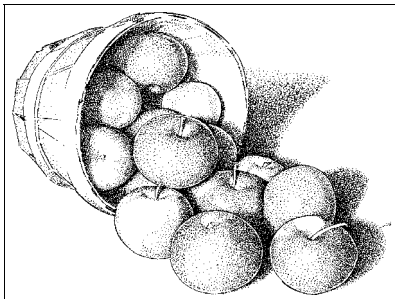


# HUDSON VALLEY TREE FRUIT NEWSLETTER

Issue 2002-1

March 18, 2002



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## **ANNOUNCEMENTS:**

### **Don't Let an Early Season Catch You Off Guard!**

There is every indication that the 2002 growing season is starting off at what may be a record early pace. One grower in Columbia Co. reported green tissue peeking out of fruit buds of apple pollinators as early as March 15th. Early season copper sprays on stone fruit, apples and pears may already be warranted. Don't get caught with your guard down!

### **Worker Protection Mock Inspections**

Cooperative extension and the NYS DEC are holding mock Worker Protection Standards inspections on March 22 at 9:00 AM at W.G. Minard & Sons in Clintondale, Ulster Co. and on April 16 at 1:30 PM at Golden Harvest Farms in Valatia, Columbia Co. Pesticide recertification credits will be awarded. All fruit growers are encouraged to attend one of these events. DEC inspections are scheduled for this spring and summer in our area. This is your opportunity to see how well you comply with WPS regulations before an actual inspection takes place. Fines for lack of compliance can be substantial.

### **Special Permit Training Workshops**

As we did the last 2 years, we are again offering Pesticide Special Permit Training workshops to allow growers to deal with the changes in on-site supervision of non-certified pesticide applicators. The workshops will be held March 26 at the Hudson Valley Lab and March 27th at the Cooperative Extension office in Hudson. You must call 845-340-3990 to pre-register. See the announcement in this issue for more information

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Tree Fruit Grower Alert Messages

Recorded messages regarding stone fruit, apples and pears are available by calling 845-691-7173. Messages will be updated each day starting March 25. Growers enrolled in the Cornell Cooperative Extension Hudson Valley Regional Fruit Program of Columbia, Dutchess, Orange, Rensselaer or Ulster Counties may avoid the chance of a busy signal or long-distance phone charge by having these messages e-mailed to them. Contact Mike for more information.

*POME FRUIT*Use Market Loss Assistance Money Wisely – Plan for Drastic Change

By Alison DeMarree, Lake Ontario Fruit Team

We think that growers will be receiving around \$0.40 per bushel on the first 120,000 bushel of their 2000 apple crop in Market Loss Assistance (MLA) money. An amendment was added to the farm bill in the Senate to add \$100 million (another \$0.50 per bushel) to MLA. **Don't plan on this money!** It is highly unlikely that this will make it through the conference committee. The bad news is that it may be harvest time before growers see **any** money. This is also likely to be the last direct payment growers are to receive in the form of MLA. Government money is likely to be put into crop insurance and adjusted gross revenue insurance subsidies, conservation payments (such as partial payment for a covered spray shed) and or support of export programs in the future.

Many growers have debated whether direct aid to growers really helps the industry. I have heard of growers who are not removing acreage because they want the bushels for MLA payments. This is NOT good for the industry – it means that prices could be depressed for some time to come because not enough apples are being removed. Many growers say we do not have over-production but under-consumption. Whatever way you put it – there are more apples out there than current demand. This situation WILL NOT change enough in the next several years to increase the apple price enough to meet the cost of production for the following reasons:

1. High density apple plantings are now in full production – they are capable of producing 1,000 – 1,200 bushel to the acre consistently, when converted from fresh to process markets. Many of these plantings are being converted to process production because of varieties becoming obsolete for the fresh market and the older many of these plantings get – the more difficult to get the quality needed for the fresh market. These plantings produce 2 to 3 times what an acre of standard trees can produce.
2. There are many apple growers who have no idea what it costs them to produce apples. Many growers do not know their cost per acre nor their yield per acre for their whole farm on an annual basis, let alone on a per block basis. These blocks will be removed only when the fruit cannot be sold, even though growers have been losing money on them for several years.
3. Washington is expecting a HUGE crop this year – even though acreage has been removed – even more new acreage is coming into production. Washington growers typically do not know how much money they lost from the previous years crop until the following July – when they get their payments from packers. This means that many will

have money already invested in the 2002 crop and will see the crop year out. It also means that a large national crop will likely keep our processing prices depressed – even if the Virginias and Carolinas lose a good portion of their crop.

