) produced from these stem lesions in early spring are splashed by rain onto small fruits and twigs. Infection and fungal growth are most rapid during periods of rainfall with temperatures between 65-75 F. Symptoms develop after a very long incubation period of 40-70 days. Because of the long incubation period, it is most often only the infections occurring between shuck split and pit hardening that develop fruit symptoms before harvest. Secondary infections may occur on twigs and on late-season cultivar fruit.

Although leaves and twigs may become infected, the fruit exhibit the most obvious evidence of the disease, developing small, greenish, circular spots that gradually get bigger and darken as spore production begins. These spots appear when fruit are half grown, and are most common on the stem end of the fruit, but can occur over the whole surface. Enlarging lesions, if numerous, may coalesce, causing the fruit to be misshapen or cracked as it expands. This cracking opens an infection site for other fungi, such as brown rot. Scabby fruit do not ship or store well, and may drop prematurely.

Disease management. The most effective way of managing bacterial spot is to plant varieties resistant to the disease, yet this is not always practical in respect to market demand. Maintaining proper fertility is essential, as excessive growth or poor nutrition increases a tree's susceptibility. Our limited choice of cultural control methods makes chemical control necessary when spot is a problem. If you had disease problems last year and/or weather predictions look favorable for infection, applications of oxytetracycline will be necessary. If warm and wet weather conditions persist, oxytetracycline can be applied on a 7-10-day schedule from now until 3 weeks before harvest. Oxytetracycline is intended to be used in a preventive mode; it has very limited to no kickback activity. If conditions prohibit you from making an application 24 hours or longer after a known infection event, save your money, as an application here will probably be ineffective against these infections.

To prevent peach scab, pruning is helpful because it facilitates air movement through the canopy to reduce the length of wetting periods, and improves spray penetration into trees. When control measures are needed, apply fungicide sprays at 10-14-day intervals starting 10 days after shuck split and continuing until 6 weeks before harvest. These intervals may be lengthened during extended periods of dry weather. Several products are labeled for use in N.Y. for peach scab control, including Captan 50WP (2 lb/100 gal) or Captan 4L (1.5-2 pt/100 gal), Indar 75WS (0.8 oz/100 gal), Sulfur 95WP (5 lb/100 gal), or Topsin M 70WP / Captan 50 WP combination (6 oz/100 gal and 1 lb/100 gal, respectively). All of these fungicides are labeled for control of brown rot through either petal fall or shuck split. So, if you have been using these fungicides in your schedule for control of brown rot, you have been managing scab as well. It is important to maintain protection beyond shuck split through pit hardening for control of peach scab, especially under favorable weather conditions. These fungicides will also offer protection against brown rot during this period.

OBLR -- Our Favorite Summer Rerun

Source: Art Agnello & Harvey Reissig, Entomology, Geneva, Scaffolds #13 (Editor's note: This article was included as some trapping for monitoring OBLR in Ohio is being conducted.)

Obliquebanded leafroller moths started flying in the Hudson Valley on June 4 and in Wayne County (Marion) on June 7, which puts us back on a nearly normal schedule for insect activity for the time being. First hatch is generally assumed to occur about 360 DD (base 43 F) after the flight starts. This brings us quite naturally to the perennial question of how best to approach management of OBLR

populations this year, so a brief synopsis of last year's research efficacy trials might be in order. Pesticide control programs for the first summer brood of OBLR were conducted in two Wayne County orchards in 2000, one of them an Empire/Cortland mixed planting, and the other McIntosh/Idareds. All sprays were applied using some of the following timings after the beginning of summer adult flight on 6/11:

- Peak Flight (6/20)
- First Hatch (6/27, the standard 300 DD timing)
- 40% Hatch (7/5)
- "Cover Sprays" at various timings: 7/11, 7/19, and 7/24
- Confirm 2F and Intrepid 2F (the 2nd-generation version of Confirm) were applied at 6/20, 7/5 and 7/19.

