



United States  
Department of  
Agriculture



Federal Crop  
Insurance  
Corporation

FCIC-20550U (01-2025)

# **APPLE TREE CROP INSURANCE STANDARDS HANDBOOK**

## **2026 and Succeeding Crop Years**

**UNITED STATES DEPARTMENT OF AGRICULTURE  
FARM PRODUCTION AND CONSERVATION  
RISK MANAGEMENT AGENCY**

<b>TITLE: Apple Tree Crop Insurance Standards Handbook</b>	<b>NUMBER: FCIC-20550U OPI: Product Administration and Standards Division</b>
<b>EFFECTIVE DATE: 2026 and Succeeding Crop Years</b>	<b>ISSUE DATE: January 29, 2025</b>
<b>SUBJECT:</b>  Provides the approved standards and procedures for administering the Apple Tree Crop Insurance Program.	<b>APPROVED:</b>  <i>/s/ John W. Underwood for</i>  Deputy Administrator for Product Management

**REASON FOR ISSUANCE**

This handbook provides the approved standards and procedures for administering the Apple Tree Crop Insurance Program for the 2026 and succeeding crop years. This handbook replaces FCIC-20550U Apple Tree Crop Insurance Standards Handbook, dated January 29, 2021. This handbook is effective upon approval and until obsoleted.

**SUMMARY OF CHANGES**

Listed below are the significant content changes to the FCIC-20550U Apple Tree Crop Insurance Standards Handbook. All changes and additions are highlighted. Minor changes and corrections are not included in this listing. \*\*\* used throughout the handbook indicate where major deletions occurred.

<b>Reference</b>	<b>Description of Change</b>
Throughout Handbook	Updated handbook formatting, crop year references, and paragraph numbering.
Cover page	Deleted the blank page after the cover page.
TP	Control Chart was removed.
<a href="#">Para. 1</a>	Renamed paragraph and subparagraph titles. Revised Para. 1A language and added Source of Authority, Civil Rights Act, and Related Handbooks language. Moved previous Part 1 paragraph 7 to Part 1 paragraph 2.
<a href="#">Para. 2A</a>	Added AIP Responsibilities language.
<a href="#">Para. 2C</a>	Revised paragraph numbering for stage table reference.
<a href="#">Part 2</a>	Renamed to Insurability. Moved previous Part 1 paragraphs 3-6 to Part 2 paragraphs 11-14. Revised paragraph numbering and added Reserved section.
<a href="#">Para. 14C</a>	Added CAT Coverage language.
<a href="#">Part 3</a>	Renamed to Apple Tree Crop Provisions and Program Details. Revised paragraph numbering and added Reserved section.
<a href="#">Para. 21D</a>	Added to clarify insurable acreage.
<a href="#">Para. 23</a>	Revised paragraph title to include Unit Value. Added language for Unit Value under Para. 23B.
<a href="#">Para. 25C</a> and <a href="#">25D</a>	Revised the unit division requirements.
<a href="#">Part 4</a>	Moved previous Part 3 language to Part 4 and added Reserved section.
<a href="#">Exhibit 1</a>	Retitled to Acronyms and Abbreviations. Added missing acronyms and abbreviation to table.

## SUMMARY OF CHANGES (Continued)

Reference	Description of Change
<a href="#">Exhibit 2</a>	Revised definitions to match CP. Added definitions for average revenue value, crop year, fire blight, and reference revenue value. Revised definition for type.
<a href="#">Exhibit 3</a>	Revised the Apple Tree PAW Example, under Crop & Type section, to show variety instead of group.
<a href="#">Exhibit 5</a>	Revised the Rate column to Range Class on the Apple Tree PAIR Example. In Remarks section, corrected paragraph reference number regarding fire blight instructions.
<a href="#">Exhibit 8</a>	Updated 22' × 18' Setting Distance and Approximate Number of Trees per Acre.

\*\*\*

# APPLE TREE CROP INSURANCE STANDARDS HANDBOOK

## TABLE OF CONTENTS

<b>PART 1: GENERAL INFORMATION AND RESPONSIBILITIES .....</b>	<b>1</b>
1    General Information.....	1
2    Responsibilities.....	2
3-10  (Reserved).....	3
<b>PART 2: INSURABILITY.....</b>	<b>4</b>
11   Availability.....	4
12   Eligibility.....	4
13   Important Dates.....	4
14   Coverage Levels, Price Elections, and Policy Changes .....	5
15-20 (Reserved).....	6
<b>PART 3: APPLE TREE CROP PROVISIONS AND PROGRAM DETAILS.....</b>	<b>7</b>
21   Insured Crop.....	7
22   Causes of Loss .....	8
23   Establishing the Amount of Protection for the Unit and Unit Value.....	8
24   Acceptable Records.....	11
25   Unit Division .....	13
26   Excluded Coverage .....	14
27   Service Forms .....	15
28-30 (Reserved).....	15
<b>PART 4: ENDORSEMENTS AND OPTIONS.....</b>	<b>16</b>
31   Endorsements and Options.....	16
32-40 (Reserved).....	19
<b>EXHIBITS .....</b>	<b>20</b>
Exhibit 1  Acronyms and Abbreviations.....	20
Exhibit 2  Definitions.....	21
Exhibit 3  Apple Tree Orchard Producer Pre-Acceptance Worksheet .....	26
Exhibit 4  Grove Identification Map & Instructions for Completion .....	31
Exhibit 5  Apple Tree Orchard Pre-Acceptance Inspection Report.....	34
Exhibit 6  Trellis Inspection Report.....	39
Exhibit 7  Apple Tree Age Determinations .....	41
Exhibit 8  Setting Distances and Approximate Number of Trees Per Acre .....	42
Exhibit 9  Average Revenue Value and Maximum and Minimum Actual CTV Reference Prices Examples .....	43
Exhibit 11 Optional Unit Determinations .....	60
Exhibit 12 Comparison of Symptoms of Fire Blight to Blossom Blast .....	61

## PART 1: GENERAL INFORMATION AND RESPONSIBILITIES

### 1 General Information

---

#### A. Purpose and Objective

The purpose of this handbook is to provide supplementary instructions for establishing apple tree crop insurance coverage in accordance with the Apple Tree CP (26-AT), Apple Tree LASH (FCIC-20550L), GSH (FCIC-18190), and the CIH (FCIC-18010). The supplemental RMA-issued standards for this crop and crop year are in effect as of the signature date for this crop handbook at [www.rma.usda.gov/policy-procedure/crop-underwriting-standards](http://www.rma.usda.gov/policy-procedure/crop-underwriting-standards).

This handbook remains in effect until superseded by reissuance of the entire handbook subject to any directives contained in any bulletin or FAD released by RMA. A bulletin or FAD can supersede applicable portions of the original handbook.

#### B. Source of Authority

The FCIC Board of Directors approved the Apple Tree 508(h) during the FCIC Board meeting in 2021, under section 508(h) of the Federal Crop Insurance Act. AT was implemented on January 23, 2020, for the 2020 reinsurance year and 2021 commodity year.

#### C. Title VI of the Civil Rights Act of 1964

The USDA prohibits discrimination against its customers. Title VI of the Civil Rights Act of 1964 provides that “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” Therefore, programs and activities that receive Federal financial assistance must operate in a non-discriminatory manner. Also, a recipient of RMA funding may not retaliate against any person because they opposed an unlawful practice or policy, or made charges, testified, or participated in a complaint under Title VI.

It is the AIPs’ responsibility to ensure that standards, procedures, methods, and instructions, as authorized by FCIC in the sale and service of crop insurance contracts, are implemented in a manner compliant with Title VI. Information regarding Title VI of the Civil Rights Act of 1964 and the program discrimination complaint process is available on the USDA public website at [www.usda.gov/oascr](http://www.usda.gov/oascr). For more information on the RMA Non-Discrimination Statement, see the DSSH.

## 1 General Information (Continued)

### D. Related Handbooks

The following table provides handbooks related to this handbook.

Handbook	Relation/Purpose
CIH	This handbook provides the official FCIC-approved underwriting standards for policies administered by AIPs for the General Administrative Regulations, Common Crop Insurance Policy BP, and Area Risk Protection Policy BP.
DSSH	This handbook provides the official FCIC-approved form standards for use in the sale and service of any eligible Federal crop insurance policy; required statements and disclosures; and the standards for submission and review of non-reinsured supplemental policies in accordance with the SRA.
GSH	This handbook provides the official FCIC-approved standards for policies administered by AIPs under the General Administrative Regulations, Common Crop Insurance Policy Regulations BP, including the CAT Endorsement; the Area Risk Protection Insurance Policy BP; the Stacked Income Protection Plan of Insurance; the Rainfall Index Plans; and the Whole-Farm Revenue Protection Pilot Policy.
LAM	This handbook provides the official FCIC-approved general loss adjustment standards for all levels of insurance provided under FCIC unless a publication specifies that none or only specified parts of this handbook apply.
AT LASH	This handbook provides specific loss adjustment procedures for AT.

- (1) Terms, abbreviations, and definitions general (not crop specific) to the Apple Tree insurance program are identified in the CIH, GSH, and LAM.
- (2) Terms, abbreviations, and definitions specific to the Apple Tree insurance program are listed in [Exhibits 1](#) and [2](#) herein, and specific procedures in this handbook are identified as additions or exceptions to those general procedures contained in the CIH.

## 2 Responsibilities

### A. AIP

AIPs must use standards, procedures, methods, and instructions as authorized by FCIC in the sale and service of policies. Each AIP is responsible for using RMA-approved procedures. Procedures, herein, must be administered on a policy basis.

### B. Agent

In addition to the responsibilities discussed in the CIH, the agent will assist the insured in completing the annual acreage report, [PAW \(AT\)](#), and advise insureds of their responsibility to comply with all of the reporting requirements of the policy.

**C. Insured**

To be eligible for the Apple Tree Insurance Program, insureds must comply with all terms and conditions of the BP and CP.

- (1) The agent will assist the insured to ensure that the stage-blocks reported by the insured are established in accordance with the definitions of block and stage found in the CP and the stage table in [Para. 23E](#) of this handbook.
- (2) The agent will assist the insured in correctly reporting the number of trees by block within the unit by utilizing plat maps, Grove Identification Maps, past acreage reports, and/or other relevant sources.
- (3) In addition to the responsibilities discussed in the CIH, the insured must accurately report the number of trees in each unit by stage-block on the PAW (AT) (including set out dates) and the acreage report. Stage-block locations are identified on the Orchard Identification Maps.

## PART 2: INSURABILITY

### 11 Availability

---

The AT Insurance Program is patterned after other tree-based dollar amount of insurance programs (Plan 40) and provides an indemnity for trees that are damaged during the insurance period by the listed perils contained in the CP. The program is administered under the guidelines contained in this handbook and the CIH.

The AT program is available in counties where the AT Insurance Program is offered in the AD.

Written agreements are not allowed under the AT Insurance Program.

