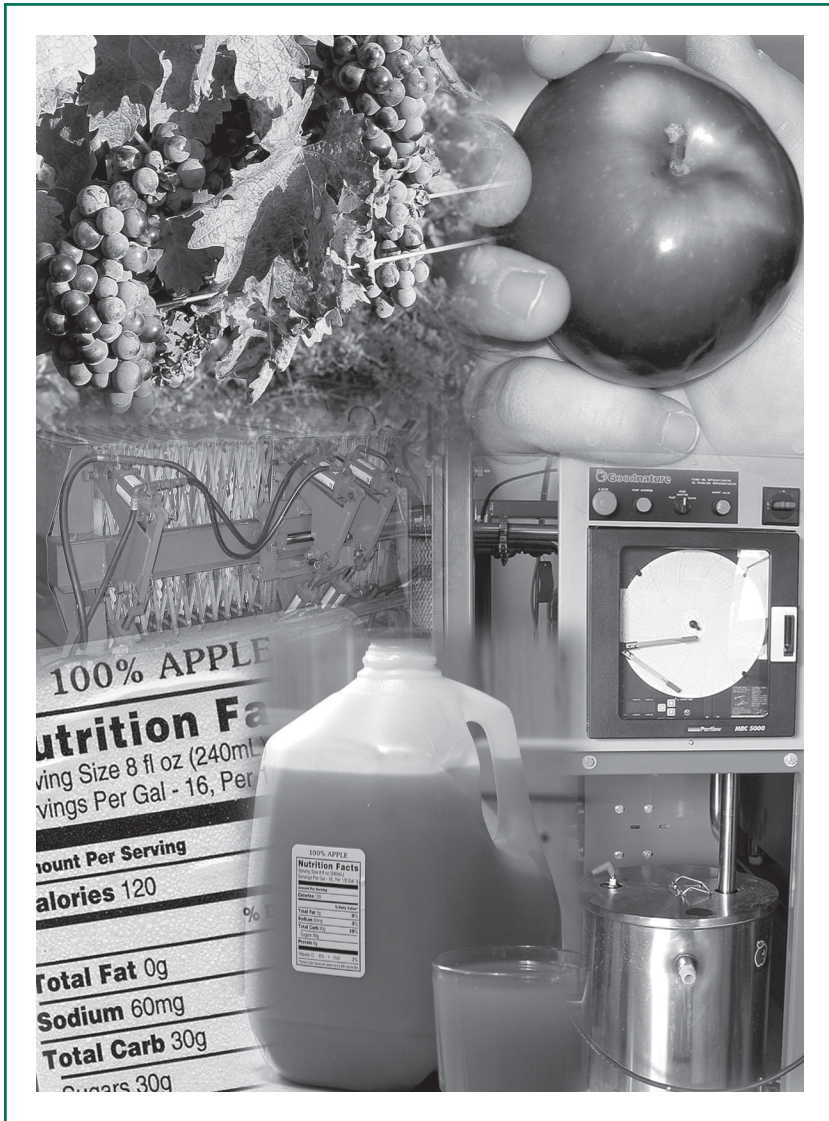


## Food Safety Begins on the Farm: A Grower Self Assessment of Food Safety Risks

# Juice and Cider



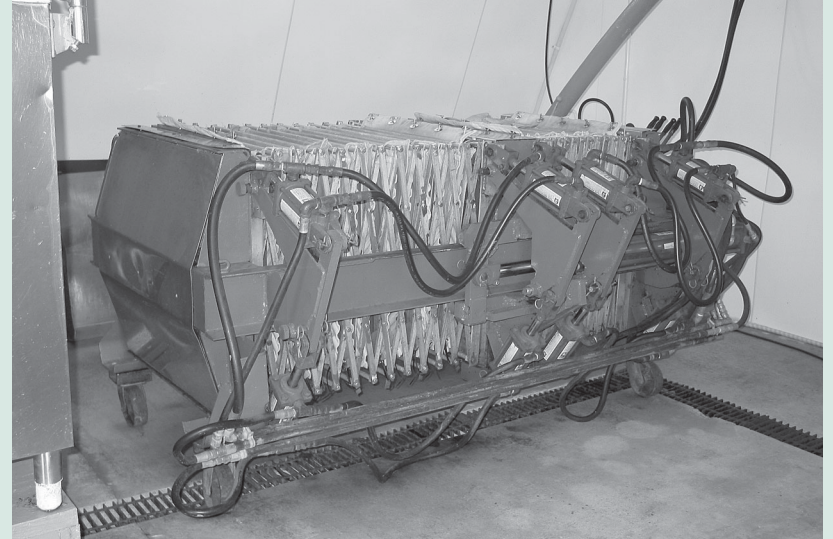


## Juice and Cider Production

In 2001, the Food and Drug Administration released the Juice HACCP Regulation under the Code of Federal Regulation 21 CFR 120. This regulation outlines specific requirements for the production of juice and cider. The worksheets that follow are meant to provide a summary of this regulation so you can begin to assess your juice or

cider operation. It is very difficult to summarize the entire regulation using the assessment format, so if you are a juice or cider producer, please refer to the regulation directly to determine how your particular operation is affected. As outlined in the worksheets, if you produce juice or cider for wholesale, someone in your operation **MUST** be trained and certified in Juice HACCP. Contact your local extension service to find certified training sessions in your area or check the website, <http://vm.cfsan.fda.gov/~comm/haccpjui.html>, for more information on Juice HACCP.