4. Countries in the southern hemisphere that export to the US are now harvesting a bigger crop than last year. The dollar is strong and they want it. The last I heard the world Apple Juice Concentrate price is very weak. AJC prices are likely to remain weak.

Processors have been lowering prices of varieties that do not store well for several years now. Some rented acreage has been abandoned and some acreage has been removed, but not enough acreage to balance the high density plantings reaching full production. The question that now remains is: **How much money can you afford to lose each year to grow apples until production comes more in line with demand?** Apples are now a commodity – we are in the same situation as tart cherries were in several years ago – except you need to invest a lot more in growing and harvesting apples than tart cherries **and stand to lose more money than you could with cherries!**

#### **Other problems:**

Environmental concerns are not going away, we will continue to lose broad spectrum materials. The new materials are more selective and expensive. You will need to spray more often to keep ONE insect under control. Each insect will need a different material to control it – AND coverage on standard and large semi-dwarf trees will be poor. This means that you won't get the control you need and you are likely to end up with a lower price per hundredweight because of insect damage that results in rot or poor storage. Disease problems are also likely to lower yields.

Finally, it will be more difficult to get large trees pruned and picked. Labor is often short now – who will want to pick or prune huge trees when they can work in high density plantings?

**THEREFORE:** I suggest you consider one of the following options;

1. Use your Market Loss Assistance (MLA) money to exit farming gracefully.
2. Pay down debt with MLA money.
3. Minimize your risk of losing money for future years when MLA is no longer in existence by removing unprofitable acreage.
4. Invest your MLA money in a new enterprise OUTSIDE of agriculture.
5. Use MLA money to make your business more competitive to allow you to survive in the future.

There are many things growers can do to improve the likelihood that their business will survive;

**1. Reduce expenses** . Fulltime labor with benefits is expensive. Are you getting your money's worth? Pay by the piece whenever possible and use seasonal help whenever possible. DO NOT mess with expenses directly related to production or fruit quality: dormant pruning, fertilizer, spray materials, summer pruning, hand thinning. Skipping these jobs or cutting these expenses is the beginning of the end.

**2. KNOW your costs**, income, cash flow and debt INSIDE and OUT.

- 3. Remove unprofitable blocks.** Mature fresh fruit blocks producing **less than 600 bushel** per acre and mature process blocks producing **less than 800 bushel** per acre are or will soon be unprofitable!
- 4. Sell all non-essential assets and equipment.** Log your farm woods. Sell orchards that do not have a good market, regardless of production. DO NOT HOLD the mortgage on any land you sell! (When advertising property, emphasize wildlife, hunting prospects, scenic view and romance of owning your own property – 40-50 acre plots may sell best – show the property when you are likely to see wildlife, apples are in blossom or ripe apples are on the tree.)
- 5. Sell good orchards and rent them back, where possible.** Buyers may be attracted to the fact that someone will take care of the land and property taxes will be paid.
- 6. Improve fruit quality to retain good markets.** Focus on varieties that are likely to grow in demand. Be ready to seize new opportunities.
- 7. Minimize risk in three areas: Market, Labor, Financial.** Identify areas of your business that could result in large losses in bad years – move to minimize those risks. This could mean; removing blocks, buying crop insurance, buying AGR insurance, downsizing now but being ready to expand if specific opportunities arise.
- 8. Rent apple acreage ONLY if you personally know that production is high AND YOU HAVE A GOOD market for those apples.** Do not rely on former operator's recollection of production.
- 9. Set long term goals** with family and business partners. Reorganize business to meet those goals.

### **Apogee Update, 2002. Part 1.**

By Dr. Jim Schupp, Dept. of Horticultural Science, Cornell's Hudson Valley Lab

Many growers used the new plant growth regulator Apogee on a trial basis last year, its first season of being registered for use on apples in NY. Most growers had positive results, and most of those who used Apogee last year report that they are planning on using it again this year. The following information is provided to help growers fine tune the use of Apogee in 2002.

### **Apogee and Pruning**

The big incentive for using Apogee is saving on labor for summer and dormant pruning. In several research studies on commercial orchards, Apogee has reduced pruning time by 25-45%. However, Apogee has worked best when applied to well-pruned trees. It is better to prune dense trees hard during winter and use Apogee to help control the regrowth than it is to apply Apogee to overgrown trees without corrective pruning.