### 12 Eligibility

---

#### A. Apple Tree Program

The AT program is available to all persons with a share in an apple tree orchard in the counties listed in the AD for the purpose of producing a crop intended to be sold for human consumption in accordance with the BP, CP, and SP.

#### B. Ineligible Persons

Any person with a delinquent federal crop insurance debt to RMA or an AIP, or who is otherwise ineligible under the BP, may not obtain AT insurance coverage.

### 13 Important Dates

---

#### A. Contract Change Date

January 31 preceding the cancellation date.

#### B. Sales Closing Date

April 15.

#### C. Cancellation and Termination Dates

April 15 before the beginning of the crop year.

#### D. Premium Billing Date

March 1 of the crop year.

#### E. Acreage Reporting Date

For new and carryover insureds, April 15.



## 13 Important Dates (Continued)

---

### F. Beginning of the Insurance Period Dates

- (1) For new policies: On July 1 following the SCD date unless the AIP notifies the insured that all or a part of the insured's trees are not insurable.
- (2) For carryover policies: July 1 of the crop year.

### G. Calendar Date for the End of the Insurance Period

June 30 of the crop year.

## 14 Coverage Levels, Price Elections, and Policy Changes

---

### A. Coverage Levels

The insured may select a different coverage level for each insured apple tree type, as specified in section 3 of the CP (e.g., the insured may elect the 75 percent coverage level on one type and the 65 percent coverage level on a different type). However, if the insured elects the CAT level of insurance, the CAT level of coverage will be applicable to all insured apple tree acreage in the county.

### B. Price Elections (Tree Reference Price)

The insured may select different price elections by type. Additionally, the insured may elect a different percentage of the maximum price election available for each type. For example, if the insured chooses 100 percent of the maximum price election for one type, the insured may choose 75 percent of the maximum price election for another type.

### C. CAT Coverage

If the insured elects the CAT Endorsement for any type of the insured crop, CAT coverage (50 percent coverage level/55 percent price election) will be applicable to all insured apple tree acreage of the crop in the county.

### D. Policy Changes

Changes to the insurance coverage that would become effective for the current crop year are limited as follows:

- (1) For new policies, changes may not be made after the SCD.
- (2) In subsequent years, for carryover policies, the insured may elect, prior to the SCD, a higher coverage level, higher price percentage, or optional coverage on the applicable form.

**D. Policy Changes (Continued)**

- (3) The insured may:
  - (a) by the SCD, elect:
    - (i) a higher coverage level;
    - (ii) a higher price percentage; or
    - (iii) to add optional coverage (CTVE, Fire Blight Endorsement in states where the endorsement is an optional election, or OLO).
  - (b) by the ARD:
    - (i) increase the insured share; or
    - (ii) report additional insurable trees such that the amount of protection increases more than ten percent. The additional trees must be inspected and accepted before insurance will attach.
- (4) If insured damage is evident at the time the election is made under Para. 14D(2) or if damage occurs after the SCD but before the date insurance coverage attaches for the crop year under Para. 14D(3)(a) or (b), any election or change made under Para. 14D(2) or (3) will not be effective for the crop year for which the election or reported change was made.

**15-20 (Reserved)**

---

## PART 3: APPLE TREE CROP PROVISIONS AND PROGRAM DETAILS

### 21 Insured Crop

---

#### A. Insured Commodity

The insured commodity is listed in the AD and SP.

#### B. Insurability

In accordance with section 8 of the BP, the insured crop will be all apple trees in the county for which a premium rate is quoted in the AD:

- (1) that are grown in the county listed on the insured's application;
- (2) that are adapted to the production area;
- (3) in which the insured has a share;
- (4) that are at least one year of age on July 1 of the current crop year;
- (5) that have the potential to produce a yield typical of a healthy tree of the same age as the subject trees;
- (6) that are grown for the production of a commodity (i.e., apples) to be sold for human consumption; and
- (7) that are insured under the Fire Blight Endorsement as specified in the SP. (See [Para. 31D](#) for instruction regarding administration of the Endorsement.)

#### C. Exclusions

In addition to the exclusions listed in section 8 of the BP, the insured crop will not include any trees that:

- (1) are non-grafted seedlings (grown from seed);
- (2) are unsound, diseased, or unhealthy;
- (3) are toppled or leaning and that have not been reset (see the definition of reset);
- (4) were damaged before the beginning of the insurance period. If trees suffered such damage the previous crop year, then insurance will not attach until the previous year's damage is determined, the insured submits a revised acreage report, and the trees are accepted by the AIP; or
- (5) are inspected by the AIP and considered unacceptable.

#### D. Insurable Acreage

Apple trees interplanted with other perennial crops are insurable unless the AIP inspects the acreage and determines it is not insurable.

**A. Crop Provisions – Insured Causes**

The CP provide crop insurance coverage only against the following causes of loss that occur within the insurance period:

- (1) freeze;
- (2) wind (leaning or toppled tree damage);
- (3) hail;
- (4) volcanic eruption (volcanic ash);
- (5) fire, unless weeds and other forms of undergrowth have not been controlled or pruning debris removed from the orchard;
- (6) insects, diseases, and other pathogens, as specifically provided by the SP or by a separate endorsement; and
- (7) failure of the irrigation water supply caused by an unavoidable, naturally occurring event that occurs during the insurance period.

**B. Crop Provisions – Exclusions**

In addition to causes of loss excluded in section 12 of the BP:

- (1) Wind damage due to the failure of inadequately constructed or poorly maintained trellis system; or
- (2) Damage other than actual damage to the tree due to the insured causes specified above is not insured except as provided in section 13(e) of the CP.

---

**23** Establishing the Amount of Protection for the Unit and Unit Value

---

**A. Amount of Protection (unit)**

The dollar amount of protection for the unit is calculated by multiplying the number of insurable trees reported by the insured in each stage-block by the applicable tree reference price for each stage-block by the price percentage selected by the insured for the type, totaling these values, and then multiplying this result by the insured's coverage level for the type.

- (1) The applicable reference price is the Tree Reference Price shown in the AD (referred to in the CP as the insured's [your] tree reference price).
- (2) Under the CTVE, the applicable reference price is the Maximum CTV Reference Price shown in the AD. (The insured may elect to provide actual sales records to determine CTV Reference Prices. See [Exhibit 9](#).)

**B. Unit Value**

The unit value is the dollar amount determined for all insurable trees in each stage-block in the unit on the day before any tree loss occurs times the applicable reference price for each stage-block, totaling these values (see Para. 23A above) and then multiplying this result times the insured’s coverage level. The unit value is the basis for the indemnity and calculation of the URF.

**C. Certification**

Applicants for insurance certify the numbers and ages of trees to be insured by completing and submitting an Apple Tree Orchard Producer PAW (shown in Exhibit 3 with instructions for completion) by the ARD.

- (1) The applicant identifies the blocks of trees in each unit and provides information about the number of trees and planting dates used to designate the stage-blocks that comprise each unit.
- (2) The applicant also provides a Grove Identification Map (shown in Exhibit 4 with instructions for completion) that shows locations of the stage-blocks identified in the PAW.
- (3) Insureds are not required to submit new PAW or maps in subsequent years of coverage unless changes occur which alter the numbers of trees and/or stage-block designation, trees are damaged (see section 8(b)(4) of the CP) or as required by the CIH. The insured may use the original PAW to certify that no changes have occurred. [See Exhibit 3, Remarks instructions and sample worksheet.]

**D. 75/25 Rule for Determining Tree Stages**

- (1) Insureds must report trees by block on the Apple Tree Orchard Producer PAW (shown in Exhibit 3).
  - (a) For blocks in which 75% or more of the trees are the same stage, the insured may report the block as one stage-block.

**Example 1:** An insured has one unit of standard density trees containing 400 stage III trees, 50 stage II trees, and 50 stage I trees.

The block may be reported as follows:

Block No.	Stage-Block	Stage	Number of Trees
1	1-III	III	500

The insured elects a 75% coverage level and 100% price percentage. The stage III tree reference price is \$51, and the maximum CTV reference price is \$161.

Amount of protection Tree =  $[500 \times (\$51 \times 100\%)] \times 75\% = \$19,125$   
 Amount of protection CTVE =  $[500 \times (\$161 \times 100\%)] \times 75\% = \$60,375$

**D. 75/25 Rule for Determining Tree Stages (Continued)**

**Example 2:** The 50 stage I trees in the preceding example could be reported as a separate block if there were a distinct change in planting pattern in one area of the orchard (e.g., end rows at the edge of an orchard).

The insured may report the blocks as follows:

Block No.	Stage-Block	Stage	Number of Trees
1	1-III	III	450
2	2-I	I	50

The stage I tree reference price is \$25.

Amount of protection Tree =  $[450 \times (\$51 \times 100\%)] + [(50 \times (\$25 \times 100\%))] \times 75\% = \$18,150$

Amount of protection CTVE =  $[450 \times (\$161 \times 100\%)] \times 75\% = \$54,338$

The CTV Amount of Protection includes only the stage-III block. Stage-I blocks are not eligible for the CTVE.

- (b) For blocks in which less than 75% of the trees are the same stage, the insured must separate the blocks into stage-blocks and report the number of trees in each stage-block.

**Example 3:** An insured has one unit of standard density trees containing 300 stage III trees, 100 stage II trees, and 100 stage I trees.

The block must be reported as follows:

Block No.	Stage-Block	Stage	Number of Trees
1	1-III	III	300
1	1-II	II	100
1	1-I	I	100

The instructions contained in the previous subparagraph **D(1)(b)** would be applied to this example for reporting purposes.

The insured elects a 75% coverage level and 100% price percentage. The tree reference prices are \$51 for stage III, \$29 for stage II, and \$25 for stage I.

The maximum CTV reference prices are \$161 for stage III; \$69 for stage II.

**D. 75/25 Rule for Determining Tree Stages (Continued)**

Amount of protection Tree =  $[100 \times (\$25 \times 100\%)] + [100 \times (\$29 \times 100\%)] + [300 \times (\$51 \times 100\%)] \times 75\% = \$15,525$

Amount of protection CTVE =  $[300 \times (\$161 \times 100\%)] + [100 \times (\$69 \times 100\%)] \times 75\% = \$41,400$

- (c) If the trees described in (b) were inter-planted, the three stage-blocks would be shown in the same location on the Grove Identification Map.

