



United States  
Department of  
Agriculture



Federal Crop  
Insurance  
Corporation

FCIC-24320 (08-2021)

# **PISTACHIO INSURANCE STANDARDS HANDBOOK**

## **2022 and Succeeding Crop Years**



**UNITED STATES DEPARTMENT OF AGRICULTURE  
RISK MANAGEMENT AGENCY  
KANSAS CITY, MO 64133**

<b>TITLE: PISTACHIO PROGRAM INSURANCE STANDARDS HANDBOOK</b>	<b>NUMBER: 24320</b>
<b>EFFECTIVE DATE: 2022 and Succeeding Crop Years</b>	<b>ISSUE DATE: 08-30-2021</b>
<b>SUBJECT:</b>  <b>Provides the Pistachio Insurance Standards for the 2022 and succeeding crop years</b>	<b>OPI: Product Administration and Standards Division</b> <b>APPROVED:</b>  /s/ Richard Flournoy  <b>Deputy Administrator for Product Management</b>

**REASON FOR ISSUANCE**

Pistachio Insurance Standards Handbook is being reissued and the handbook will be effective for the Pistachio Program available beginning with the 2022 crop year. The handbook contains updated language for variability determinations and other program modifications, such as updated references. Highlighted text throughout the handbook represents changes or additions.

**SUMMARY OF CHANGES**

Listed below are the changes to the 2021 FCIC 24320 Pistachio Insurance Handbook Standards with significant content change. The \*\*\* used throughout the handbook indicates where major deletions occurred.

<b>Reference</b>	<b>Description of Change</b>
Para. 23B	Updated coverage levels.
Para. 32	Restructured the CIH chart.
Para. 32 (Para. 1862)	Updated variability index numbers and variability adjustment factor information because of policy changes.
Para. 32 (Para. 1881)	Added language regarding RO determined yields or underwriting guide updates for underage yields in an APH database.
Para. 32 (Exhibit 15V)	Added yield indicators.
Exhibit 2	Updated variability adjustment factor definition.
Exhibit 3	Updated and added examples on how to calculate the approved APH yield using the new variability index and variability adjustment factor changes.

## PISTACHIO INSURANCE STANDARDS HANDBOOK

### CONTROL CHART

Pistachio Insurance Standards Handbook							
	TP Page(s)	TC Page(s)	Text Page(s)	Exhibit Number	Exhibit Page(s)	Date	Directive Number
Insert	Entire Handbook						
Current Index	1-2	1-2	1-12	1-4	13-27	08-2021	FCIC-24320

### FILING INSTRUCTIONS

This handbook replaces the 2021 Pistachio Pilot Insurance Standards Handbook, FCIC-24320 (08-2020). This handbook is effective for the 2022 and succeeding crop years and is not retroactive to any 2021 or prior crop year determinations.

**PISTACHIO PROGRAM  
INSURANCE STANDARDS HANDBOOK**

**TABLE OF CONTENTS**

	Page No.
Part 1 General Information and Responsibilities.....	1
1    General Information.....	1
2    Responsibilities.....	2
3-20 (Reserved).....	2
Part 2 Insurability .....	3
21    Alternate Bearing .....	Error! Bookmark not defined.
22    Insurable Types and Practices.....	3
23    Units, Coverage Levels, and Prices .....	4
24    Reports.....	5
25    Written Agreements .....	5
26-30 (Reserved).....	5
Part 3 Applicability of Handbooks .....	6
31    General Overview .....	6
32    Specific Information Regarding the Crop Insurance Handbook.....	6
33    General Standards Handbook.....	12
34    Prevented Planting Standards Handbook.....	12
35    Loss Adjustment Manual .....	12
36    Pistachio Loss Adjustment Standards Handbook .....	12
37-40 (Reserved).....	12

**PISTACHIO PROGRAM  
INSURANCE STANDARDS HANDBOOK**

**TABLE OF CONTENTS**

**Page No**

Exhibits

1 Acronyms .....	<b>13</b>
2 Definitions.....	<b>14</b>
3 Examples – Alternate Bearing .....	Error! Bookmark not defined.
4 Transitional and Organic APH Database Examples .....	<b>19</b>

## Part 1 General Information and Responsibilities

### 1 General Information

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#### A. Purpose

This handbook provides procedure for administering the Pistachio Program in accordance with the Common Crop Insurance Policy Basic Provisions and the Pistachio Crop Provisions and supplements the CIH, DSSH, GSH, and LAM via exceptions, changes, and additions. If there is a conflict between this handbook and the CIH, DSSH, GSH, LAM or other issuance, this handbook supersedes the others.