Apogee provides poor control of one kind of shoot: water sprouts. Apogee must be applied prior to the first flush of terminal shoot growth in order to be effective, but that timing of Apogee is too early to reduce the growth of water sprouts, which have not yet formed at the

start of the season. Heading or stubbing back cuts (i.e. bench cuts) should be avoided when pruning to limit the number of water sprouts that are often stimulated by such cuts.

Apogee is best used as a tool to supplement good pruning practices. It will not erase excessive limbs that are already in place or make up for poor pruning practices. Thus the importance of good pruning prior to application of Apogee cannot be over-emphasized.

### Apogee and Thinning

The effect of Apogee on fruit set and fruit size is the biggest concern voiced by growers after its first season of use. While some growers saw no such effect, others reported that Apogee increased set, and reduced fruit size due to the increased crop load. Likewise, some research studies have shown that Apogee can increase fruit set, while others have shown no effect. Given the variability in fruit set and thinning difficulty from year-to-year, from farm-to-farm, and across varieties, this is perhaps no surprise. Still, there is solid evidence that Apogee can increase fruit set. There is also research data to suggest how chemical thinning should be adjusted to account for the Apogee effect.

Apogee rate affects the fruit thinning response. The rate of Apogee (dilute basis) at which this effect of increased set usually becomes apparent is 12 oz per 100 gal. Dr. Duane Greene at the University of Massachusetts showed that McIntosh fruit set increased linearly with increasing Apogee concentration. Stated another way, the lower the Apogee rate, the less effect it had on fruit set. To minimize potential adverse effects on thinning and fruit size, use the lowest rate of Apogee necessary to get good growth control. Increasing the rate from 6 oz per 100 gal to 12 oz per 100 gal is more likely to affect the duration of the growth control than the degree of growth control. If a grower has had problems thinning Apogee treated trees, it may be better to make three applications of 6 to 8 oz per 100 gal than to apply 12 oz per 100 gal twice.

Be assertive when thinning. It has always made good sense to evaluate initial fruit set and it is even more important to do so on Apogee blocks. If the initial set is heavy, thin early and thin often! The growth inhibition from Apogee takes a week or longer to become apparent, which suggests that thinning early, before the Apogee kicks in, may be a good way to reduce crop load on Apogee treated trees. Petal fall thinner applications may have an important role in combating excessive set on Apogee treated trees. Starting the thinning program at petal fall also gives the grower a longer window of opportunity to adjust the crop. This strategy is a good one without Apogee. With Apogee, it is the only way to go.

Another way to remove more fruit is to increase the dosage of a chemical thinner, or use two or more chemical thinners in combination. Our initial recommendation to adjust for Apogee was to increase the strength of the thinner by 30-50%. For example, if you determined that untreated trees in a given block would require a thinning spray of 5 ppm NAA, then Apogee treated trees in that block may require 7.5 ppm NAA or 5 ppm NAA plus Sevin to get the same degree of thinning. Beware the laws of diminishing returns when considering rates of NAA in excess of 10 ppm. The increase in thinning diminishes as the rate of NAA is increased. Dosages of NAA higher than 10 ppm can stunt the growth of the fruit that remain, resulting in little improvement in fruit size.

Another way to remove more fruit from heavy fruit sets is to add a penetrant such as oil to the thinning spray. Duane Greene showed that adding a quart of spray oil per 100 gal to a tank mix of Accel plus Sevin XLR increased the amount of thinning to an acceptable level on Apogee treated trees. If you try this method, remember that one should **NOT** concentrate the oil when using it as a surfactant in a concentrate spray mix. Also remember that oil and captan can't be ap-

plied together or within a few days of one another, due to the possibility of spray damage.

Leave check trees! Many factors affect fruit set, and it is nearly impossible to assess the effects of Apogee or chemical thinners without leaving some untreated trees. Some growers might find that their thinning program was inadequate even **before** they applied Apogee! A few check trees would answer this question.

Different varieties may respond differently to Apogee. McIntosh and Gala were the varieties that growers most often mentioned as problems following Apogee applications. In a two year study on Golden Delicious in the Hudson Valley, I have found no difference in fruit set due to Apogee, and Apogee treated Goldens responded to NAA no differently than untreated trees.