A large group of products and combinations were compared at 6/27, 7/11, and 7/24:

- Asana XL
- Lorsban 50WP
- Baythroid 20WP (cyfluthrin, a pyrethroid)
- SpinTor 2SC
- Proclaim 5SG (emamectin benzoate, an avermectin) combined with either Dyne-Amic or Kinetic
- DiPel DF
- Lepinox (another B.t. formulation)
- Avaunt 30WG combined with other products (SpinTor, DiPel 2X, and Asana).
- A later SpinTor 2SC program was applied on 7/5, 7/19, and 7/31.
- Avaunt was applied in a seasonal program on 6/20, 6/27, 7/5, 7/10, 7/19, and 7/24.

The initial infestation levels were quite low in both orchards, compared with those observed the previous season. Fruit damage in the untreated check plots at harvest (4.8% at the Empire/Cortland site and 11.0% at the McIntosh/Idared site) was also low. Average fruit damage levels in the combined orchards were generally less than 3% in plots treated both with the most effective newer compounds and older standard materials. All rates of Intrepid, Proclaim combined with Dyne-Amic, and the high rate of Baythroid were the most effective treatments of new compounds in both orchards. The standard materials, DiPel and Lorsban, also allowed less than 3% damage. The synthetic pyrethroids, Asana and Baythroid, were relatively more effective in the McIntosh/Idared block than in the Empire/Cortland plot. Neither Avaunt nor the various mixtures of compounds tested with this material (SpinTor, DiPel, and Asana) were as effective as the better standard insecticides, SpinTor, Lorsban, and DiPel. Fruit damage was higher in the Lepinox plots than in the standard DiPel treatments. The SpinTor treatment applied at the later timing was no more effective than the standard 300 DD timing.

Our recommendations for OBLR management this year continue to follow along lines similar to those we have given previously. Most materials available should be at their maximum potential effectiveness when used 2-3 times (in moderate or high pressure orchards, respectively) against the first summer brood larvae. Applications in a 3-spray program should be made at times approximately corresponding to periods of first hatch, mid-hatch, and 2 weeks after mid-hatch. In orchards where SpinTor is being used, the inclusion of a low rate of an adjuvant such as LI-700 or Sil-Wet is recommended. As always, standard materials such as Asana and SpinTor are likely to work better against populations not having a history of extensive exposure to them.

Market Loss Assistance for Apple Growers

\$100 million to be distributed to apple growers beginning June 15 for losses suffered in 1998/1999

Source: U.S. Apple Association (<http://www.usapple.org>), via John Wargowsky, Ohio Fruit Growers Society

Members of Congress from key apple producing states on June 12 introduced legislation to provide \$250 million to compensate U.S. apple growers for market losses sustained during the 2000 crop year. Reps. Maurice Hinchey (D-N.Y.), Doc Hastings (R-Wash.), Tom Reynolds (R-N.Y.), John Sweeney (R-N.Y.) and James Walsh (R-N.Y.) introduced the Apple Market Loss Assistance Act in the House of Representatives, while Sens. Carl Levin (D-Mich.), Olympia Snowe (R-Maine), Maria Cantwell (D-Wash.), Patty Murray (D-Wash.), Charles Schumer (D-N.Y.) and Debbie Stabenow (D-Mich.) sponsored companion legislation in the Senate.

"America's apple growers are suffering the worst economic losses in more than 70 years due to adverse marketing conditions largely beyond their control," said U.S. Apple Association (USApple) President and CEO Kraig R. Naasz, whose group is working closely with the bill's sponsors in Congress to garner this much-needed assistance. "Current apple prices, which are as much as 40 percent below production costs, are pushing apple growers deeper into financial crisis and driving many family farms out of existence."

The legislation would reimburse apple growers for a portion of the losses they sustained in marketing the 2000 apple crop by authorizing a pro-rata payment on each producer's total production of up to 20 million pounds.

U.S. apple growers have sustained losses of \$1.5 billion over the past five years, including an estimated \$500 million during the past year alone, according to U.S. Department of Agriculture (USDA) statistics. Unfairly priced imports, excessive regulatory costs, stagnant domestic consumption, food retail consolidation, subsidized foreign competition, diminished exports, and global overproduction have all contributed to the economic plight of America's apple growers.