#### B. Source of Authority

The APH Pistachio Program is an RMA developed product approved by the FCIC Board of Directors, under Section 523 of the Federal Crop Insurance Act. This handbook provides the FCIC approved procedures for administering the program.

#### C. Applying for Pistachio Program

AIPs shall use the application located in the DSSH for the Pistachio Program. The application must indicate the insured has selected the Pistachio Crop Provisions along with all other required information.

#### D. Related Handbooks

The following table provides handbooks related to Pistachio Program.

**Important:** Not all sections of related handbooks or all procedures in a section apply to the Pistachio Program. See Part 3 for more information.

Handbook	Purpose
CIH	This handbook provides the official FCIC-issued underwriting standards for policies covered under the Common Crop Insurance Policy Basic Provisions and Area Risk Protection Insurance, including the Catastrophic Risk Protection Endorsement and Supplemental Coverage Option; and the Actual Production History Regulation G.
DSSH	Provides the official FCIC approved form standards and procedures for use in the sale and service of any eligible Federal crop insurance policy.
GSH	Provides the general administrative procedures that apply across all plans of insurance.
LAM	Identifies loss adjustment standards and requirements for determining production or revenue and adjusting crop insurance claims.
Pistachio Loss Adjustment Standards Handbook	Provides specific loss procedures for pistachios.

**A. AIP Responsibilities**

AIPs must use standards, procedures, methods, and instructions as authorized by FCIC in the sale and service of crop insurance contracts. Each AIP is responsible for using RMA approved procedure. AIPs should report any program issues or concerns to the PASD of RMA.

**B. Insured's Responsibilities**

To be eligible for the Pistachio Program, insureds must comply with all terms and conditions of the CCIP Basic Provisions, and the Pistachio Crop Provisions.

**3-20 (Reserved)**



## Part 2 Insurability

### 21 Alternate Bearing

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Pistachios are an alternate bearing perennial crop and establishing an approved APH yield to reflect the expected annual yield for the next year requires modified procedures found in this handbook APH crop insurance programs cover yield losses due to natural causes. For alternate bearing crops, the swing in production is an inherent characteristic of the tree; therefore, low annual yields may not be due to an insurable cause of loss.

To address alternate bearing characteristic, the pistachio procedures use a variability index to identify units which have 'on' versus 'off' years and adjusts the approved APH yield accordingly. If the previous year was high, the approved APH yield may be lowered for the current crop year. Likewise, when the annual yield for the previous year was low, the approved APH yield may be increased for the current crop year. This approach will better align the guarantee in both 'on' and 'off' years with the true expected annual yield.

### 22 Insurable Types and Practices

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#### A. Types Insurable

For pistachios there are no types specified.

#### B. Insurable Practices

- (1) Pistachios must be irrigated to be insurable.
- (2) Organic practices (transitional and certified) are also insurable.
- (3) Insurable practices listed in the actuarial documents are:

- 002 Irrigated
- 702 Organic (certified) irrigated
- 712 Organic (transitional) irrigated

## 23 Units, Coverage Levels, and Prices

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A selection of one coverage level and one price election percent **applies** for both years of the two-year coverage period for all pistachios insured in the county. Coverage level, price election percent, and unit structure may be changed by the insured by notifying the AIP in writing by the sales closing date for the next two-year coverage period.

### A. Units

The Pistachio Crop Provisions, Section 2, allow basic units to be divided into optional units if each optional unit is located on non-contiguous land, unless limited in the Special Provisions or otherwise allowed by written agreement.

As with other insurance plans:

- (1) All optional units must be identified on the forms used to report production and acreage.
- (2) When adjusting a loss, units may be adjusted or combined to reflect the actual unit structure.
- (3) For optional units, acceptable records of production must be available for at least the most recent crop year.
  - The insured does not have to be able to separate all years in the APH database to qualify for OUs.
  - The insured must have acceptable records for at least the most recent crop year according to the OUs requested.
  - For the requested OU, if the insured is unable to separate prior years (other than the most recent), actual yields will be used in accordance to CIH 1088B(1) since T-Yields are not available. See CIH exhibit 15W for the applicable yield descriptors.
- (4) The insured must have production evidence, which can be independently verified, including the acreage and production used to determine the approved APH yield or amount of insurance for each optional unit.