**E. Tree Stages**

Tree stages will be based on the number of crop years since the trees were set out as follows:

Stage as of July 1 Following Each Complete 12-Month Period Following Event Crop Year  
**Standard Density Orchard**

Event Crop Year	Crop Year 2024 – 2025	Crop Year 2026 – 2029	Crop Year 2030+
Set Out Calendar Year – Spring 2023	Stage I	Stage II	Stage III

Stage as of July 1 Following Each Complete 12-Month Period Following Event Crop Year  
**High Density Orchard**

Event Crop Year	Crop Year 2024	Crop Year 2025 – 2026	Crop Year 2027+
Set Out Calendar Year – Spring 2023	Stage I	Stage II	Stage III

**24** Acceptable Records

**A. Acceptable Records**

Acceptable records may be requested at the time of loss to substantiate the tree counts and stages reported by applicants/insureds. Insureds are not required to submit copies of their records to the AIP unless required by the loss adjuster at the time of claim settlement due to discovery of a discrepancy between the stage-blocks that were reported for the unit and the actual numbers and stages of trees in the unit. \*\*\*

**B. Record Types**

The following types of records are acceptable, if the records indicate the location, the number of trees, and planting dates:

- (1) planting records (orchard management records); and

**B. Record Types (Continued)**

- (2) AIP recorded evidence, which includes PAIRs, acreage reports, and any other documentation of tree ages that was used to establish insurance coverage for the trees.

**C. Apple Tree Orchard Pre-Acceptance Worksheet and Grove Identification Map**

- (1) Insureds should be encouraged to obtain and use acceptable records to prepare an Apple Tree Orchard PAW and Grove Identification Map. (See Exhibits 3 and 4 for completion instructions and sample worksheet and map.)
- (2) The PAW and Grove Identification Map are submitted with the application. For subsequent crop years, the PAW is completed annually (self-certification allowed following year of application) and submitted by the ARD. The Grove Identification Map is also used in conjunction with the PAIR (see Exhibit 5).
- (3) The applicant/insured certifies:
  - (a) by stage-block for each unit, the numbers and age of trees to be insured and the applicable stage, by completing a PAW (see Exhibit 7 for instructions on determining tree age); and
  - (b) other information contained on the PAW.

**D. Tree Numbers and Stage Determinations**

- (1) A visual inspection is required to establish the unit value for claim settlement and will be completed by a loss adjustment contractor or company employee who has been trained in loss adjustment procedures to determine the actual (existing) tree numbers and stages.
  - (a) If an inspection reveals no discrepancy between the reported and actual numbers and stages of trees, the loss adjuster (or trained company employee) should sign and date the PAW that was submitted by the insured to verify that the information was found to be accurate.
  - (b) If an inspection reveals a discrepancy between the reported and actual numbers and stages of trees, the loss adjuster can:
    - (i) request to examine the records used by the insured to complete the PAW and Grove Identification Map;
    - (ii) establish the numbers of trees in each stage-block using the setting distances shown in Exhibit 8; or
    - (iii) conduct a tree count.



## 24 Acceptable Records (Continued)

---

### D. Tree Numbers and Stage Determinations (Continued)

- (2) AIPs may use a PAW and the instructions provided in [Exhibit 3](#) to establish the stage-blocks of trees in each unit at the time of loss, if the information provided by the policyholder was not accurate. Both the insured and the AIP representative should sign and date the revised PAW.

## 25 Unit Division

---

### A. Whole-Farm Units

Whole-farm units as provided in Section 34(a)(1) and (3) of the BP are not applicable.

### B. Basic Unit

A basic unit as defined in the BP will apply.

### C. Optional Units

- (1) Optional units may be established by: \*\*\*
  - (a) organic and non-organic farming practice as provided in section 34(c)(3) of the BP;
  - (b) located on non-contiguous land;
  - (c) type; or
  - (d) separate orchards located on contiguous acreage that is separated from any other orchard on such acreage and that meets the minimum distance and acreage requirements specified in the SP (see [Exhibit 11](#)).
- (2) Optional units by land location as provided in section 34(c)(1) of the BP and irrigation practice as provided in section 34(c)2 of the BP are not applicable.

### D. Enterprise Units

Section 34(a)(2) of the BP is not applicable. To qualify for an enterprise unit:

- (1) the enterprise unit must contain all of the insurable acreage of the same insured crop in:
  - (a) two or more optional units;
  - (b) two or more sections, section equivalents, or FSA farm numbers;
  - (c) any combination of two or more parcels under Para. D(1)(a) or (b); or
  - (d) one optional unit, section, section equivalent, or FSA farm number that contains at least 660 planted acres of the insured crop; and

## 25 Unit Division (Continued)

---

### D. Enterprise Units (Continued)

- (2) At least two of the optional units, sections, section equivalents, or FSA farm numbers, respectively, under Para. D(1)(a) – (c) each must contain at least the lesser of 20 acres or 20 percent of the insured crop acreage in the enterprise unit. Separate optional units, sections, section equivalents, or FSA farm numbers, respectively, may be aggregated to meet the 20-acre or 20-percent acreage requirement.
- (3) The insured must separately designate on the acreage report each basis in Para. D(1) the insured used to qualify for an enterprise unit.
- (4) The insured may elect an enterprise unit that contains all the insurable acreage of the same insured crop if allowed by the actuarial documents.
  - (a) the insured must meet the requirement in Para. D(1) through (3) to qualify.
  - (b) if the AIP discovers the insured does not qualify for an enterprise unit and such discovery is made:
    - (i) on or before the acreage reporting date, the insured's unit division will be based on the basic or optional units, whichever the insured reports on the insured's acreage report and qualify for; or
    - (ii) at any time after the acreage reporting date, the AIP will assign the basic unit structure.

\*\*\*

## 26 Excluded Coverage

---

The following coverages do not apply to the AT insurance program:

- (1) Prevented Planting;
- (2) Late Planting; or
- (3) Replanting.

## 27 Service Forms

---

The following forms are required for the AT Program:

- (1) Application;
- (2) Policy Change;
- (3) Apple Tree Orchard Producer PAW;
- (4) Grove Identification Map;
- (5) Apple Tree Orchard PAIR; and
- (6) Acreage Report.

## 28-30 (Reserved)

---

## PART 4: ENDORSEMENTS AND OPTIONS

### 31 Endorsements and Options

---

The AT Program has an endorsement and options that add supplemental coverage, exclude coverage, or otherwise modify the coverage.

#### A. Occurrence Loss Option (OLO)

An insured with an AT Policy in effect may elect to obtain additional coverage on the insured trees through the use of this option (where premium rates for the option are provided on the AD). The option applies to all insurable trees of the insured crop in the county. The option is continuous and must be elected by the SCD for the crop year. The option may be cancelled in accordance with the cancellation provisions of the policy.

- (1) The insured may elect the OLO if they have not elected coverage under the CAT Endorsement.
- (2) An indemnity will be due under the OLO only if the amount of insured damage within all SDTs identified as a result of the most recent cause of loss is at least five percent (5%) (10% if the Fire Blight Endorsement is elected) of the unit value (unless otherwise specified in the SP).
- (3) The amount of the indemnity will be determined by:
  - (a) multiplying the total number of trees in each stage-block (in all SDTs identified as a result of the most recent cause of loss) by the insured's tree reference price (the applicable AD tree reference price by the insured's price percentage) and applicable percent damage for each stage-block and then totaling these values to determine the damage value;
  - (b) multiplying the damage value by the coverage level selected by the insured for the type to determine the amount of insured damage;
  - (c) multiplying the amount of insured damage by the URF; and
  - (d) multiplying the result of (3)(c) by the insured share.If A(3)(b) is greater than A(2), the amount in A(3)(d) is the amount of indemnity due.
- (4) The total amount of indemnities payable on a unit during the crop year is limited to the lesser of the amount of protection for that unit or the unit value times the insured's share.

#### B. Comprehensive Tree Value Endorsement

The CTVE provides supplemental coverage for apple trees in addition to the coverage provided by the CP.

**B. Comprehensive Tree Value Endorsement (Continued)**

- (1) The insured may elect the CTVE if **they have** not elected coverage under CAT. The endorsement is continuous and must be elected by the SCD for the crop year. The endorsement may be cancelled in accordance with the cancellation provisions of the policy.
- (2) A CTVE indemnity will not be paid unless an indemnity is paid on the unit under the CP.
- (3) The CTV Amount of Protection (unit) will be determined by multiplying the number of insurable trees reported by the insured in each stage-block by the insured's maximum CTV reference price (the applicable AD CTV maximum reference price time the insured's price percentage) for each stage-block, adding these values, and then multiplying by the coverage level.
- (4) The CTV Unit Value will be determined by multiplying the number of insurable trees in each stage-block in the unit, as determined by the AIP, on the day before the loss (but not reduced for any insured damage that occurred during the crop year) by the insured's maximum CTV reference price for each stage-block, adding these values, and then multiplying by the coverage level.
- (5) The reference price offered under this endorsement is applicable to CTVE coverage and indemnity determinations and are in addition to coverage and indemnity determinations under the CP.

The CTV reference prices may be based on actual records of sales of apples (converted to a tree basis). See the CTVE and [Exhibit 9](#) for applicable terms and requirements, example calculations, and applicable form for collecting sales records and determining the average market value.

- (6) Only those trees in stage-blocks designated as stage II and stage III and considered fully damaged or destroyed are eligible for an indemnity under this endorsement.
- (7) If the insured elects both the OLO and the CTVE, the OLO will apply to the CTVE.
- (8) The coverage level and price percentage elected by the insured for the AT Policy will apply to the endorsement.

**C. High-Risk Land Exclusion Option**

This option is available for apple trees on any land identified in the AD as high-risk and allows the insured to exclude land identified as high-risk in accordance with section 3(b)(2) of the BP.

**D. Apple Tree Fire Blight Endorsement**

This option is available for apple trees and allows the insured to add coverage for damage caused by fire blight under the following conditions:

**D. Apple Tree Fire Blight Endorsement (Continued)**

- (1) The insured must have the BP and AT CP in force to elect to insure against fire blight under this Endorsement.
- (2) Availability of Fire Blight Endorsement

The Endorsement is:

- (a) optional in Idaho, Oregon, and Washington – All program counties.
- (b) required in Michigan, New York, and Pennsylvania for additional coverage policies – All program counties.

(See SP for optional and mandatory coverage statements.)

The Fire Blight Endorsement is not available for ATs under CAT or the organic practice (all coverage levels) on either an optional or required basis. Subject to an acceptable PAIR inspection, ATs are insured for all other insured causes of loss.

- (3) In those states where the Endorsement is optional, **the insured** must elect this Endorsement in writing on or before the applicable SCD for AT.
- (4) This Endorsement, if in effect (i.e., optional or mandatory), will apply to all eligible acreage of all types of ATs under the CP where the AD provides fire blight coverage. The Endorsement applies on a unit basis. PAIR inspections will be used to determine which units meet the requirements of the Endorsement. Qualifying units and non-qualifying units (units with fire blight) are reported separately on the acreage report. The applicable fire blight code contained in the rate table of the AD will be reported to identify qualifying units. Any trees within a qualifying unit with pre-existing damage from other causes would be uninsurable and would be reported separately on the acreage report from insurable undamaged trees.

For a non-qualifying unit, any trees in a unit determined to be uninsurable due to any pre-existing damage including fire blight infection based on a PAIR or prior to insurance attaching for subsequent crop years based on a PAIR or PAW, as applicable, will be uninsurable for fire blight and all other insured causes under the CP (see section 8(b)(2), (4), and (5) of the CP).

