



## **Vermont Apple Newsletter**

*M. Elena Garcia, Lorraine Berkett, Terry Bradshaw, and Jessica Reardon*  
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## **Horticultural News**

*M. Elena Garcia, Horticulturist*

### **Notes on Honeycrisp**

By now, many of you have planted Honeycrisp because of the many good reports you have heard about this cultivar which comes from the University of Minnesota breeding program . The qualities for which this cultivar is known include: great taste and texture, good storage, and currently, it is bringing premium prices to growers. However, Honeycrisp is not a cultivar without problems and growers need to be aware of these problems before they decide whether to plant this cultivar or not. In this article, I will first give you the general information for this cultivar. Then, I will give you a summary of the findings on this cultivar from research conducted by the Apple Team at UVM HRC, and last, I will summarize a journal article that appeared in the October issue of the Compact Fruit Tree by D. Greene, UMass.

#### ***General cultivar description***

- Parentage: Macoun x Honeygold
- Tree vigor: Weak, upright to spreading
- Bloom: Early season
- Fruit
  - Size: Medium to large
  - Skin color: Deep red over yellow ; may have stripes
  - Flesh color: Scarlet red over a yellow background
  - Shape: Round
  - Uses: Dessert quality
- Harvest date: Mid Sept to Oct (125-140 DAFB)
- Storage: Excellent
- Advantages: Great tasting apple, seems to do well in storage; appears to be winter hardy in Vermont
- Disadvantages: Information needed on disease susceptibility.



**From our research at the HRC:**

The following is a summary of some findings on Honeycrisp from the 1995 planting of the NE-183 cultivar evaluation planting at the HRC. These trees are on M.9 root-stock. This data was collected from five trees in the planting.

Year	Average Harvest / Tree (lb)	Average Drops/ Tree (lb)	Average TCSA (cm <sup>2</sup> )
1998 (3 <sup>rd</sup> leaf)	17.6	0.2	7.26
1999 (4 <sup>th</sup> leaf)	28.6	2.6	9.80
2000 (5 <sup>th</sup> leaf)	21.6	2.6	10.30

**Cumulative Yield Efficiency** : 3.24 kg-cm-2 (3rd out of 23 cultivars in the planting).

(This is the yield over three years per tree/final tree trunk cross-sectional area. It integrates number of fruit per tree size).

**Three year summary of fruit evaluation (1998-2000)**

Average Harvest Date	Average Days from FB to Harvest	Average Starch Index at Harvest	Average Soluble Solids at Harvest (% brix)	Average Red Color (%)
9-Sep	117	5.9	12.4	57

Overall desirability (appearance and taste)	
Year	Scale of 1-5: (1=worst, 3= average, 5=best)
1998 (3 <sup>rd</sup> leaf)	4.6
1999 (4 <sup>th</sup> leaf)	3.9
2000 (5 <sup>th</sup> leaf)	4.4
Average Rating for all 3 years	4.3

**General observations :**

- Variable fruit and tree.
- Leaves show yellowing and spotting, beginning in the middle of the growing season. Trees look “sickly” .
- Some trees produced stripey fruit, others produced nearly 100% red fruit
- Trees were moderate-low in vigor, but relatively precocious
- Off- flavor fruit if not harvested at proper maturity

***From October 2001 issue of the Compact Fruit Tree. Vol. 34 (4).***

*Evaluation and growing Honeycrisp in New England . Duane W. Greene and Sarah A. Weiss. UMass*

- In general, Honeycrisp maintains firmness better than most varieties.  
Fruit that was harvested on 3 Sep and 16 Sep and stored at regular storage at 32°F for 18, 26, and 39 weeks lost no firmness.
- Other fruit quality parameters do decrease during storage.  
The fruit that did not lose firmness did show a decline in astringency, acidity, crispness, flavor and desirability.
- Leaves develop chlorotic areas making tree look unthrifty.
- Honeycrisp has the potential to develop soft scald.  
The severity of the problem is associated with geographical area, storage at low temperatures, late harvest, and prestorage manipulation.
- An off-flavor can develop while the fruit is on the tree.  
This off-flavor does not develop every year and the environmental conditions that favor the development of this conditions are not known. It is recommended to harvest Honeycrisp at the proper maturity stage to avoid this problem.
- Honeycrisp develops bitter pit and cork spot.  
The severity of these disorders can be minimized by the use of calcium sprays.
- Biennial bearing tendencies
- Redder may not necessarily be better for this cultivar. Waiting for this cultivar to develop good red color on the tree can create problems:  
Increases the risk of developing an off-flavor  
Increases the susceptibility to soft scald in storage
- This cultivar shows much variability in the field in growth, extent of red color in fruit, and type of red color.
- Honeycrisp develops more decay in storage than most common varieties.
- Crop load needs to be adjusted to get best fruit quality.
- The best time to harvest Honeycrisp is when the starch index (Cornell chart) is 5 and 6.
- This cultivar may require multiple harvest to maximize fruit quality.