### **Don't use Apogee on Empire.**

Apogee can cause fruit corking and cracking when applied to Empire. The occurrence of this injury is sporadic, and the circumstances that lead to expression of the injury are not known. However it has occurred across several years in Michigan, New York, Ohio, and Pennsylvania. Apogee has been applied to many commercially important varieties, but Empire is the only variety identified as being sensitive to Apogee thus far. The sporadic nature of the fruit damage to Empire suggests that one or more environmental or application factors contribute to this problem. Apogee is applied as a foliar spray, so other agricultural chemicals applied with Apogee, or near the time of the Apogee application(s) may contribute to the problem. One category of chemicals that we have investigated is water conditioners.

Applicators are advised to add a water conditioner such as ammonium sulfate (AMS) when mixing spray solutions from a hard water source. Foliar applications of nitrogen fertilizer salts can cause plant damage when applied at excessive concentration, under poor drying conditions, or when applied with surfactants. Butch Palmer, ACDS Research, has reported that adding AMS to the spray mixture worsened Empire cracking. Studies were conducted at the Hudson Valley Lab in 2001 to evaluate the effect of Apogee and water conditioners on fruit damage of Empire. Fruit damage was severe in these studies, despite the use of the lowest labeled rate of Apogee (3 oz per 100 gal). The damage was worsened by the addition of a water conditioner. However, AMS applied with Regulaid but without Apogee had no effect on either the severity or extent of fruit injury. We conclude that the fruit injury is directly caused by the formulated product Apogee itself, and that this product should not be used on Empire.

### **Historical Flowering Dates At The Hudson Valley Lab**

by Mike Fargione, CCE Hudson Valley Regional Fruit Program

The 2002 fruit growing season seems like it is coming on at a record pace. Inevitably, someone asks how does this year compare to a "normal season." Just what constitutes a normal year? It would be useful to have some historical data to compare with the current growing season to see where we are this season.

The following table gives the estimated dates for McIntosh flower bud growth stages as recorded at the Hudson Valley Lab, Highland, NY during 1980 through 2001. These records represent the observations of Dr. Chick Forsey, Dr. Dave Rosenberger, Dr. Dick Straub and Peter Jentsch. Your bud growth stage records are likely to vary slightly from those reported below. Flowering dates vary within the Hudson Valley due to location and microclimate differences. In addition, orchard removal and replanting efforts at the HVL resulted in observations being conducted on different trees during the course of the 21 year period. Observations made

on different age trees with different rootstocks could add some yearly variability to flowering dates. However, the trees used to determine flowering stage were always at least 5 years old and in good health.

Compare the information listed below with any records you have for McIntosh flower bud growth stage dates in your area. Then compare the numbers to this season's bud development timing and decide just how early we really are!

**Annual Date (month—day) of McIntosh Flower Bud Growth Stages  
as Recorded at the Hudson Valley Lab, Highland, NY**

<b>year</b>	<b>green tip</b>	<b>1/2 inch green</b>	<b>tight cluster</b>	<b>pink</b>	<b>full bloom</b>	<b>petal fall</b>
2001	4-11	4-17	4-25	4-28	5-2	5-10
2000	3-27	4-2	4-14	4-24	5-1	5-8
1999	4-2	4-7	4-12	4-26	5-2	5-13
1998	3-27	3-29	4-1	4-10	4-23	5-4
1997	4-4	4-11	4-21	4-28	5-1	5-14
1996	4-15	4-19	4-22	4-29	5-6	5-20
1995	4-11	4-19	4-24	4-29	5-8	5-19
1994	4-11	4-14	4-20	4-29	5-5	5-12
1993	4-12	4-19	4-24	5-1	5-3	5-10
1992	4-13	4-21	5-4	5-7	5-12	5-18
1991	4-5	4-8	4-11	4-17	4-27	5-7
1990	3-21	4-16	4-23	4-26	4-29	5-11
1989	3-29	4-17	4-28	5-3	5-9	5-19
1988	4-4	4-9	4-28	5-5	5-8	5-19
1987	3-29	4-10	4-18	4-22	4-29	5-16
1986	3-31	4-7	4-19	4-27	5-3	5-8
1985	3-30	4-12	4-15	4-22	5-4	5-12
1984	4-10	4-26	4-30	5-6	5-16	5-24
1983	4-12	4-27	4-30	5-2	5-5	5-18
1982	4-15	4-22	4-30	5-4	5-13	5-17
1981	- - -	4-8	4-16	4-22	5-5	5-14
1980	4-15	- - -	4-24	5-2	5-5	5-10
Earliest	3-21	3-29	4-1	4-10	4-23	5-4
Latest	4-15	4-27	4-30	5-5	5-16	5-24
Average	4-5	4-13	4-21	4-27	5-4	5-13
Midrange*	4-2 (+-12)	4-12 (+-14)	4-15 (+- 14)	4-22 (+- 12)	5-4 (+-11)	5-14 (+-10)

\* midrange = approx. equal number of observations {shown in ()} occurred before and after the reported date.