The Basic Provisions, Section 34, which allow enterprise and whole-farm units do not apply to pistachios.

### B. Coverage Levels and Prices

Coverage is available in 5 percent (5%) increments from 50 percent (50%) **to 85 percent (85%). \*\*\***

## **24 Reports**

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Acceptable supporting records for delivered pistachios include:

- (1) delivery statements;
- (2) pool closing statements;
- (3) production recaps or settlement reports provided by the processor only if the records clearly identify the production unit; and
- (4) all records, regardless of the type of record, must include the assessed weight determined according to regulations of the Administrative Committee for Pistachios.

## **25 Written Agreements**

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Written agreements are acceptable for pistachios. \*\*\*

**26-30 (Reserved)**

## Part 3 Applicability of Handbooks

### 31 General Overview

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This Part identifies information specific to the applicability of the CIH, GSH, DSSH, LAM, and any other procedural issuance that may require supplemental information with regards to pistachios. Unless specifically amended, supplemented, or deleted by information in this handbook, all policy and procedure issuances apply to the Pistachio Program.

Pistachios are a perennial crop and existing procedures for perennials will apply.

Some procedures are modified to address alternate bearing which is a special characteristic of pistachio production. In particular:

- The approved APH yield for each unit will be determined by adjusting the average yield for expected alternate bearing effects. Year-to-year changes in approved yields are determined by the variability adjustment factor.
- All APH databases will contain at least four years of actual yields. T-Yields, yield limitations, yield adjustments, and yield exclusions are not applicable.

AIPs will be responsible for calculating and documenting the approved APH yield adjustments as applicable.

### 32 Specific Information Regarding the Crop Insurance Handbook

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The CIH, applies to the Pistachio Program. The following table provides general information, changes, additions, deletions and/or modifications, and termed supplemental instructions regarding the applicability of the CIH to the Pistachio Program.

CIH Reference	Supplemental Instructions
Part 10	Optional Units – Optional units may be established if each optional unit is located on non-contiguous land, unless limited in the Special Provisions or otherwise allowed by written agreement. The supporting records must indicate production for each optional unit and must account for total production from the planted acreage.
Para. 1215	Does not apply to Pistachio Program.
Part 15 Sec. 3, 4, 5, and 6	Does not apply to Pistachio Program.

**32 Specific Information Regarding the Crop Insurance Handbook (Continued)**

CIH Reference	Supplemental Instructions
Part 18	Pistachios are an eligible Category C crop. Category C APH crop procedures apply for pistachios with included modifications.
Part 18 Sec. 3	<p>Age/Leaf Year Determination – Rooted pistachio plants are usually planted in spring, then once established are budded in the field with the fruiting cultivar. This determination of “Leaf Year” for perennials by subtracting the set out year from the calendar year of insurance and add one year.</p> <p>For purposes of the Pistachio Program, the calendar year the trees are grafted in the field is considered the year of “set out.”</p> <p>Example: Rootstock is graphed in April of 2013. The “set out” year is 2013. Harvestable fruit production is expected to begin in the 6<sup>th</sup> leaf year, 2018. The minimum age the orchard would become insurable is the 10<sup>th</sup> leaf year, 2022.</p>
Part 18 Sec. 4	<p>PAW is applicable including the following supplemental instructions:</p> <p>Block Number – Certification of information by block is necessary to document differences in planting date, type, variety, rootstock, etc. List uninsurable block(s) on separate line(s) as needed.</p>
Part 18 Sec. 5	PAIR is required for new insureds. Special attention must be given to water supplies for irrigation, arrangements for harvesting and processing, and documentation of the number of bearing trees per planted acre.
Part 18 Para. 1851	Block Reporting – Block reporting allows the insured to report and maintain separate production and acreage by block. An insured may report production and an AIP may establish an APH database by block. Reporting by block allows production from underage trees or acreage not meeting production minimums to be maintained separately.
Part 18 Para. 1854	<p>APH database instructions for acreage with an organic plan – This procedure is modified because T-Yields, yield limitations, yield adjustment, and yield exclusion are not applicable to the Pistachio Program. Actual conventional yields from the acreage are carried over to the certified organic and transitional APH databases as modified below:</p> <p>If there are less than four years of actual yields for the transitional acreage available in the transitional APH database, use the recent four years of actual yields from the conventional APH database with a twenty percent reduction for each yield. The reduced actual yields from the conventional acreage will be replaced by actual yield history for the transitional acreage as it is collected.</p>