## **From the USApple Association: The USApple Association would like to let you know what they do for the apple industry**

Dear Grower:

The U.S. Apple Association (US Apple) is fighting for the survival of America's apple growers. While our achievements over the past year significantly aided most members of the U.S. apple industry, our agenda remains far from complete. Your organization's continued financial support is critical to our continuing efforts on behalf of our nation's apple producers.

As you are aware, USApple Board of Trustees recently increased the dues for state and regional member associations from 4/10 of one cent per bushel to 6.5/10 of one cent per bushel, effective July 1, 2001. This increase was deemed essential to maintain and supplement the association's crisis communications, nutrition research and promotion, and government affairs efforts on behalf of the industry. It also marks the first time since 1989 that USApple has raised its dues rate for our member associations.

According to the U.S. Department of Agriculture's (USDA) final 2000 crop estimate, as published in July, Vermont's five-year average production for 1996 – 2000 is 1,085 (000) 42-pound units. At an assessment rate of \$.0065 per 42-pound unit, your state's total assessment amounts to \$7,053. As your organization usually pays these dues in 1 annual payment (\$7,053 for this year)

USApple generated a healthy return on your organization's investment in our activities over the past year, as demonstrated by the following list of accomplishments.

- USApple prevailed in the U.S. apple industry's two-year long dumping case against Chinese concentrate imports, with Commerce Department's decision to levy duties of up to 52 percent on Chinese apple juice concentrate imports. More recently, at USApple's urging, the Commerce Department closed a loophole that permitted some importers to circumvent the duties, applying anti-dumping duties on all forms of non-frozen Chinese apple juice concentrate. Apple growers received \$90.6 million more for their 1999 and 2000 juice apple crops than they would have received absent these activities, according to USDA statistics.
- USApple gained congressional approval of \$138 million in market loss and crop loss assistance for U.S. apple growers, as part of the 2001 agriculture appropriations act. As a result, more than 7,500 growers nationwide received

direct market loss assistance payments of up to \$28,000 per producer.

- USApple garnered a record purchase of 825,000 bushels of fresh apples by USDA for the school lunch and other domestic feeding programs, as well as 138 million pounds of processed apple products. These purchases assisted our industry by reducing excess supplies and significantly aided our industry's all-important fall marketing efforts. In total, USDA has purchased \$317 million worth of apples and apple products over the past three years thanks to USApple's efforts.
- USApple secured the purchase of approximately 100,000 bushels of apples by USDA as part of the Food for Progress Russian food aid program. This first-ever humanitarian aid purchase of fresh apples should open the door to additional purchases in the future, providing our industry with another important offshore outlet for fresh apples.
- USApple's nutrition research and promotion efforts in partnership with the Processed Apples Institute (PAI) generated more than 50 million favorable media impressions, with an equivalent advertising value of \$1.4 million. USApple and PAI have committed up to \$250,000 per year over three years to fund new apple nutrition research, and to promote the health attributes of apples and apple products to consumers throughout the year.
- USApple recently distributed its newly revamped fall media kit touting the health benefits of the bountiful 2001 U.S. apple crop to more than 750 influential food, health and nutrition reporters nationwide. The kit included USApple's new consumer health brochure, which was favorably reviewed by the American Dietetic Association's Nutrition Education for the Public Practice Group.
- USApple successfully launched a new healthy Christmas holiday tradition of leaving an apple for Santa rather than a fattening sweet, providing a boost to our industry's winter marketing efforts. USApple's accompanying SANTA Healthful Holiday Eating Guidelines promote apples and apple products as ideal healthy holiday foods.
- Recently, when Live! With Regis and Kelly co-hosts Regis Philbin and Kelly Ripa ( syndicated ABC) made negative comments about the safety of apples (an association of anthrax and eating apples), the USApple Association wrote producer Michael Gelman asking for a live apology. This apology was made during the show on October 17.