From a food safety perspective it is important to realize foodborne illnesses have resulted from the consumption of unpasteurized juice. Good agricultural practices that can be utilized to reduce risks include never using drops in the production of juice and cider and effectively culling crops to discard bruised or damaged fruit. These practices also have a positive impact on fresh market fruit by reducing microbial risks and increasing post harvest quality.





*As outlined in the worksheets, if you produce juice or cider for wholesale, someone in your operation **MUST** be trained and certified in Juice HACCP.*

# Juice and Cider Production

## Good Agricultural Practices

## Practices Requiring Attention






Management Area	Best Practice	Minor Adjustments Needed	Concerns Exist; Examine Practice	Needs Improvement: Prioritize Changes Here
<b>Training and certification in Juice HACCP</b> 	Farm personnel that control cider production are trained and certified in Juice HACCP as required through 21 CFR 120. Cider is only produced when certified person is present.	At least one person on the farm who handles cider production is trained and certified in Juice HACCP.		No one on the farm is certified in Juice HACCP
<b>Juice and cider pasteurization for wholesale</b> 	All juice and cider produced is pasteurized (heating, UV, etc.) to achieve a minimum 5-log reduction of pertinent pathogens in the final product prior to sale. Records are kept.			Juice or cider is not pasteurized or treated in any way to kill potential pathogens.
<b>Production of non-pasteurized apple juice and cider for growers who direct market</b>	Absolutely no drops are used in the production of non-pasteurized cider <b>AND</b> apples are sanitized prior to juicing.	Absolutely no drops are used in the production of non-pasteurized cider.		Any drops are often used in the production of cider and juice.
<b>Labeling for non-pasteurized apple juice and cider for growers who direct market</b>	Must be properly labeled so consumers recognize risk of consuming unpasteurized apple juice and cider. Can sell unpasteurized product <b>ONLY</b> if you label each container <b>AND ONLY</b> direct market to consumer.			Unpasteurized juice and cider is not properly labeled <b>OR</b> is sold in wholesale market.

# Juice and Cider Production

## Good Agricultural Practices

## Practices Requiring Attention



Management Area	Best Practice	Minor Adjustments Needed	Concerns Exist; Examine Practice	Needs Improvement: Prioritize Changes Here
<b>Patulin content in apple juice and cider**</b> 	Apple juice and cider is tested and known to be <50 parts per billion. Producers test at least once per season and producers who press apples after December and throughout the next year should test at least three times.		Apple juice and cider is tested and found to be >50 parts per billion.	Never test for patulin in finished product.
<b>Citrus juice production</b> 	Citrus juice is pasteurized prior to sale <b>OR</b> citrus fruit is treated to achieve 5-log reduction prior to squeezing. Method for achieving 5-log reduction must be scientifically valid.			Citrus is not treated prior to squeezing to reduce pathogens and is not pasteurized.
<b>Adherence to 21 CFR 120-FDA Juice HACCP Regulation</b> 	Farm owner and farm manager are aware of Juice HACCP regulation and follow the regulation.			Farm owner or farm manager not aware of Juice HACCP regulation. Farm not in compliance with regulation.

\*\* Sorting and culling apples to exclude damaged and rotten fruit prior to squeezing will reduce patulin levels.

# Juice and Cider Production Action Plan

Date: \_\_\_\_\_ Reviewer: \_\_\_\_\_ Field or Commodity: \_\_\_\_\_

Management Area	Best Practice	Minor Adjustment	Concerns Exist	Prioritize Changes Here	Your Plans to Reduce Risks			
					Action for Improvement	Person Responsible	Estimated Cost	Target Date
Training and certification in Juice HACCP								
Juice and cider pasteurization for wholesale								
Production of non-pasteurized apple juice and cider for growers who direct market								
Labeling for non-pasteurized apple juice and cider for growers who direct market								
Patulin content in apple juice and cider								

# Juice and Cider Production Action Plan

Date: \_\_\_\_\_ Reviewer: \_\_\_\_\_ Field or Commodity: \_\_\_\_\_

Management Area	Best Practice	Minor Adjustment	Concerns Exist	Prioritize Changes Here	Your Plans to Reduce Risks			
					Action for Improvement	Person Responsible	Estimated Cost	Target Date
Citrus juice production								
Adherence to 21 CFR 120-FDA Juice HACCP Regulation								