32 Specific Information Regarding the Crop Insurance Handbook (Continued)

CIH Reference	Supplemental Instructions
<p>Part 18 Para. 1854 (Continued)</p>	<p>The yield variability index procedure in this handbook applies for both certified organic and transitional acreage.</p> <p>APH database instructions for acreage without an organic plan are modified as follows:</p> <p>Transitioning Acreage. For acreage in transition to certified organic without an organic plan or written documentation from a certifying agent indicating an organic plan is in effect, the AIP must reduce the approved APH yield for the conventional APH database to reflect the change in practice. The approved APH yield for the conventional APH database should be reduced using the following procedure:</p> <ul style="list-style-type: none"> <li>(a) Apply the yield variability index procedures,</li> <li>(b) Multiply the result in (a) by 0.80 to account for the twenty percent reduction due to the change in practice,</li> <li>(c) Report the resulting approved APH yield.</li> </ul> <p>Continue to make this adjustment until the acreage becomes certified organic or the insured reverts to conventional farming practices.</p> <p>Certified Acreage. When acreage previously transitioned to certified organic without an organic plan or written documentation from a certifying agent indicating an organic plan is in effect, and the acreage becomes certified organic, the AIP must consider the annual yields from the time the acreage was in transition to organic to determine the approved APH yield for the certified organic acreage.</p> <ul style="list-style-type: none"> <li>(a) Four or more years of certified organic production history. If the insured has four or more years of certified organic annual yields, the AIP does not adjust the certified organic approved APH yield other than the applicable yield variability adjustment.</li> <li>(b) Less than four years of certified organic production history. If the insured has less than four years of certified organic annual yields, the AIP must assure that any acreage in transition to certified organic, without an organic plan or written documentation in effect from a certifying agent, is accounted for in the certified organic production history. The APH database should be established, and approved APH yield calculated by:</li> </ul>

**32 Specific Information Regarding the Crop Insurance Handbook (Continued)**

<b>CIH Reference</b>	<b>Supplemental Instructions</b>
<p>Part 18 Para. 1854 (Continued)</p>	<ol style="list-style-type: none"> <li>1. Use any certified organic annual yields,</li> <li>2. Include the annual yields from the transitional acreage (without a plan or written documentation from a certifying agent indicating an organic plan is in effect) in the most recent four APH crop years,</li> <li>3. Complete the database with prior conventional yields, reduced by twenty percent to account for the change in practice.</li> </ol> <p>For both certified organic and transitional acreage, the yield variability index procedure in this handbook applies.</p> <p>For acreage that coverts to a conventional practice from an certified organic practice, use the most recent four years of certified organic yields with each yield transferred over without adjustment. The actual yields from the certified organic acreage will be replaced by actual yield history for the conventional acreage as it is collected.</p>
<p>Part 18 Para. 1856</p>	<p>APH Database Establishment Methods – A minimum of four years of actual yields are required in each APH database to calculate an approved APH yield.</p>
<p>Part 18 Para. 1858</p>	<p>Does not apply to Pistachio Program.</p>
<p>Part 18 Para. 1860</p>	<p>Added Insurable Acreage – Added insurable acreage is acreage that becomes insurable in the current policy crop year because policy requirements for minimum age are met.</p> <p>For pistachios the minimum age requirement is 10 leaf years. The procedures in Subparagraph A for specific crops in AZ, CA, HI, and UT will also apply to pistachio production in NM, and Subparagraph C will apply to added insurable acreage when the 10<sup>th</sup> leaf year minimum age requirement is met.</p>
<p>Part 18 Para. 1861</p>	<p>Added new land – Land may be added to an insured’s pistachio policy prior to the acreage reporting date of each year of the two-year module as long as the insured can provide four years of acceptable production records for the land being added and the acreage added meets the minimum requirements to be insurable under the policy. An insured may use production records from another producer for the acreage being added but the records must contain at least four years of production and must meet the requirements to qualify as acceptable verifiable records shown in Part 2 Section 24 of this Handbook.</p>