I hope your organization will continue to support these and the many other activities underway at USApple on behalf of Vermont's apple industry. Please contact USApple Communications Manager Harriet Pimm or me at (800) 781-4443 should you have any questions regarding your state's membership assessment.

Sincerely yours,

Kraig R. Naasz  
President & CEO



## ***IPM News***

*Lorraine P. Berkett, IPM Specialist*

### An IPM Checklist for Vermont — Reminders

Since this will be the last regularly-scheduled newsletter until March 2002, the following are some items you may want to consider from now until next March. Details and “how-to’s” regarding the items can be found in the New England Apple Pest Management Guide.

#### *November*

- ✓ After leaves have fallen to ground, perform **Apple Scab** sanitation practices.
- ✓ **Paint trunk** to protect against sudden temperature changes.
- ✓ If **Deer** repellents will be used, set them before Deer establish a feeding habit. Inspect and make repairs to Deer fence.
- ✓ **Clean, service and properly store** equipment and pesticides.

#### *December to March*

- ✓ **Evaluate completeness of your records** from the previous growing season. In addition to legal requirements, do they reflect scouting information and application of findings in decision-making, do they include tree health information, foliar and/or soil analyses? Does your record-keeping system need improvement?
- ✓ Use records to **review pest management strategy and results** from the previous growing season and make necessary adjustments.
- ✓ **Read** fact sheets, articles and other resources on the biology and life cycles of different orchard pests and beneficial organisms; **attend** fruit workshops and meetings to obtain updates on thresholds and IPM options; get on the mailing and email

lists for newsletters and alerts.

- ✓ **Review pesticide labels** for any changes in use, pre-harvest intervals, handling, disposal or storage.
- ✓ Review information on **non-target effects of pesticides** on biological control agents and determine what materials will be effective yet conserve beneficial organisms.
- ✓ Investigate sources of local **weather information**; determine what equipment will be used to monitor environmental conditions (i.e., rain, temperature, leaf wetness) in the orchard for pest models and for assessing spray conditions.
- ✓ Start any major **repairs** to orchard spray equipment so that it will be ready to calibrate and function properly when the season begins.
- ✓ **Order** IPM monitoring supplies.
- ✓ **Clean** and **sharpen** pruning tools.
- ✓ **Prune** trees to provide good tree structure but also to open canopy for light and air penetration, which will have both horticultural benefit (i.e., better fruit coloring with more light) and pest management benefits (i.e., make conditions less favorable for disease development; allows better pesticide penetration). Remove cankers, dead or weak wood. Remove mummified fruit.
- ✓ While pruning, note any sections of orchard that have high numbers of overwintering **European Red Mite** eggs.
- ✓ Check for **winter damage**. Look for peeling or cracked bark.
- ✓ Contact beekeeper and write a **pollination contract**
- ✓ Start **fertilizer** application based on foliar and soils analysis recommendations. Weak or overly vigorous trees will be more susceptible to certain arthropod pests and/or diseases.

### ***Another Reminder .... Vole Management Timeline***

Table 1. Timeline for Vole Management

Time of Year	Management Techniques
Autumn	<ul style="list-style-type: none"> <li>• Pick a 3-day stretch of sunny, dry weather to monitor voles and nontarget species.</li> </ul>
	<ul style="list-style-type: none"> <li>• Remove or mow fruit drops where feasible.</li> </ul>
	<ul style="list-style-type: none"> <li>• Post-harvest mowing if necessary.</li> </ul>
	<ul style="list-style-type: none"> <li>• Repair mouse guards.</li> </ul>
	<ul style="list-style-type: none"> <li>• After mid-November, when most migratory birds have left Vermont, apply rodenticide if warranted.</li> </ul>
Winter	<ul style="list-style-type: none"> <li>• Remove prunings and brush piles in and around the orchard.</li> </ul>