Any trees in a non-qualifying unit that are not damaged would be insurable for all covered causes of loss (i.e., fire blight would not be a covered cause of loss on a non-qualifying unit) and would be reported as insured trees for the unit on the acreage report.

If any of the conditions in section 3(b)(1) – (3) of the Endorsement are met, the unit would qualify for the Endorsement and all eligible undamaged trees in the qualifying unit would be insurable for all causes of loss including fire blight (trees with other pre-existing damage would remain uninsurable).

**D. Apple Tree Fire Blight Endorsement (Continued)**

- (5) The coverage level and price percentage elected by the insured for the AT Policy will apply to the endorsement.
- (6) The insured may not elect this Endorsement if the insured's apple tree crop is:
  - (a) insured under the CAT Endorsement; or
  - (b) grown under organic production practices (i.e., all insurable trees).
- (7) The Endorsement, if an optional election, will continue in effect until cancelled by either the insured or the AIP by the cancellation date. If the Endorsement is mandatory, it will continue in effect until either the insured or the AIP cancels the AT insurance policy by the cancellation date. If at any time the insured's AT insurance policy is cancelled or terminated, the Endorsement is automatically cancelled or terminated as of the same date.

**32-40 (Reserved)**

---

## EXHIBITS

### Exhibit 1 Acronyms and Abbreviations

The following table contains FCIC-approved acronyms used in this handbook.

Approved Acronym/Abbreviation	Term
AD	Actuarial Documents
AIP	Approved Insurance Provider
ARD	Acreage Reporting Date
AT	Apple Tree(s)
BP	Basic Provisions
CAT	Catastrophic Risk Protection Endorsement
CIH	FCIC-18010 Crop Insurance Handbook
CP	Crop Provisions
CTV	Comprehensive Tree Value
CTVE	Comprehensive Tree Value Endorsement
DSSH	FCIC-24020 Document and Supplemental Standards Handbook
FCIC	Federal Crop Insurance Corporation
FN	Farm Number
FSA	Farm Service Agency
GSH	FCIC-18190 General Standards Handbook
LAM	FCIC-25010 Loss Adjustment Manual
LASH	Loss Adjustment Standards Handbook
OLO	Occurrence Loss Option
OPI	Office of Primary Interest
PAIR	Pre-Acceptance Inspection Report
Para.	Paragraph
PAW	Producer Pre-Acceptance Worksheet
RMA	Risk Management Agency
SCD	Sales Closing Date
SDT	Stand of Damaged Trees
SP	Special Provisions
URF	Underreport Factor



## Exhibit 2 Definitions

---

**Adjustment factor:** A factor contained on the AD used to determine the percent of damage and damage value of fully damaged trees for purposes of determining an indemnity.

**Age (of tree):** The number of complete 12-month periods that have elapsed since the month the trees were set out or were grafted, whichever is later. Age determination will be made for each unit, or portion of a unit, as of July 1 of each crop year.

**Amount of insured damage:** The dollar amount determined by multiplying the damage value by the coverage level.

**Amount of protection (unit):** The dollar amount for the unit calculated by multiplying the number of insurable trees reported by the insured in each stage-block by the insured's tree reference price for each stage-block, totaling these values, and then multiplying this result by the coverage level selected by the insured subject to any limitations contained in the SP.

**Average revenue value:** The value per tree for each applicable stage as determined in section 7(b) and (c) of the CTVE.

**Block:** A stand of trees of the same type on acreage in a unit that shares a common boundary with no discernible change in the planting pattern.

**Bud union:** The location on the tree trunk where a bud from one tree variety is grafted onto the rootstock of another variety.

**Crop year:** In accordance with the definition in the Basic Provisions, a period beginning with the date insurance attaches to the apple tree crop extending through June 30 of the following calendar year and is designated by the calendar year in which the period ends.

**CTV amount of insured damage:** The dollar amount determined by multiplying the CTV damage value by the coverage level.

**CTV amount of protection:** The dollar amount (by unit) calculated by multiplying the number of insurable trees reported by the insured in each stage II and III block by the insured's maximum CTV reference price for each stage-block, adding these values, and then multiplying the result by the coverage level selected by the insured subject to any limitations contained in the SP.

**CTV damage value:** The dollar amount determined by multiplying the actual number of destroyed trees and the actual number of fully damaged trees in each stage II and III block in all the stands of damaged trees identified as a result of the most recent cause of loss by the insured's CTV reference price for each stage-block, and then adding these values. The CTV reference price will be the maximum CTV reference price for trees destroyed and the minimum CTV reference price for trees fully (100-percent) damaged.

**CTV underreport factor (unit):** A factor determined by AIP and used to adjust the insured's CTV indemnity in section 11(b)(2) when the insured has underreported the number of insurable trees. The factor is the result of dividing the CTV amount of protection by the CTV unit value, rounded to three decimal places, not to exceed 1.000.

## Exhibit 2 Definitions (Continued)

---

**CTV unit deductible:** The dollar amount determined by multiplying the actual number of insurable trees in each stage II and III block in the unit on the day before the loss (but not reduced for any insured damage that occurred during the crop year) by the insured's maximum CTV reference price for each stage-block, adding these values, and then multiplying the result by the deductible (1.0 minus the coverage level).

**CTV unit value:** The amount determined by multiplying the number of actual insurable trees in each stage II and III block in the unit, as determined by the AIP, on the day before the loss (but not reduced for any insured damage that occurred during the crop year) by the insured's maximum CTV reference price for each stage-block, adding these values, and then multiplying the result by the coverage level selected by the insured.

**Damaged (damage):** A tree that requires removal or reset due to injury to the main trunk, central leader, or roots (including leaning and toppling) due to an insured cause of loss that occurs during the insurance period.

**Damage value:** The dollar amount determined by multiplying the actual number of insurable trees in each stage-block damaged by the most recent cause of loss by the insured's tree reference price for each stage-block, multiplying this result for each stage-block by the percent of damage applicable to each stage-block, and totaling these values.

\*\*\*

### **Destroyed tree:**

- (a) For stage I – III trees damaged due to insured causes, any insurable tree that:
- (1) Is dead (including trees with trunks broken at or near the bud union);
  - (2) For a standard density orchard:
    - (i) Is a stage I – II tree that is toppled or leaning and **the insured** and **AIP** agree that reset is not practical; or
    - (ii) Is a stage III tree that is toppled or leaning;
  - (3) For a high-density orchard is a stage I – III tree that is toppled or leaning and **the insured** and **AIP** agree that reset is not practical;
  - (4) Is missing; or
  - (5) If the Fire Blight Endorsement is in effect:
    - (i) Is one to six (1 – 6) years of age with fire blight cankers on the trunk or central leader; or
    - (ii) Is seven (7) or more years of age with fire blight cankers on the trunk or central leader at a height above the bud union equal to 25 percent of the height of the tree (e.g., location height equals 4.5 feet for a 16-foot tree with a bud union height of 6 inches).
- (b) Destroyed trees are considered 100 percent damaged.
- (c) See section 13(d) and (i) of the CP for determining the percent of damage for destroyed trees.

**Fire blight:** A bacterial disease that can infect the blossoms, new green shoots, branches, and other parts of apple trees and other members of the Rosaceae family.

**Fully damaged tree:**

- (a) An insurable tree requiring reset.
- (b) A fully damaged tree will be considered 100 percent damaged but is not destroyed. (See section 13(d) and (i) of the CP for determining the percent of damage for fully damaged trees.)

**High density:** Orchards containing the number of trees per acre specified in the SP.

**Leaning (lean):** A tree that is leaning more than 15 degrees from the upright position.

**Maximum CTV reference price:** The price per tree, by stage, type, and practice, listed on the AD for CTV that is used in calculating the CTV unit value, the CTV amount of protection, and the portion of the CTV damage value for destroyed trees for the Endorsement.

**Minimum CTV reference price:** The price per tree, by stage, type, and practice, listed on the AD for CTV that is used in calculating the CTV unit value, the CTV amount of protection, and the portion of the CTV damage value for fully damaged trees for the Endorsement. The minimum CTV reference price applies only to stage II trees.

**Occurrence loss option:** An option that may be elected by the insured that eliminates the unit deductible in accordance with section 15 of the CP.

**Reference revenue value:** The value per tree, by type, density practice, and stage, contained in the AD for CTV that is used in calculating the actual CTV (minimum/maximum) reference prices for insureds using their actual records of production and sales.

**Remove (removal, removed, removing):** Conducting the necessary operations to prepare the planting site for a replacement tree including removing the damaged tree.

**Replacement tree:** A tree set out in an existing orchard in the same location of a damaged tree that cannot be reset or is otherwise destroyed.

**Reset:** Restoration of a toppled or leaning tree by:

- (a) Returning the tree to approximately the same position the tree occupied before it was caused to topple or lean; or
- (b) Stabilizing a leaning tree by:
  - (i) Installing a stake (a wooden or metal post of a standard size); and
  - (ii) Carrying out the cultural practices necessary to reestablish or maintain the tree.

For loss adjustment purposes only, reset is applicable only for stage I and II trees in standard density orchards and all stages in high density orchards.

## Exhibit 2 Definitions (Continued)

**Sales closing date:** In lieu of the definition in section 1 of the BP, the SCD for the crop year and subsequent crop years will be April 15 unless another date is provided in the SP.

**Set out:** Transplanting a tree into the orchard.

**Share:** In addition to the definition in section 1 of the BP, an insured tenant or operator must have a lease with the owner of the apple orchard that requires **the tenant or operator** to maintain the apple orchard using accepted orchard management practices. The lease agreement must clearly state the tenant is entitled to **their** insured share of any indemnities under the AT CP. A copy of the lease must be on file with the insuring company at the time insurance attaches. However, only for the purpose of determining the amount of indemnity, the insured's share will not exceed the insured's share at the time of loss. **\*\*\***

**Stage:** Each full 12-month period based on the age of the tree and tree density.

Stage	Age of Standard Density Tree	Age of High Density Tree
I	1-2 Years	1 Year
II	3-6 Years	2-3 Years
III	7+ Years	4+ Years

**Stage-block:** A block in which at least 75 percent of the trees are the same stage, at the time insurance attaches.

**Standard density:** Orchards containing the number of trees per acre specified in the SP.

**Stand of damaged trees:** The area or areas within a unit where damage due to the same insurable cause of loss occurs, as established by the insurance provider for the crop year and used to determine the damage value for the unit. If distinct areas of damaged trees within the unit cannot be established, the stand of damaged trees will be the entire unit.

**Toppled:** A tree that is leaning more than 60 degrees from the upright position or is leaning and has an exposed root system.

**Tree reference price:** The price per tree, by stage, type, and practice, listed on the actuarial that is used in calculating the unit value, the amount of protection, and the damage value.

**Type:** A **category** of apple trees as designated in the SP. **\*\*\***

**Undamaged:** A tree that does not require removal or reset.

**Underreport factor (URF):** A factor determined by the insurance provider and used to adjust the insured's indemnity in section 13(a) when the insured has underreported the number of insurable trees. The factor is the result of dividing the amount of protection by the unit value, rounded to three decimal places not to exceed 1.000.