32 Specific Information Regarding the Crop Insurance Handbook (Continued)

CIH Reference	Supplemental Instructions														
Part 18 Para. 1862	<p>Test for High Variability of Actual Yields – Substitute new procedure as follows:</p> <p>In lieu of the procedure specified in this paragraph, the following procedure is to be used for pistachios to determine the approved APH yield. The Special Provisions may authorize different variability adjustment factors.</p> <p>If the orchard is in the 10<sup>th</sup> or 11<sup>th</sup> leaf years, the variability adjustments below are not applicable. The approved APH yield for 10<sup>th</sup> and 11<sup>th</sup> leaf year orchards will be the simple average of the most recent 4 years of history.</p> <p>If the orchard is in the 12<sup>th</sup> leaf year or older, the following variability adjustment procedure will be applied by the AIP to determine approved APH yield. See Exhibit 3 for additional examples.</p> <p><i>Step 1.</i> Calculate the average yield from the APH database. Use the most recent, largest even number of yields if there fewer than 10 years of yields. Also note, the RO may remove the uninsurable years from the APH database by either RO Determined Yield or underwriting guide.</p> <table border="1" data-bbox="410 1052 1468 1203"> <tr> <td>If the APH database has 10 yields</td> <td>Use all 10 years</td> </tr> <tr> <td>If the APH database has 9 or 8 yields</td> <td>Use most recent 8 years,</td> </tr> <tr> <td>If the APH database has 7 or 6 yields</td> <td>Use most recent 6 years,</td> </tr> <tr> <td>If the APH database has 5 or 4 yields</td> <td>Use most recent 4 years,</td> </tr> </table> <p><i>Step 2.</i> Average the two (2) years prior to the most recent crop year.</p> <p><i>Step 3.</i> Calculate the variability index by dividing the most recent year’s annual yield by the average calculated in Step 2; multiply by 100; round to nearest whole number. The variability index may vary per the Special Provisions.</p> <table border="1" data-bbox="410 1461 1346 1577"> <tr> <td>If the variability index is:</td> <td></td> </tr> <tr> <td>Less than 100</td> <td>the most recent year was an “off” year</td> </tr> <tr> <td>Greater than or equal to 100</td> <td>the most recent year was an “on” year</td> </tr> </table>	If the APH database has 10 yields	Use all 10 years	If the APH database has 9 or 8 yields	Use most recent 8 years,	If the APH database has 7 or 6 yields	Use most recent 6 years,	If the APH database has 5 or 4 yields	Use most recent 4 years,	If the variability index is:		Less than 100	the most recent year was an “off” year	Greater than or equal to 100	the most recent year was an “on” year
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Less than 100	the most recent year was an “off” year														
Greater than or equal to 100	the most recent year was an “on” year														



**32 Specific Information Regarding the Crop Insurance Handbook (Continued)**

CIH Reference	Supplemental Instructions																
Part 18 Para. 1862 (continued)	<p><i>Step 4.</i> Determine the variability adjustment factor:</p> <table border="1" data-bbox="410 390 1346 621"> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </table> <p>***</p> <p><i>Step 5.</i> Calculate the approved APH yield by multiplying the average yield calculated in Step 1 by the variability adjustment factor determined in step 4.</p> <table border="1" data-bbox="410 768 1395 995"> <tr> <th data-bbox="410 768 891 842">If the variability index is:</th> <th data-bbox="891 768 1395 842">The approved APH yield is calculated as:</th> </tr> <tr> <td data-bbox="410 842 891 884">Less than or equal to 40</td> <td data-bbox="891 842 1395 884">1.60 x average yield</td> </tr> <tr> <td data-bbox="410 884 891 957">Greater than 40 but less than or equal to 160</td> <td data-bbox="891 884 1395 957">Variability adjustment factor x average yield</td> </tr> <tr> <td data-bbox="410 957 891 995">Greater than 160</td> <td data-bbox="891 957 1395 995">0.40 x average yield</td> </tr> </table> <p><i>Step 6.</i> Enter the approved APH yield from Step 5 into the APH database as appropriate.</p> <ul style="list-style-type: none"> <li>• Alternate bearing adjustments will be determined, and documentation maintained by AIPs.</li> </ul> <p>The approved APH yields must be submitted, as appropriate, based on guidance from Appendix III.</p>									If the variability index is:	The approved APH yield is calculated as:	Less than or equal to 40	1.60 x average yield	Greater than 40 but less than or equal to 160	Variability adjustment factor x average yield	Greater than 160	0.40 x average yield
If the variability index is:	The approved APH yield is calculated as:																
Less than or equal to 40	1.60 x average yield																
Greater than 40 but less than or equal to 160	Variability adjustment factor x average yield																
Greater than 160	0.40 x average yield																
Part 18 Para. 1862E	Downward Trending Test(s) are not required. Special case indicators D and DF are not applicable.																
Part 18 Para. 1862F	Does not apply to Pistachio Program.																
Part 18 Para. 1863	Approved APH Yield – The approved APH yield may be different from the simple average due to AIP adjustments by formula and procedures contained in this Handbook.																
Part 18 Para. 1872	Yield Adjustment – Not applicable, flag 12 is not appropriate.																
Part 18 Para. 1873	Yield Limitations – Year-to-year changes in approved APH yields are determined by the variability adjustment factor. Cups are not authorized.																