## ***A Look Back at the 2001 Season....***

### ***Disease Situation:***

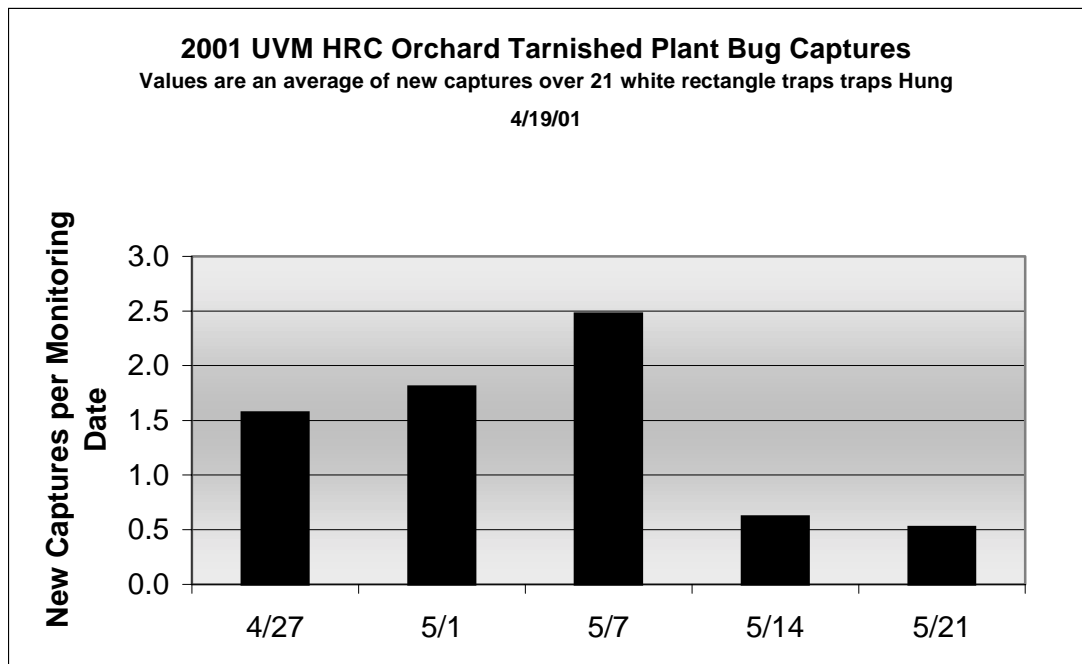
Probably the most significant disease event this past growing season was that this was the first time in recent history that some orchards did not have an **apple scab** infection period until bloom (May 12). What was significant about this infection period was that: (1) there was potentially high levels of overwintering inoculum because of the rainy, wet weather last year; (2) the scab fungus had overwintered well (i.e., the snow had provided a protective blanket and moisture for scabby leaves); and (3) few to none of the ascospores that had been matured up to May 12 had been released