"Our nation's apple producers have long prided themselves on their independence from the federal government," said Naasz. "Until our government can achieve parity with our foreign competitors, however, most apple growers would rather accept a helping hand than lose a farm that has been in the family for generations." Naasz continued, "USApple will continue to fight for the survival of America's apple growers by working with our government's trade negotiators to level the playing field and our industry's key allies in Congress to secure this desperately needed market loss assistance."

Meanwhile, USDA's Farm Service Agency (FSA) is expected to begin distributing \$100 million in market loss assistance to apple growers as early as Friday, June 15, under provisions adopted by the 106th Congress as part of the fiscal 2001 agricultural appropriations act (Public Law 106-387).

Individual apple growers may receive as much as \$28,000, depending on the volume of apples they produced in either 1998 or 1999. Approximately 7,500 growers nationwide, representing more than five billion pounds of production, applied for assistance to their local FSA office between March 8 and May 4. Payments will be made on a producer's first 1.6 million pounds of production in either 1998 or 1999 at a USDA-calculated payment rate of roughly one and three-quarter cents per pound.

"Apple growers across America have been hard hit by five disastrous years in a row, and for far too

many producers this assistance can't come soon enough," said Naasz. "We greatly appreciate Congress for having heard and responded to our pleas for assistance, as well as Agriculture Secretary Ann Veneman for expeditiously distributing this aid to our nation's apple growers."

Notable Quotes

Source: American Fruit Grower, June 2001

Two Ohio tree fruit leaders were quoted in the June issue of the *American Fruit Grower*. Dr. Diane Miller went back in history to compare today's economic pressures with the situation 65 years ago. At that time, the Ohio State University Department of Horticulture, under the leadership of Dr. J. H. Gourley, sponsored a meeting of apple growers concerned with low prices. That meeting led to the formation of the National Apple Institute, now known as the U.S. Apple Association.

Mitch Lynd, of the Lynd Fruit Farm in Pataskala, used two books to frame his advice on how to survive in the apple industry. Steven Blank's book, *The End of Agriculture in the American Portfolio*, points out that "cost is local, price is global." In other words, your cost of production is determined by local factors, but the price is determined by global factors.

The second book, *Who Moved My Cheese* by Dr. Spencer Johnson, has provided guidance to managers of Fortune 500 companies as well as family-owned businesses facing a world that is ever changing. Your reaction to changes in your apple markets will lead to success or failure. Replacing hard-to-sell cultivars with newer, high quality ones can help rebuild the economic stability of your orchard.

NAA Can Increase Return Bloom

Source: Healthy Fruit Volume 9, Number 11

Naphthaleneacetic acid (NAA) can increase flower bud formation in apples. For a number of years some growers have added a little NAA to the spray tank at the end of June drop with the hopes of increasing return bloom without thinning. Details and data in the literature to support this are vague. In general, NAA between 3 and 5 ppm is usually recommended, and it is applied one to several times in normal cover sprays.

Recently, Dick Unrath, a pomologist in North Carolina, conducted a study using 5 ppm NAA in 3 different orchards. He applied 5 ppm NAA starting 45 days after full bloom from one to four times at 2-week intervals. His results were that NAA significantly increased flowering for the following year in all cases. One application was as good as four in one block of Golden Delicious, whereas in a second Golden Delicious block at least two applications were necessary to increase flowering. On Delicious 4, applications increased flowering the most. In no case did these treatments hasten ripening or bring about additional thinning. The conclusion from this study was that NAA at 5 ppm can increase return bloom when applied at the end of June drop. The number of applications necessary to get the maximum response varied with the orchard.