## STONE FRUIT

**Bob's Best Bets in Sweet Cherries for New York & Similar Climates as of 2002**

The following table was provided by Dr. Robert L. Andersen, Department of Horticultural Sciences, Geneva Experiment Station

<u>Early (dark flesh):</u>	<u>Cons (-s)</u>	<u>Pros (+s)</u>	<u>Rootstock</u>
<b>Cavalier</b>	<b>Shy</b>	<b>Q</b>	<b>Gi</b>
<b>Cristalina</b>	<b>BCT?, New</b>	<b>Sz, Q</b>	<b>Gi</b>
<u>Mid-early (dark flesh):</u>	<u>Cons (-s)</u>	<u>Pros (+s)</u>	<u>Rootstock</u>
<b>Sam</b>	<b>Q</b>	<b>LoCrk, Rel, Pol, Pro</b>	<b>Gi</b>
<b>Columbia</b>	<b>New</b>	<b>Q, Sz, Rel, LoCrk</b>	<b>Gi</b>
<b>BlackYork=NY1725</b>	<b>Sz</b>	<b>Rel, Pol, Pro</b>	<b>Gi?</b>
<u>Mid-late (dark flesh):</u>	<u>Cons (-s)</u>	<u>Pros (+s)</u>	<u>Rootstock</u>
<b>Attika = Kordia</b>	<b>OvS, Frost</b>	<b>Q+</b>	<b>Gi?</b>
<u>Late (dark flesh):</u>	<u>Cons (-s)</u>	<u>Pros (+s)</u>	<u>Rootstock</u>
<b>Regina</b>	<b>Shy</b>	<b>Q, LoCrk, SZ</b>	<b>Gi</b>
<b>Sweetheart</b>		<b>Rel, Pol, LATE</b>	<b>Gi</b>
<u>Light Flesh: Season</u>	<u>Cons (-s)</u>	<u>Pros (+s)</u>	<u>Rootstock</u>
<b>Emp. Francis</b> <b>M</b>	<b>Sz</b>	<b>Rel</b>	<b>Gi</b>

### Abbreviations

\***Bold** = Dr. Andersen's "Best Bet" professional opinion for the season of maturity based on pros out-weighting cons as determined by at least 7 seasons' trials at Geneva with 4 trees per kind, as of January, 2002.

BCT	= bacterial canker
BCT?	= bacterial canker susceptibility is not fully tested & show some signs of being problematic at GES
Crk	= cracks
Dwf	= dwarf (or semi-dwarf)
E	= early ripening season
Eblm	= early bloom emergence in spring
E-M	= early-mid ripening season
Gi	= Gisela Series or dwarfing or precocious root suggested
Gi?	= fruit sz probably will disappoint average grower
Hardy?	= wood hardness has shown signs of weakness @ GES
L	= late ripening season
LATE	= latest ripening of varieties shown
LoCrk	= low fruit cracking
M	= mid ripening season
Med	= mediocre
Mz	= mazzard, or similar level of vigor is needed in rootstock
New	= variety has been tested & proven to be very good at Geneva for 7 or more seasons but it has not yet been grower-tested in NY or similar climes
OvS	= over-sets causing reduced size, variable ripening, less Q
Pol	= pollinate other varieties well if same season bloom time
Pro	= processing-type, meaning heavy yielding, but fruit size medium or less
Q	= quality (a combination of taste & texture)
Q+	= best quality fruit of varieties we have tested
Red	= red, not mahogany or black skin
Rel	= reliable, consistently crops very well @GES
Rel?	= may be quite reliable based on data from similar climes
Shy	= shy cropping, meaning slow to crop & needs extra pollenizer trees % in commercial orchards
Soft	= soft flesh
Shy	= light cropper
Sz	= size
Sz+	= largest size fruit of varieties we have tested

Untr  
VarS

= Untried @ GES – we have it, but it has not cropped  
= variable fruit setting time at bloom which leads to variable fruit ripening and difficulty in quality control for once over harvest