**32 Specific Information Regarding the Crop Insurance Handbook (Continued)**

CIH Reference	Supplemental Instructions		
Part 18 Para. 1881	RO Determined Yield Request –The validation of the variability index and variability adjustment factors are not reviewable. However, a RO Determined Yield or Underwriting Guide may authorize the removal of yields when the acreage was uninsurable from the APH database.		
Part 18 Para. 1882	Relevant underwriting and AIP responsibilities apply.		
Exhibit 15V	Yield Indicator	If the variability index is:	Comments
	VL	Greater than or equal to 100	the most recent year was an “on” year
	VH	Less than 100	the most recent year was an “off” year
	V	Cannot be calculated	3 most recent years have been zero
	If the two preceding years of the most recent year in the APH database are zero (years 8 and 9) and the most recent year in the APH database has a value greater than zero (year 10) then the yield indicator will be VL and the Max VI will be used to determine applicable variability adjustment factor.		

**33 General Standards Handbook**

GSH Reference	Supplemental Instructions
Part 6	Applies to Pistachio Program.
Part 8 Sec. 4	Organic Part 8, Section 4 is modified as follows: Organic: Certified Organic and acreage in transition to organic (transitional) practices are insurable. Variable T-Yield procedures do not apply.

**34 Prevented Planting Standards Handbook**

The Prevented Planting Standards Handbook is not applicable to the Pistachio Program. Prevented planting coverage is not available for pistachios.

**35 Loss Adjustment Manual**

The procedures identified (except replanting procedures) in the LAM are adopted for the Pistachio Program. Replanting coverage is not available for pistachios.

**36 Pistachio Loss Adjustment Standards Handbook**

The Pistachio Program Loss Adjustment Standard Handbook is applicable.

37-40 (Reserved)

**Acronyms**

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The following table provides approved acronyms used in this handbook.

<b>Approved Acronyms</b>	<b>Term</b>
AIP	Approved Insurance Provider
APH	Actual Production History
CAT	Catastrophic Risk Protection
CCIP	Common Crop Insurance Policy
CIH	Crop Insurance Handbook
DSSH	Document and Supplemental Standards Handbook
GSH	General Standards Handbook
FCIC	Federal Crop Insurance Corporation
LAM	Loss Adjustment Manual
NASS	National Agricultural Statistics Service
PAIR	Pre-Acceptance Inspection Report
<b>PASD</b>	<b>Product Administration and Standards Division</b>
PASS	Policy Acceptance and Storage System
PAW	Producer's Pre-Acceptance Worksheet
RO	Regional Office
RMA	Risk Management Agency

## Definitions

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The following are definitions of the terms used within this handbook.

Agent – means the same as the term “agent” in the Standard Reinsurance Agreement.

Approved Insurance Provider (AIP) – means the same as the term “approved insurance provider” in the Federal Crop Insurance Act. For the purposes of this handbook, Approved Insurance Provider includes managing general agents as defined in the Standard Reinsurance Agreement.

Alternate bearing – means the physiological propensity of perennial species, such as pistachios (*Pistacia vera*), to produce a higher yield (‘on’ year), typically followed the next year by a lower yield (‘off’ year).

Assessed Weight – means the total pounds of edible split in-shell, total edible kernels from shelling stock and edible kernels from closed shell. Total edible kernels from shelling stock and edible kernels from closed shell are converted to in-shell equivalents according to Administrative Committee for Pistachios regulations.

Approved yield (per acre) – means in addition to the definition contained in the Basic Provisions, the quantity of pistachios (total assessed weight pounds per acre) determined by multiplying the average production history yield per acre by the variability adjustment factor.