**Unit deductible:** The dollar amount determined by multiplying the actual number of insurable trees in each stage-block in the unit on the day before the loss (but not reduced for any insured damage that occurred during the crop year) by the insured's tree reference price for each stage-block, totaling these values, and multiplying this result by the deductible (1.0 minus the coverage level).

## Exhibit 2 Definitions (Continued)

---

**Unit value:** Unless otherwise specified on the AD, the amount determined by multiplying the actual number of insurable trees in each stage-block in the unit, as determined by the insurance provider, on the day before the loss (but not reduced for any insured damage that occurred during the crop year) by the insured's tree reference price for each stage-block, totaling these values, and then multiplying this result by the coverage level selected by the insured.

### Exhibit 3 Apple Tree Orchard Producer Pre-Acceptance Worksheet

The PAW (AT) is completed annually (self-certification allowed following year of application) and submitted by the ARD. The applicant/insured also provides a Grove Identification Map (shown in [Exhibit 4](#) with completion instructions) that shows locations of the stage-blocks identified in the PAW (AT).

Once the initial certification (worksheet and Grove Identification Map) has been provided, insureds who continue insurance coverage in subsequent crop years will be allowed to self-certify in the remarks section of the original PAW that no change has occurred. (See the Remarks section instructions.)

If any changes have occurred since the original certification that would alter the stage-block designations or the numbers of trees in each stage-block (e.g., periodic stage changes, tree damage resulting in resetting, removal/thinning of trees, etc.), an amended or revised worksheet and aerial photo(s), maps (e.g., GPS), or Grove Identification Map must be completed for any blocks of trees affected by the change. (See the Remarks section instructions.) A new PAIR (AT) may be required.

The PAW triggers the need for a PAIR when the applicant/insured answers:

- (1) Yes to whether "... damage (e.g., wind (e.g., tornado/hurricane), freeze, drought, etc.) occurred to trees that will reduce the insured crop's coverage from previous crop years?"
- (2) Yes to whether "...practices or production methods (e.g., removal or thinning; resetting, dehorning, grafting; or hedging or pruning) have been performed that will reduce the insured coverage from previous crop years?"

Applicable changes must be reported on the acreage report.

#### Instructions for Completion

Items to be completed by the approved insurance provider are denoted [AIP].

Element	Required Information
Name of Applicant/Insured	Enter the name of the applicant or insured as it appears on the application for insurance.
Crop Year	Enter the crop year for which the worksheet is being completed.
County	Enter the name of the county in which the trees are located.
Agent [AIP]	Enter the name, address, and phone number of the agent who services or will service this contract, as applicable.
Contract Number [AIP]	Enter the contract number from the most recent Policy Confirmation. In the case of a new applicant, enter only the 2-digit state and 3-digit county code, e.g., XX-XXX.
Address of Applicant/Insured	Enter the mailing address of the applicant or insured as it appears on the application for insurance.
Phone Number of Applicant/Insured	Enter the area code and telephone number at which the applicant or insured can be reached during normal business hours.

**Exhibit 3 Apple Tree Orchard Producer Pre-Acceptance Worksheet (Continued)**

**Individual Orchard Data:**

Element	Required Information
1. Unit Number [AIP]	Begin unit numbering with 0001-0000BU or 0001-0001OU. Basic, optional, and enterprise units are allowed as defined in the CP.
2. Block Number	<p>By line, enter the block number as identified on the grove identification map.</p> <p>A block is a stand of trees of the same type on acreage in the unit sharing a common boundary with no discernible change in planting pattern (a homogenous planting pattern) and may or may not consist of different tree stages (age classes). If there is a change in planting pattern that distinguishes areas of different tree ages within the stand (orchard), the insured can report the areas as separate blocks.</p>
3. Section	<p>Enter the section number for the orchard location.</p> <p>(a) Complete a separate worksheet for each section. Note all section numbers in the “Remarks” section.</p> <p>(b) In the absence of sections, townships, and ranges, use the applicable legal description for the area to complete items (3) through (5). Enter the Farm/Tract/Field Number if available.</p>
4. Township (Twp.)	Enter the legal description (township number) for the orchard location if available [see item (3)(b)].
5. Range	Enter the legal description (range number) for the orchard location if available [see item (3)(b)].
6. Crop & Type	Enter the applicable commodity name and type as specified in the SP.
7. Acres in Block	Enter the acres occupied by the block, rounded to the nearest tenth.
8. Tree Spacing	Spacing in whole feet (e.g., 15 × 15). If spacing varies, enter “varying” and explain in “Remarks.”
9. Tree Count	Enter the total number of trees in the block. Enter an estimate (identify as “Est”) if accurate determination is impractical.
10. Tree Stage	The stages (I – III) are shown on separate lines of the worksheet.
11. Month & Year Set	Enter the month and year of set out for the trees in each stage shown on separate lines. If the trees of a stage were set out in different years, enter the date when most of the trees were set out.
12. Tree Age	Enter the tree age in years (that corresponds to the date in item 11) for the trees in each stage shown on separate lines.
13. Number of Trees	Enter the number of trees in each stage on separate lines.
14. Percent of Trees	For each line, enter the result of dividing the number of trees (item 13) by the tree count for the block (item 9), and multiplying by 100. Round the result to whole numbers; for example, report 65.48% as 65% and 65.84% as 66%.

**Exhibit 3 Apple Tree Orchard Producer Pre-Acceptance Worksheet (Continued)**

Element	Required Information
15. Stage-Block Number	<p>Determine if the block should be reported as one or more stage blocks. If one of the percentages reported in item 14 is at least 75%, report the block as one stage-block. If none of the percentages reported in item 14 is at least 75%, report each block as a separate stage-block. Denote the stage-block on each line for which there are entries in item 14, by the block number and the tree stage. For example, if the block is No. 1 and 80% of the trees in the block are stage III, record the stage-block number as 1-III on each line for which there are entries in item 14; if the block is No. 2 and 50% of the trees in the block are stage III and 50% are stage I, record the stage-block numbers as 2-III and 2-I, respectively.</p>
REMARKS	<p>Enter notes pertinent to the orchard certification, such as the source of information used to complete the worksheet, method of determining tree numbers, and description of the orchard.</p> <p>List each block:</p> <ul style="list-style-type: none"> <li>(a) Identify it as a non-trellis block or a trellis block.</li> <li>(b) If a trellis block, indicate the type of trellis and year installed.</li> <li>(c) Indicate if trees are visibly infected with fire blight and the percent of the unit infected.</li> </ul> <p>For subsequent crop years, the insured will:</p> <ul style="list-style-type: none"> <li>(a) Enter “No change for XXXX Crop Year,” initial, and date if no changes have occurred in the orchard.</li> <li>(b) If there are any changes, note in the remarks section the nature of the changes (e.g., tree damage, change in the number of trees, stage changes, etc.) that have occurred since the original certification and sign and date the amended or revised worksheet and grove identification map.</li> <li>(c) Report applicable changes on the current year’s acreage report.</li> </ul>
Signature of Insured/Applicant	<p>Sign and date the worksheet.</p> <p>See Remarks section of the sample worksheet for subsequent year instructions.</p>
Signature of Insurance Provider Representative	<p>Sign and date the worksheet after conducting an inspection to verify the information provided on the worksheet.</p>

Enter the page number of this form in the first blank and the total number of pages of this form for this contract in the second blank. For example: PAGE 2 OF 3.



**Exhibit 3 Apple Tree Orchard Producer Pre-Acceptance Worksheet (Continued)**

<b>APPLE TREE ORCHARD PRODUCER PRE-ACCEPTANCE WORKSHEET</b>														
<b>FOR ILLUSTRATION ONLY</b>														
NAME OF APPLICANT/INSURED <p style="text-align: center;">Joe Farmer</p>					CROP YEAR <p style="text-align: center;">YYYY</p>		COUNTY <p style="text-align: center;">Walla Walla</p>			AGENT <p style="text-align: center;">Frank Agent</p>			CONTRACT NUMBER <p style="text-align: center;">48-XXX</p>	
ADDRESS OF APPLICANT/INSURED <p style="text-align: center;">RR One Walla Walla, Washington</p>					PHONE NUMBER OF APPLICANT/INSURED <p style="text-align: center;">XXX-XXX-XXXX</p>					5678 Apple Tree Drive Walla Walla, Washington  XXX-XXX-XXXX				

**INDIVIDUAL ORCHARD DATA:**

UNIT NO. (1)	BLOCK NO. (2)	SECTION (3)	TWP (4)	RANGE (5)	CROP & TYPE (6)	ACRES IN BLOCK (7)	TREE SPACING (8)	TREE COUNT (9)	TREE STAGE (10)	MONTH & YEAR SET (11)	TREE AGE (12)	NUMBER OF TREES (13)	PERCENT OF TREES (14)	STAGE-BLOCK NUMBER (15)
0001 0001OU	1	Sec.7	7N	37W	Apple Trees <b>Fuji</b>	20.0	10×20	4356	I					
									II	<b>MM/YYYY</b>	3	479	11%	1-II
									III	<b>MM/YYYY</b>	6	3,877	89%	1-II
0001 0002OU	2	Sec.7	7N	37W	Apple Trees <b>Gala</b>	20.0	10×20	4356	I					
									II					
									III	<b>MM/YYYY</b>	6	4,356	100%	2-II

**Exhibit 3 Apple Tree Orchard Producer Pre-Acceptance Worksheet (Continued)**

<b>APPLE TREE ORCHARD PRODUCER PRE-ACCEPTANCE WORKSHEET, CONTINUED</b>		
<p>REMARKS</p> <p style="margin-left: 40px;">Block 1 – Non-Trellis; No visible fire blight infection</p> <p style="margin-left: 40px;">Block 2 – Non-Trellis; No visible fire blight infection</p> <p style="margin-left: 40px;">(For subsequent crop years if no changes occur from the prior crop year, the insured will enter the following statement on a copy of the insured’s original Pre-acceptance Worksheet, initial and date)</p> <p style="margin-left: 40px;">No change for _____ crop year. JF, MM/DD/YYYY</p>		
I certify that the information provided above is true and correct to the best of my knowledge.		
SIGNATURE OF INSURED/APPLICANT	DATE	PAGE <u>  1  </u> OF <u>  1  </u>
Joe Farmer	DD/MM/YYYY	
SIGNATURE OF INSURANCE PROVIDER REPRESENTATIVE	DATE OF INSPECTION	
I. M. Inspector	DD/MM/YYYY	

The applicable Privacy Act statement must appear on the form (or back of the form). See the DSSH (FCIC-24040) for the current statement.