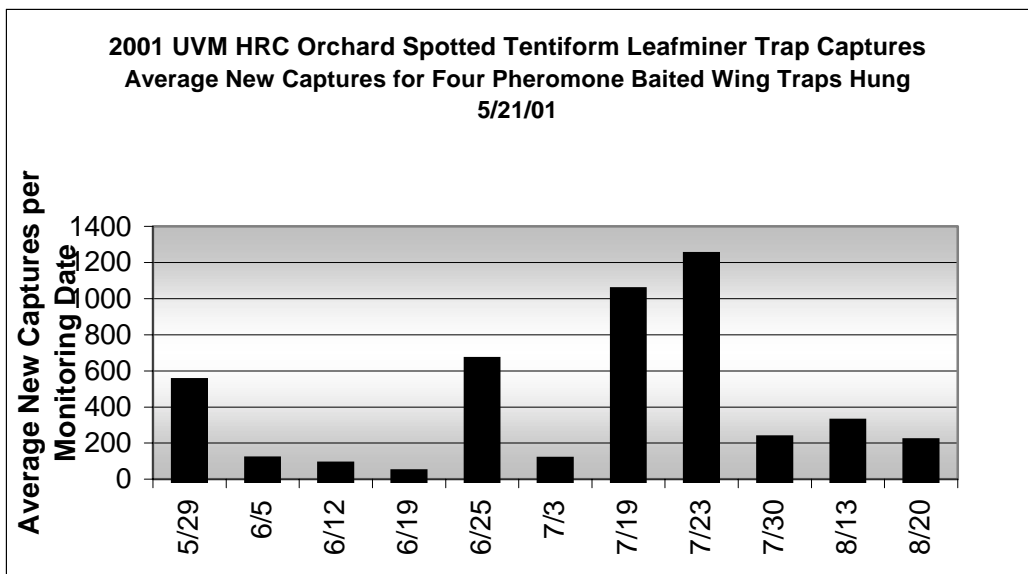
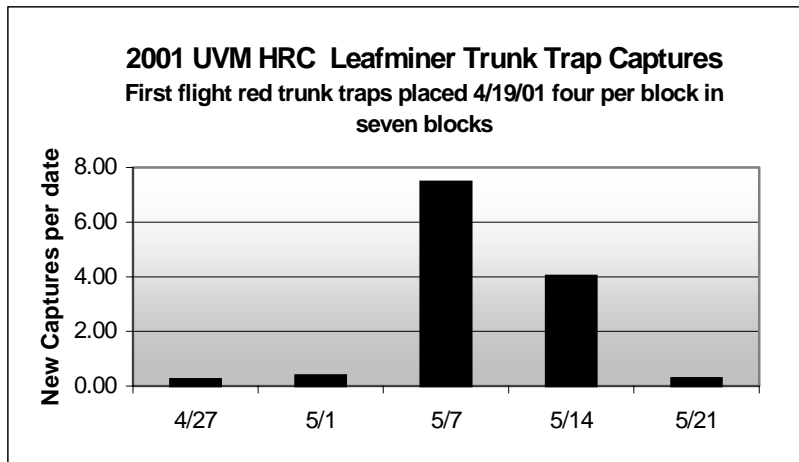
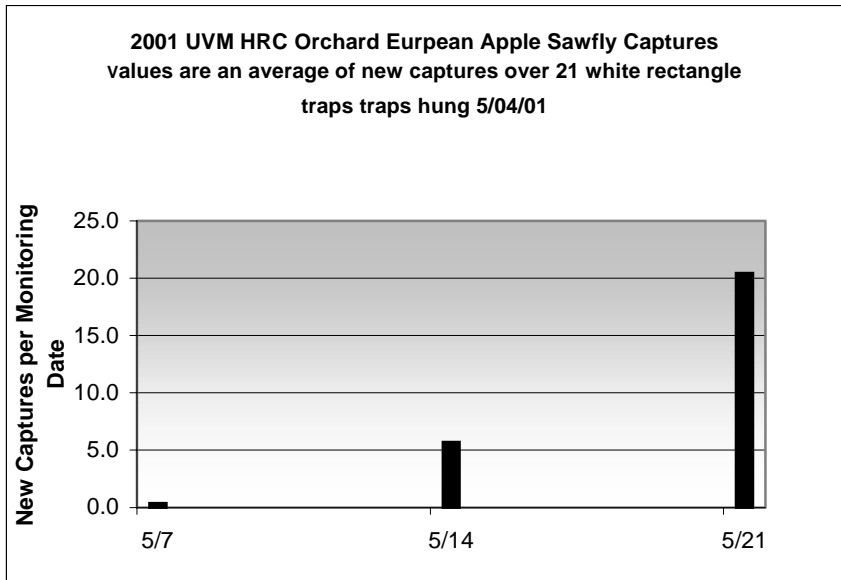
because of the lack of rain prior to that date.