Bearing Trees – means that pistachio nuts are produced only by female trees, each planting requires non-bearing male trees for pollination. The ratios of bearing trees to pollinators and planting patterns are particular to each field.

Crop Year – means the calendar year in which the harvest occurs.

Harvest – means the removal of the mature pistachio nuts from the tree.

Leaf year – means to subtract the set out year from the crop year, then add one year.

Example: Rootstock is grafted in April of 2013. The “set out” year is 2013. Harvestable fruit production is expected to begin in 2018 the sixth leaf year (sixth leaf year (6) = 2018-2013+1). The orchard would become insurable in 2022 the 10<sup>th</sup> leaf year (10 = 2022-2013+1).

Pesticide – means a generic term to include fungicides, herbicides, insecticides, rodenticides, etc.

Practice – means insurable practices listed in the actuarial documents.

Production guarantee (per acre) – means the quantity of pistachios (total assessed weight pounds per acre) determined by multiplying the approved yield per acre by the coverage level percentage.

**Definitions (Continued)**

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Set out year – means the actual calendar year for acreage grafted before July 1<sup>st</sup> or the calendar year following grafting when grafting occurs on or after July 1<sup>st</sup>.

Type – means the insurable types listed in the actuarial documents.

Variability adjustment factor – means a factor derived from the variability index that is multiplied by the APH to determine the approved yield. The resulting approved yield cannot be greater than the highest actual yield in the APH database or lower than the lowest actual yield in the database. The variability adjustment factor will be rounded to two decimal places unless otherwise provided in the Special Provisions.

- (1) If the variability index is less than or equal to 40 the variability adjustment factor will equal 1.60 unless otherwise provided in the Special Provisions.
- (2) If the variability index is greater than 40, but less than or equal to 160, the variability adjustment factor will equal (200 minus the variability index) divided by 100.
- (3) If the variability index is greater than 160, the variability adjustment factor will equal 0.40 unless otherwise provided in the Special Provisions. \*\*\*

Variability index – means a ratio determined by dividing the yield from the most recent crop year by the average yield of the two previous crop years. Multiply the result by 100 and round to the nearest whole number. The index is used to identify units that are likely to have ‘on’ versus ‘off’ years.

**Examples – Alternate Bearing**

Example 1: To provide an example of the insured’s calculated variability factor which is used to adjust the approved APH yield.

In this example the crop year is 2022.

- (a) The insured has production records for 10 years and an average yield of 1,985 pounds.
- (b) The variability index is calculated by dividing the 2021 annual yield by the average of 2020 and 2019 annual yields:  $960 / [(1050 + 2820) / 2] = 0.50$  (rounded to decimals) multiplied by 100, a variability index of 50.
- (c) The variability index value of 50 is used to determine the variability adjustment factor.
- (d) The variability index is greater than the minimum of 40 but less than the maximum of 160; therefore, the variability adjustment factor will be a calculated value:  $(200 - 50 \text{ variability index} / 100 = 1.50)$ . See Special Provisions for exceptions to the variability index minimum and maximums.
- (e) The approved APH yield will be calculated by multiplying the average yield of 1,985 pounds by the variability adjustment factor for the 2022 crop year:  $1,985 \text{ pounds} \times 1.50 = 2,978$  pounds, which is the approved APH yield.

Crop Year	Total Production	Acres	Yield
2012	61,400	20	3070
2013	15,600	20	780
2014	65,800	20	3290
2015	14,000	20	700
2016	65,200	20	3260
2017	13,000	20	650
2018	65,400	20	3270
2019	21,000	20	1050
2020	56,400	20	2820
2021	19,200	20	960
	Average Yield		1985
	Approved APH Yield		2978
Variability Index			50
Variability Adjustment Factor			1.50
Yield Indicator			VH

**Examples – Alternate Bearing (Continued)**

Example 2: To provide an example for situations where the approved APH yield (after applying the variability adjustment factor) is lower than the average yield, which would be representative of an “off” year that exceeds the maximum variability index.

In this example the crop year is 2022.

- (a) The insured has production records for 10 years and an average yield of 2,020 pounds.
- (b) The variability index is calculated by dividing the 2021 annual yield by the average of 2020 and 2019 annual yields:  $3,670 / [(3,270 + 850) / 2] = 1.78$  multiplied by 100.
- (c) The variability index value of 178 is used to determine the variability adjustment factor.
- (d) The variability index is greater than 160; therefore, the variability adjustment factor would be 0.40 indicating that 2022 crop year is expected to be lower or an ‘off’ year. See Special Provisions for exceptions to the variability index minimum and maximums.
- (e) The approved APH yield will be calculated by multiplying the average yield by the variability adjustment factor for the 2022 crop year:  $2,020 \text{ pounds} \times 0.40 = 808 \text{ pounds}$ , which is the approved APH yield.