## Exhibit 4 Grove Identification Map & Instructions for Completion

---

Item:

- (1) Enter the name of the insured or applicant.
- (2) Enter the county where insurance attaches.
- (3) Enter the policy number.
- (4) Enter the crop and type, if applicable.
- (5) Enter the unit number.
- (6) Enter the section, township, and range (or applicable legal description in place of section, township, and range) in which the insured crop is located.
- (7) Maps: Identify the acreage to be mapped using a unit designation.
  - (a) Identify highways and other significant landmarks that can be used to help identify orchard locations.
  - (b) Outline apple block (orchard) locations. Draw blocks in actual shapes and as close to scale as possible. Indicate the stages of planted trees, if identifiable. Indicate any acreage of trees that has been excluded from coverage by labeling as “excluded.”
  - (c) Outline land ownership boundaries in red for each section involved. Indicate land ownership across section lines with tie bars.

GROVE IDENTIFICATION MAP (FOR ILLUSTRATION ONLY)

Joe Farmer \_\_\_\_\_ Walla Walla \_\_\_\_\_ XXXXXXXX \_\_\_\_\_  
(Name of Insured or Applicant) (County) (Policy Number)

Crop: Apple Trees – Type – Gala \_\_\_\_\_ Unit No.: 000100010U \_\_\_\_\_

Legal Description: Township: 7N \_\_\_\_\_ Range: 37W \_\_\_\_\_

Section: 7 \_\_\_\_\_

Section: \_\_\_\_\_

■	■								
■	■								


Section: \_\_\_\_\_

Section: \_\_\_\_\_



Comments:

**GROVE IDENTIFICATION MAP – Continuation Sheet (For Illustration Only)**

Section: \_\_\_\_\_


Section: \_\_\_\_\_


Section: \_\_\_\_\_


Section: \_\_\_\_\_


Section: \_\_\_\_\_


Section: \_\_\_\_\_


## Exhibit 5 Apple Tree Orchard Pre-Acceptance Inspection Report

---

The AIP must inspect all acreage of trees and complete an AT PAIR and map (see [Exhibit 4](#)) for insurable and uninsurable trees listed on the acreage report.

### A. PAIR Requirements

PAIRs may be initiated at the AIP's discretion except that PAIRs and inspections are required:

- (1) for all new applicants (the PAIR will be completed by June 30 prior to insurance attaching on July 1) and when the Fire Blight Endorsement is in effect for the AT insurance policy (optional election or mandatory);
- (2) for new added units (trees not previously in the operation);
- (3) when any acreage of trees is added under an existing policy (new tree acreage not previously in the operation meeting insurability);
- (4) the year following any substantial damage;
- (5) for damage or probable loss when an indemnity will be claimed on any unit;
- (6) every fifth year for trellis orchards; or
- (7) when triggered by the PAW (e.g., tree damage, change in the number of trees, stage changes, etc.).

### B. Unreported Trees

If the AIP finds unreported trees during the insurance period that have not been damaged by an insured peril, the AIP must prepare a revised acreage report that includes all unreported insurable trees not entered on the original acreage report.

### C. PAIR Completion Instructions

The AIP will conduct the PAIR. The person completing the inspection must possess training equivalent to that of a loss adjuster.

Element	Required Information
Name of Applicant/Insured, County, and Contract Number	Complete the appropriate information that corresponds with the applicant/insured.
Name, Mailing Address, and Phone Number of Applicant	Complete the appropriate information that corresponds with the insured.
Was Acreage Report Verified?	Answer "Yes" or "No." If "No," explain why in the "Remarks."

**Exhibit 5 Apple Tree Orchard Pre-Acceptance Inspection Report (Continued)**

Element	Required Information
Are other apple orchards owned or operated by the applicant or insured?	<p>Answer "Yes" or "No."</p> <p>If "Yes," note the condition of the other apple orchards owned or operated by the insured.</p> <p>In addition, note the physical location of where the orchard is located.</p> <p>If necessary, enter additional comments in "Remarks."</p>
Is orchard managed by owner?	<p>Check "Yes" or "No."</p> <p>If "No," enter manager's name, address, and telephone number.</p>
Is orchard located in an established apple area?	<p>Answer "Yes" or "No."</p> <p>If "No," explain the general growing conditions and where the orchard is physically located.</p> <p>Enter additional comments in "Remarks."</p>
Unit Number	Enter unit number from the Summary of Coverage after it is verified to be correct.
Variety	Appropriate variety name.
Acres in Block	Number of acres in the block, rounded to tenths.
Tree Spacing	Spacing in feet (e.g., 15 × 15). If spacing varies, enter "varying" and explain in "Remarks."
Tree Count	Enter total number of trees in the block acreage. Enter an estimate (identify as "Est") if accurate determination is impractical.
Month & Year Set	<p>Enter the month and year of:</p> <p>(1) Original planting, or</p> <p>(2) Replacement, if more than 10 percent of the trees on any unit have been replanted.</p>
Tree Condition	<p>Enter "acceptable" or "unacceptable" as applicable.</p> <p>Explain any "unacceptable" tree conditions in "Remarks."</p>
<del>Rate Area</del> Range Class ***	<p><b>Strike through the column heading and enter "Range Class."</b> Enter the correct range class from the AD. Verify with the Summary of Coverage, and if the range class is found to be incorrect, revise according to AIP instructions. See the LAM. ***</p>
Weed Control Measures	<p>Enter one of the following:</p> <p>(1) "CWC" Chemical Weed Control;</p> <p>(2) "W/O CWC" Weed Control Without Chemicals; or</p> <p>(3) "None" No Weed Control.</p>

**Exhibit 5 Apple Tree Orchard Pre-Acceptance Inspection Report (Continued)**

Element	Required Information
Excluded Trees	<p>Identify trees which are uninsurable due to policy requirements such as trees not meeting an age requirement, etc. Leave unit column blank and enter "Excluded" in column for such trees.</p> <p>Explain any entry in the Remarks. Report uninsurable trees/blocks/units on the acreage report.</p>
Result of Inspection Check "A" or Check "B"	<p>Check "A" if: There are no indications of a change in the data reported.</p> <p>Check "B" if: There are changes needed. Enter "A Revised Acreage Report."</p>
Remarks	<p>Note any of the following:</p> <ol style="list-style-type: none"> <li>(1) The number of trees in the original planting pattern.</li> <li>(2) If more than 10 percent of the trees on any unit have been replaced, enter the total number of trees per acre in new pattern, and the total number of new trees set out with the appropriate dates.</li> <li>(3) If any insurable tree acreage is set out in a new pattern (intersets), enter the number of trees per acre in a new pattern, and the total number of new trees set out with the appropriate dates.</li> <li>(4) Any unusual conditions in the orchard or local growing area.</li> <li>(5) Variations in tree spacing within an orchard.</li> <li>(6) If the Fire Blight Endorsement is in effect.</li> <li>(7) Any reasons for recommending insurance coverage not attach (including for a trellis orchard, the condition of the trellis and its susceptibility to failure (e.g., due to wind, etc.) increasing the probability of tree damage); existing tree damage, including fire blight damage. See <a href="#">Exhibit 6</a>, Trellis Inspection Report. See <a href="#">Para. 31D</a> for additional fire blight instructions.</li> <li>(8) Note any damage (e.g., hail, wind, freeze, etc.) and where such damage occurred. Explain in detail and provide the month/year of damage. For fire blight, the date of damage will be the date of the inspection.</li> </ol> <p>If more space is needed, enter additional information on a Statement of Facts form and attach it to the inspection report.</p>



**Exhibit 5 Apple Tree Orchard Pre-Acceptance Inspection Report (Continued)**

<b>Element</b>	<b>Required Information</b>
Is application/acreage report recommended for acceptance?	Check "Yes" or "No" box, as applicable. If trees in the unit are damaged by any cause including fire blight or the block/unit is planted on a trellis system that is not acceptable, the application may be accepted but those damaged blocks/units (damaged units, if fire blight damaged), or those blocks/units with unacceptable trellises will be designated as uninsurable in the Remarks section. See section 3(b) of the Fire Blight Endorsement for guidelines on reestablishing insurability of infected units. See Trellis Inspection Report, <a href="#">Exhibit 6</a> , for determining trellis acceptability.
Orchard Inspector's Signature	Inspector signs report.
Date	Inspector enters date of report (MM/DD/YYYY).

**Exhibit 5 Apple Tree Orchard Pre-Acceptance Inspection Report (Continued)**

APPLE TREE ORCHARD PRE-ACCEPTANCE INSPECTION REPORT								
Applicant or Insured I.M. Insured			County Walla Walla			Contract Number XX-XXX-XXXXX		
Applicant/Insured Address  RR 1 WALLA WALLA, WASHINGTON  Telephone Number (509) 522-1234						Note condition of other apple orchards owned or managed by applicant or insured  N/A		
Is Orchard Managed by Owner? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES  If "No" who manages it? Telephone Number: (509) 522-1234						Is orchard located in an established apple area?  YES		
UNIT NUMBER	VARIETY	ACRES IN BLOCK	TREE SPACING	TREE COUNT	YEAR SET	TREE CONDITION	RATE RANGE CLASS	WEED CONTROL MEASURES
0001-0001	RED	20.0	10 X 20	4356	MM/YYYY	ACCEPTABLE	HD2	NONE
0001-0002	GOLDEN	20.0	10 X 20	4356	MM/YYYY	ACCEPTABLE	HD2	NONE
18 EXCLUDED TREES								
The acreage covered by the above contract was inspected on date shown below with the following results:  A. <u> X </u> Nothing found to require a change in the data reported.  B. _____ Data reported was found to be such that was prepared.						REMARKS  UNITS 00010001 and 0002, trees on moderate slope. Non-trellis orchards.  Excluded trees were underage.  Fire Blight Endorsement not applicable.		
Is application/acreage report recommended for acceptance?  <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				Code Number  XXXX		Orchard Inspector's Signature  I. M. INSPECTOR		Date  MM/DD/YYYY

**Exhibit 6 Trellis Inspection Report**

TRELLIS INSPECTION REPORT			
Applicant or Insured I.M. Insured	County Walla Walla	Contract Number XX-XXX-XXXXX	Unit Number/Block Number 0001-0000BU/01
Applicant/Insured Address  RR ONE WALLA WALLA, WASHINGTON  Telephone Number (509) 522-1234			Note conditions of other apple orchard owned or managed by applicant or insured  N/A
Is Orchard Managed by Owner? <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES If "No" who manages it?  Telephone Number: (509) 522-1234			Is orchard located in an established apple area? YES
<b>Circle the Applicable Point Value. Total All Point Values. Enter the Result in the Total Block</b>			
INSPECTION ELEMENT			Points
When was the trellis system built? a. In or after 2010 b. Before 2010			a. 5 b. 0
What is the diameter of the wood trellis posts? a. 5 inches in diameter b. 4 inches in diameter c. Less than 4-inch diameter			a. 5 b. 0 c. -5
Treated with Chromated Copper Arsenite (CCA). a. Yes b. No			a. 5 b. 0
Are the trellis posts metal? a. Yes b. No			a. 10 b. 0
What is the length of end- and mid-row wood posts? a. 12 feet or greater b. 10 or 11 feet c. Less than 10 feet			a. 5 b. 0 c. -5
What percentage of the trellis post length is underground? a. 33% or greater b. 25-33% c. Less than 25%			a. 5 b. 0 c. -5
Are posts broken or rotten? a. No b. Yes			a. 5 b. -5
Is the wire at least class 3, 12.5 gauge high-tensile? a. Yes b. No			a. 5 b. 0

**Exhibit 6 Trellis Inspection Report (Continued)**

What is the number of vertical wires? a. 4 or greater b. Less than 4	a. 5 b. 0
Are trellis anchors installed? a. Yes b. No	a. 5 b. 0
Are the anchors buried at least 4 feet into undisturbed soil? a. Yes b. No	a. 5 b. 0
What is the spacing of support wires? a. At least every 2-2.5 feet b. Less than 2 feet	a. 5 b. 0
<b>Total Points</b>	
Trellis is unacceptable if the total points is less than 25.  Recommendation: 1. Approve      Yes <input type="checkbox"/> 2. Disapprove    No <input type="checkbox"/>  <sup>1</sup> If metal posts are used, inspection elements for wood posts do not apply.	
Orchard Inspector's Signature	Inspector signs report.
DATE	Inspector enters date of report (MM/DD/YYYY).