Fruit Observations & Trap Reports

Insect Key

AM: apple maggot
CM: codling moth
ESBM: eye-spotted budmoth
LAW: lesser apple worm
LPTB: lesser peachtree borer
OBLR: obliquebanded leafroller
OFM: oriental fruit moth
PTB: peachtree borer
RBLR: redbanded leafroller
SJS: San Jose scale
STLM: spotted tentiform leafminer
TABM: tufted apple budmoth
VLR: variegated leafroller

Site: East District; Erie & Lorain Counties

Source: Jim Mutchler, IPM Scout

Traps Used: STLM=wing traps, SJS=Pherocon-V, Others=MultiPher®

Apple: 6/6 - 6/12

CM: 2.3 (up from 0.6)
SJS: 0 (unchanged)

Peach: 6/6 to 6/12

OFM: 2.7 (up from 0.3)
LPTB: 20.3 (up from 4.0)
PTB: 0.3 (unchanged)
RBLR: 0 (unchanged)

Other pests include white apple leafhopper, potato leafhopper, green apple aphid, and lilac borer

Site: West District; Huron, Ottawa, & Sandusky

Source: Gene Horner, IPM Scout

Traps Used: STLM=wing traps, SJS=Pherocon-V, PC = circle traps, Others=MultiPher® traps

Apple: 6/6 to 6/12

CM: 1.3 (up from 0.6)
RBLR: 1.0 (up from 0)
SJS: 0 (down from 0.4)

Peach: 6/6 to 6/12

OFM: 3.8 (up from 0.4)
LPTB: 13.4 (up from 2.0)
PTB: 0.4 (up from 0)

RBLR: 1.0 (up from 0)

Other pests include white apple leafhopper, green peach aphid, green apple aphid, lilac borer, apple rust mite, tarnished plant bug strikes, and plum curculio strikes

Beneficials include banded thrips and predatory wasps

Phenology

Coming Events	Range of Degree Day Accumulations	
	Base 43° F	Base 50° F
Codling moth 1 st flight peak	547-1346	307-824
Peachtree borer 1 st catch	565-1557	299-988
Lesser peachtree borer flight peak	733-2330	392-1526
Spotted tentiform leafminer 2 nd flight begins	795-1379	449-880
San Jose scale 1 st generation crawlers present	987-1247	569-784
Oriental fruit moth 2 nd flight peak	1000-2908	577-2066
Apple maggot 1 st catch	1045-1671	629-1078
Redbanded leafroller 2 nd flight begins	1096-2029	656-1381
Codling moth 1 st flight subsides	1112-2118	673-1395

Thanks to *Scaffolds Fruit Journal* (Art Agnello)

Northern Ohio Apple Scab, Fire Blight, & Sooty Blotch Activity from SkyBit®

	Dates	Level of Disease Activity
Observed	June 1-7	Possible scab infection & damage
	June 8-13	Scab active, but no infection expected
	June 1-7	Fire blight active, but no infection
	June 8-10, 12	No fire blight activity
	June 11, 13	Possible fire blight infection and damage
	June 1-13	Sooty blotch active, but no infection
Forecast	June 14, 15, 18-23	Scab active, but no infection expected

June 16-17	Possible scab infection & damage
June 14, 15	No fire blight activity
June 16-17, 20-22	Possible fire blight infection and damage
June 18, 19, 23	Fire blight active, but no infection
June 14-23	Sooty blotch active, but no infection

Degree Day Accumulations for Selected Ohio Sites January 1, 2001 to Date Indicated

Location	Reported Degree Day Accumulations						Forecasted Degree Day Accumulations 6/20/01	
	May 30		June 6		June 13			
	Base 43° F	Base 43° F	Base 50° F	Base 50° F	Base 43° F	Base 50° F		
Akron - Canton	693	445	771	488	932	614	1130	776
Cincinnati	1038	726	1156	808	1336	954	1547	1129
Cleveland	707	469	786	513	945	637	1141	797
Columbus	965	670	1076	746	1259	895	1469	1070
Dayton	930	652	1033	720	1213	865	1420	1037
Mansfield	716	471	792	512	952	634	1148	798
Norwalk	725	480	793	519	960	651	1155	810
Piketon	1014	695	1137	783	1316	927	1513	1089
Toledo	733	490	807	529	983	670	1183	834
Wooster	742	496	827	543	990	671	1176	822
Youngstown	673	431	750	473	900	587	1086	739

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