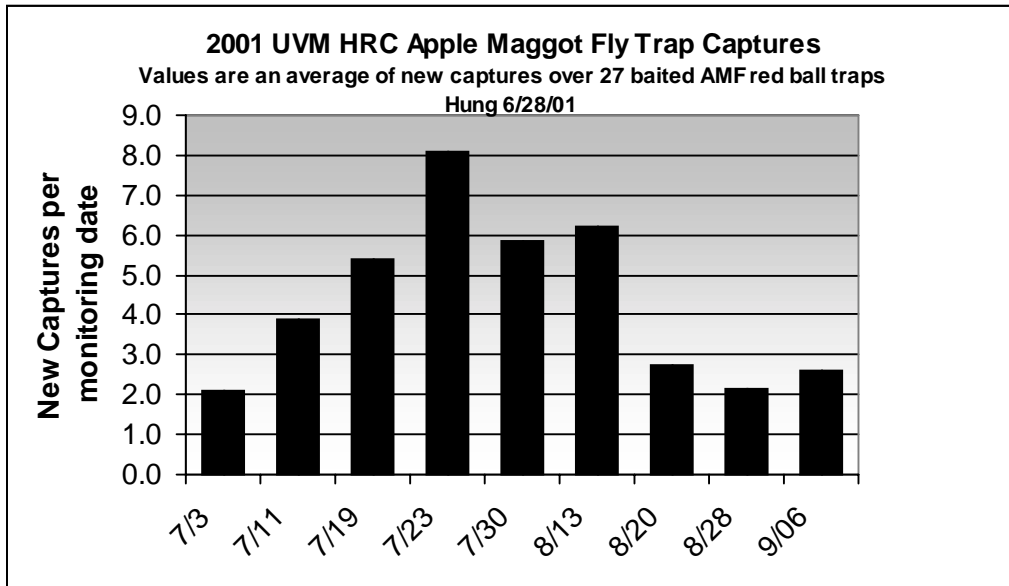
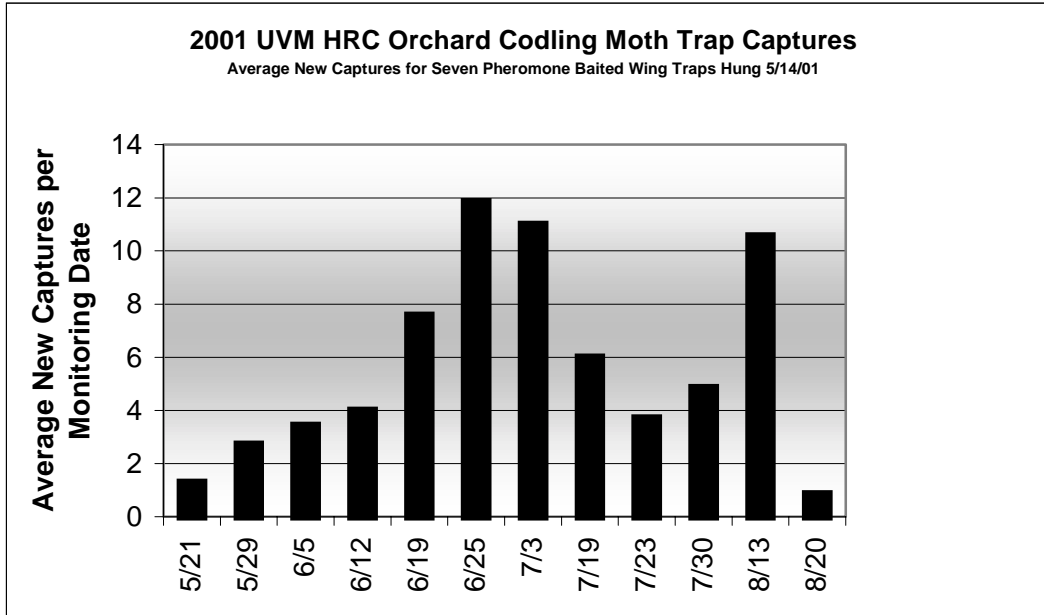
The dry weather during the growing season did help in scab management and hopefully, if scab lesions were found, they were only on the early foliage and not on the fruit. If growers did reduce their fungicide applications because of the dry weather, they may have ended up with more **powdery mildew**, but this can be addressed next year with timely applications of SI or strobilurin fungicides. Also, although the Maryblyt™ program indicated a “high risk” for **fire blight** infection over May 11-13 at 3 out of the 6 orchard sites we were monitoring (Dummerston, Shoreham, and So. Burlington), fortunately, no major outbreaks were reported (only a few Paulared trees in Shoreham were observed to have significant fire blight strikes). The dry conditions that occurred in the state throughout the growing season should have limited the development of **sooty blotch and fly speck**.

### ***Arthropod Situation:***

The record-breaking hot weather during the first few days of May may have played a role in the higher **Tarnished Plant Bug** activity that was observed this year. **Plum curculio** pressure also appeared higher this year than in the recent past. Other arthropod pest populations varied across the state with no widespread problems being evident.







## **Contact Information**

A Commitment to Excellence and Service:

If you have any questions or want to arrange for an orchard visit regarding your concerns, please call or write.

For horticulture questions contact:

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