## Exhibit 7 Apple Tree Age Determinations

Age/Leaf year is required to determine the stage of the trees and for insurability requirements in accordance with the CP.

To determine Age/Leaf Year, use the following formula:

X = Policy Crop Year

Y = Set Out/Graft Year

**Formula:**  $(X - Y) - 1 = \text{Age/Leaf Years}$

Crop year is defined in the CP as a period beginning with the date insurance attaches extending through the June 30 of the following calendar year and designated by the calendar year in which the insurance ends.

Age is defined as the number of complete 12-month periods that have elapsed since the month the trees were set out or were recently grafted, whichever is later. An age determination will be made for each unit, or portion thereof, as of July 1 of each crop year.

**Example:** For crop year 2026, July 1, 2025, is used when determining age. Age in crop year 2026 on apple trees set out in April of 2017 is 8 years.

The 12-month period is the complete 12-month periods that have passed since the crop was set out/grafted. The 12-month period is determined for the 2026 crop year as follows:

SET OUT/GRAFTED	12 MONTH PERIOD	CROP YEAR	AGE
April 2017	July 1, 2017	2018	0
	July 1, 2018	2019	1
	July 1, 2019	2020	2
	July 1, 2020	2021	3
	July 1, 2021	2022	4
	July 1, 2022	2023	5
	July 1, 2023	2024	6
	July 1, 2024	2025	7
	July 1, 2025	2026	8

If trees were set out/grafted after July 1, 2017 (i.e., set out July 31, 2017 = 2019 crop year), the age in crop year 2026 would be 7 years  $[(2026 - 2019) - 1 = 7]$ .

**Exhibit 8 Setting Distances and Approximate Number of Trees Per Acre**

		ROW SPACING (feet)																
		14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
TREE SPACING (feet)	3	1037	968	908	854	807	764	726	691	660	631	605	581	558	538	519	501	484
	4	778	726	681	641	605	573	545	520	495	473	454	436	419	403	389	376	363
	5	622	581	545	512	484	459	436	415	396	379	363	348	335	323	311	300	290
	6	519	484	454	427	403	382	363	346	330	316	303	290	279	269	259	250	242
	7	444	415	389	366	346	328	311	296	283	271	259	249	239	230	222	215	207
	8	389	363	340	320	303	287	275	259	248	237	227	218	209	202	194	188	182
	9	346	323	303	285	269	255	242	230	220	210	202	194	186	179	173	167	161
	10	311	290	272	256	242	229	218	207	198	189	182	174	168	161	156	150	145
	11	283	264	248	233	220	208	198	189	180	172	165	158	152	147	141	137	132
	12	259	242	227	214	202	191	182	173	165	158	151	145	140	134	130	125	121
	13	239	223	209	197	186	176	168	160	152	146	140	134	129	124	120	116	112
	14	222	207	194	183	173	164	156	148	141	135	130	124	120	115	111	107	104
	15	207	194	182	171	161	153	145	138	132	126	121	116	112	108	104	100	97
	16	194	182	170	160	151	142	135	128	122	116	113	109	105	101	97	94	91
17	183	171	160	151	142	134	127	121	115	110	107	102	99	95	92	88	85	
18	173	161	151	142	135	127	121	115	109	104	101	97	93	90	86	83	81	
19	164	153	143	135	127	121	115	109	104	100	96	92	88	85	82	79	76	
20	156	145	136	128	121	115	109	104	99	95	91	87	84	81	78	75	73	
21	148	138	130	122	115	109	104	99	94	90	86	83	80	77	74	72	69	
22	141	132	124	116	110	104	99	94	90	86	83	79	76	73	71	68	66	

The above figures are for square and hedgerow plantings. Use the formula below for tree and/or row spacings not shown in the chart: Multiply the distance between tree rows by the spacing between trees within the row and divide into 43,560. Refer to the LAM for additional information on how to calculate the number of trees per acre.

**Formula:** 43,560 sq. ft. per acre ÷ tree spacing (L × W) = Number of trees per acre

**Example:** Tree row spacing 16.0 feet and tree spacing within rows 12.5 feet.

$$\frac{43,560 \text{ sq. ft.}}{16.0 \text{ ft.} \times 12.5 \text{ ft.}} = \frac{43,560 \text{ sq. ft.}}{200 \text{ sq. ft.}} = 217.8 = 218 \text{ trees per acre.}$$

## Exhibit 9 Average Revenue Value and Maximum and Minimum Actual CTV Reference Prices Examples

---

The Summary of Revenue History form contained in the CIH, Exhibit 20F will be used to record the actual sales records reported by the insured. Exhibit 9 of this handbook contains examples for reporting actual records of sales and calculation of the Average Revenue Value. The following instructions replace the applicable instructions contained in CIH Exhibit 20F.

- (1) Only four most recent crop year records will be reported on the Summary of Revenue History form by type and production practice (conventional, organic-certified, and organic transitional). \*\*\*
- (2) Complete all heading entries for the insured's policy for the insured county; except make no entry for FSA FN, legal description, insurable or uninsurable, number of trees, and inspection report date. Strike out UNIT NUMBER and replace with STAGE(S) AND TYPE OF TREES. \*\*\*
- (3) Complete entries for columns 1, 2, 3, 4, and 5.
- (4) Strike out "NET ACRES" in column 2 and replace with NO. OF TREES (trees in production). Separate records for insurable and uninsurable trees may be provided but are not required. If applicable, make separate line entries for each crop year on the form. Only the production and sales from the insurable trees will be used to calculate the AVERAGE GROSS SALES PER TREE. If separate records (for insurable and uninsurable trees) are not provided, the AVERAGE GROSS SALES PER TREE will be based on the commingled production and sales from all trees in the insured county for the policy.
- (5) Revise the heading in column 5 to AVERAGE GROSS SALES PER TREE. The entry in column 5 will be the result of dividing column 4 by the number of insured trees (including uninsured trees if production and sales are commingled) rounded to two decimal places.
- (6) Make no entry in column 6.
- (7) Strike out "ACRE" in item 8 and replace with "TREE."
- (8) Strike out "APPROVED" and "PER ACRE" in item 9 and replace with AVERAGE REVENUE VALUE. The entry in item 9 will be the result of dividing item 8 by item 7, rounded to two decimal places.

The CTV (actual) reference prices based on actual sales records will be updated on an annual basis to reflect the most recent year of sales records. The earliest year of the four-year period will be removed, and the most recent year will be added to compute the four-year average actual sales value per tree.





**Average Revenue Value Calculation Example – For orchards containing multiple stages:**

The apple orchard in the state of Washington contains 2,000 insurable trees for the type (Gala, fresh production) consisting of stage II and III grown under a conventional and standard density practice. The insured provides the most recent 4 years of acceptable sales records. \*\*\*

The average gross sales/tree are:

2024	\$48.53
2023	\$58.21
2022	\$81.69
2021	\$41.36
Avg. Gross Sales	\$57.45

CTVE Factor Table		
Standard Density – Washington		
Stage	II	III
Stage Factor	.533	1.000

Using the factor table contained in the CTVE, the average revenue value for each stage is:

Stage II:  $\$57.45 \times .533$  (stage factor) = \$30.62  
 Stage III:  $\$57.45 \times 1.000$  (stage factor) = \$57.45

The reference revenue value for each stage is:

Stage II: \$17.59  
 Stage III: \$32.98

CTV reference prices	
Minimum	Maximum
\$6	\$69
---	\$161

**Maximum and Minimum Actual CTV Reference Price Calculation Example – For orchards containing multiple stages:**

Preliminary maximum actual

CTV reference price = Stage II = \$133 =  $\{(\$30.62 \div \$17.59) \times (\$69 \div 0.90)\}$   
 Stage III = \$312 =  $\{(\$57.45 \div \$32.98) \times (\$161 \div 0.90)\}$

Maximum actual

CTV reference Price = Stage II = \$92 {the lesser of the preliminary price \$133 or \$92 ( $\$69 \times 1.333$ )}  
 Stage III = \$214 {the lesser of the preliminary price \$312 or \$214 ( $\$161 \times 1.333$ )}

Preliminary minimum actual

CTV reference price = Stage II = \$12  $\{(\$30.62 \div \$17.59) \times (\$6 \div 0.90)\}$   
 Stage III = \$21  $\{(\$57.45 \div \$32.98) \times (\$11 \div 0.90)\}$

Minimum actual

CTV reference price = Stage II = \$8 {the lesser of the preliminary price \$12 or \$8 ( $\$6 \times 1.333$ )}  
 Stage III = \$15 {the lesser of the preliminary price \$21 or \$15 ( $\$11 \times 1.333$ )}

## Exhibit 10 Reference Pictures

---

The following reference pictures represent examples of apple trees under various conditions. The pictures and subtitles of each picture are intended to provide a general description of these conditions and an estimate of the degree of leaning, as applicable. Actual tree and damage conditions could be different than the conditions represented by pictures contained in this exhibit.



Figure 1: Undamaged Tree ([www.tree-pictures.com](http://www.tree-pictures.com))



Figure 2: Undamaged Tree ([www.tree-pictures.com](http://www.tree-pictures.com))



Figure 3: Undamaged Trellis ([www.pinterest.com](http://www.pinterest.com))



Figure 4: Undamaged Trellis ([www.applerootstock.com](http://www.applerootstock.com))





Figure 5: Undamaged Staked Orchards – Lynn Kime



Figure 6: Wind Damaged Trellis – Toppled Trees – Oliver Chron



Figure 7: Wind Damage – Toppled Tree ([www.backroadjournal.wordpress.com](http://www.backroadjournal.wordpress.com))





Figure 8: Wind (100%) Damage – Broken Trunk – iStock





Figure 9: Wind Damage – Leaning Trees 15 - 30 Degrees ([www.homeguides.sfgate.com](http://www.homeguides.sfgate.com))



Figure 10: Freeze Damage





Figure 11: Freeze (Winter) Damage – George Sundin



Figure 12: Freeze (Winter) Damage – Tim Smith





**Figure 13: Frost Damage ([www.orangepippintrees.com](http://www.orangepippintrees.com))**



**Figure 14: Hail Damage – Missouri Botanical Garden**



**Figure 15: Fire Blight on Apple Blossoms  
Melanie L. Ivey, Ohio State University**





**Figure 16: Fire Blight on Apple Blossoms**  
Bekoske et.al. – Cornell University



**Figure 17: Fire Blight Cankers on Young Apple Tree Trunks**  
Melanie L. Ivey, Ohio State University



**Figure 18: Fire Blight on Mature Tree Branch and Twig**  
Melanie L. Ivey, Ohio State University





**Figure 19: Fire Blight – University of Minnesota Extension**



**Figure 20: Fire Blight – WSU Tree Fruit – Washington State University**





Figure 21: Fire Blight – Destroyed Tree – Bekoske et.al. – Cornell University



Figure 22: Fire Blight Cankers on Young Apple Tree Trunks  
Melanie L. Ivey, Ohio State University



**Figure 23: Fire Blight Cankers on Young Apple Tree Trunks and Mature Tree Branch  
Melanie L. Ivey, Ohio State University**

**Exhibit 11 Optional Unit Determinations**

Section 2(a)(4) of the CP authorizes a minimum distance (see the SP) used to qualify separate orchards as optional units. The minimum distance requirement of 1 mile between optional units is established based on the closest location between the separate orchards. Any orchards that are within a one-mile distance of each other will be combined into a single optional unit. A separate orchard meeting the distance requirement but with less than 10 acres will be combined with the nearest optional unit. See the example below for guidance in determining optional units for separate orchards. \*\*\*

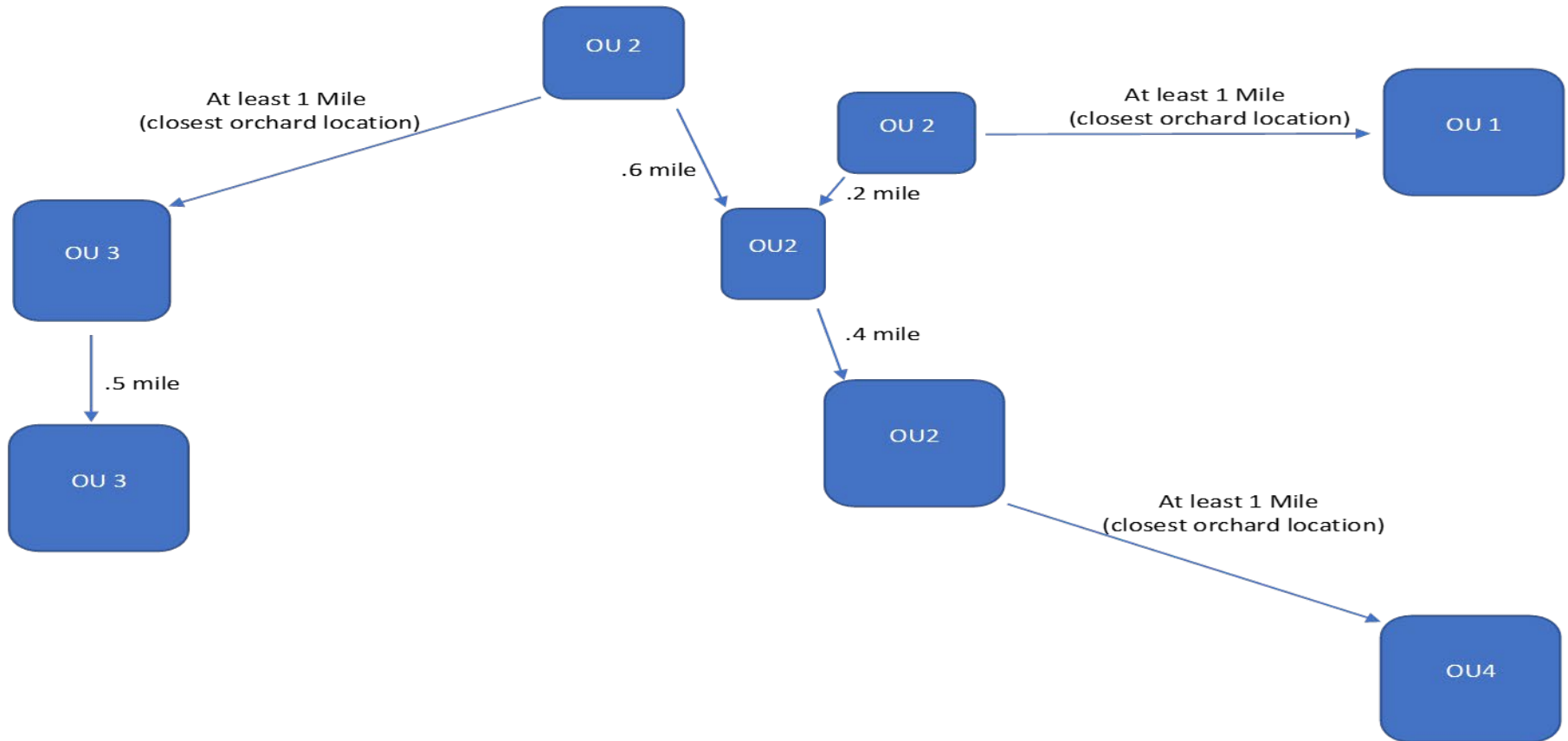
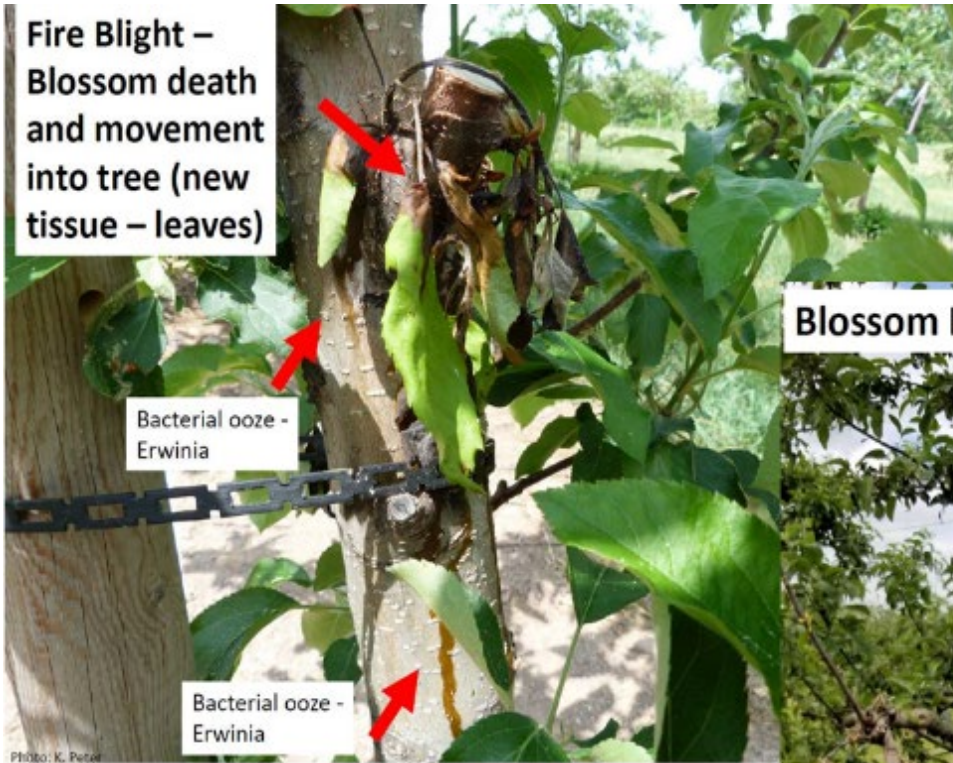




Exhibit 12 Comparison of Symptoms of Fire Blight to Blossom Blast



← Insurable



May 9, 2020 freeze: Diseases caused by *Pseudomonas syringae* pv. *syrginae* appeared

DO NOT confuse blossom blast with fire blight!

- ← This is blossom blast on apple
- ← There is no ooze or spread beyond blasted blossoms (like you would observe with fire blight)



NOT Insurable →

### Fire blight vs. Blossom Blast

	Fire Blight	Blossom Blast
<b>Causal pathogen</b>	<i>Erwinia amylovora</i>	<i>Pseudomonas syringae</i> pv. <i>syringae</i>
<b>Environmental conditions favored to cause disease</b>	<b>FAVORS WARM WEATHER during bloom</b> Warm temperatures during bloom ( <u>average</u> ~60°F) Can see spread throughout the summer while trees are actively growing (= warm weather)	<b>FAVORS COLD/FROSTY WEATHER during bloom (upper 20s – low 30s°F)</b> Frost or freeze events during bloom <b>Disease/bacteria shuts down when warm weather occurs</b>
<b>Symptoms</b>	<b>Blossoms</b> – wilting, blackened, can see progression into tree beyond blossom; stem tissue death around where blossom is attached to tree (“canker” = dead tissue in stem developing) <b>Leaves</b> – Wilting, will be discolored/blackened; blackened leaf veins and petioles; will see discoloration move into surrounding tissues; shepherd’s crook appearance <b>WILL see oozing (amber-colored)</b>	<b>Blossoms</b> – Wilting, flowers can be brown, dried-looking, papery; can also turn brown to black <b>Leaves</b> – Wilting, will be discolored/blackened; blackened leaf veins; <b>WILL NOT</b> see extensive spread like <i>Erwinia</i> ; <b>WILL NOT</b> see disease move into stem tissues readily like <i>Erwinia</i> <b>WILL NOT see oozing</b>
<b>Spread throughout the orchard?</b>	<b>YES</b> – after initial infection: bacteria can spread readily throughout orchard, even within a tree, when disease is active Bacteria can move <b>FAST</b> , thanks to water and wind Can observe new symptoms showing up during the season	<b>NO</b> – bacteria will not spread readily; tissue death usually occurs where bacteria were present during frost/freeze event; Bacteria moves <b>SLOW</b> ; spread very limited <b>AND:</b> bacteria shuts down when the temps get warmer = no new symptom development
<b>Can the disease cause tree death?</b>	<b>YES</b> – Bacteria can systemically invade the tree via the vascular system; can kill young trees readily	<b>NO</b> – trees will appear unsightly; however, the trees will rebound during the season and will produce new growth; Bacteria does not systemically invade the tree like <i>Erwinia</i>
<p><b>#1 Question</b> to ask when faced with “blighted” blossoms or shoot death symptoms: <b>What was the temperature during bloom or just preceding symptoms appearing (if post bloom)?</b></p> <p>→ IF it was warm = fire blight</p> <p>→ IF it was cold (frost or freeze event) = blossom blast</p>		