Crop Year	Total Production	Acres	Yield
2012	13,200	20	660
2013	61,400	20	3070
2014	15,600	20	780
2015	65,800	20	3290
2016	14,000	20	700
2017	65,200	20	3260
2018	13,000	20	650
2019	65,400	20	3270
2020	17,000	20	850
2021	73,400	20	3670
	Average Yield		2020
	Approved APH Yield		808
Variability Index			178
Variability Adjustment Factor			0.40
Yield Indicator			VL

**Examples – Alternate Bearing (Continued)**

Example 3: To provide an example for situations where the approved APH yield (after applying the variability adjustment factor) is higher than the average yield, which would be representative of an “on” year that exceeds the maximum variability index.

In this example the crop year is 2022.

- (a) The insured has production records for 10 years and an average yield of 1,935 pounds.
- (b) The variability index is calculated by dividing the 2021 annual yield by the average of 2020 and 2019 annual yields:  $660 / [(850 + 2,820) / 2] = 0.36$  multiplied by 100.
- (c) The variability index value of 36 is used to determine the variability adjustment factor.
- (d) The variability index is less than 40; therefore, the variability adjustment factor would be 1.60 indicating that crop year 2022 crop year is expected to be higher or an ‘on’ year. See Special Provisions for exceptions to the variability index minimum and maximums.
- (e) The approved APH yield will be calculated by multiplying the average yield by the variability adjustment factor for crop year 2022 crop year:  $1,935 \text{ pounds} \times 1.60 = 3,096$  pounds, which is the approved APH yield.

Crop Year	Total Production	Acres	Yield
2012	61,400	20	3070
2013	15,600	20	780
2014	65,800	20	3290
2015	14,000	20	700
2016	65,200	20	3260
2017	13,000	20	650
2018	65,400	20	3270
2019	17,000	20	850
2020	56,400	20	2820
2021	13,200	20	660
	Average Yield		1935
	Approved APH Yield		3096
Variability Index			36
Variability Adjustment Factor			1.60
Yield Indicator			VH



**Transitional and Organic APH Database Examples**

Note for the examples in this exhibit the yield descriptor “GT” designates a twenty percent reduction in conventional actuals yields for pistachios. For other applicable yield descriptors see CIH 2022 Exhibit 15W.

Examples for acreage in transition to certified organic, with an organic plan or written documentation from a certifying agent indicating an organic plan is in effect:

(1) Establishment and maintenance of the transitional APH database.

In 2015, an insured transitions conventional acreage using organic practices, following an approved plan. The insured has no prior organic farming history.

(a) The insured’s yield history (conventional APH database) prior to transitioning the acreage under the organic practice.

(a) Conventional APH Database			
Crop Year: 2015		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2005	119,125	125	A 953
2006	183,625	125	A 1469
2007	89,750	125	A 718
2008	168,125	125	A 1345
2009	125,125	125	A 1001
2010	151,250	125	A 1210
2011	117,000	125	A 936
2012	209,000	125	A 1672
2013	103,125	125	A 825
2014	224,500	125	A 1796
Approved APH Yield			716

(b) The transitional APH database will consist of four reduced actual yields from the conventional acreage in the unit when no actual transitional yields are available.

(b) Transitional APH Database			
Crop Year: 2015		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2011			GT 749
2012			GT1338
2013			GT 660
2014			GT1437
Approved APH Yield			628

**Transitional and Organic APH Database Examples (Continued)**

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Examples (c) - (e) illustrate a transitional APH database that contains transitional organic yield history. The actual yields include total production and number of acres. The transitional organic actual yields will replace the reduced conventional yields as they are accumulated in the APH database.

- (c) One year of actual transitional yields in the APH database and three reduced conventional yields.

(c) Transitional APH Database			
Crop Year: 2016		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2012			GT1338
2013			GT 660
2014			GT1437
2015	90,500	125	A 724
	Approved APH Yield		1456

- (d) Two years of actual transitional yields in the APH database and two reduced conventional yields.

(d) Transitional APH Database			
Crop Year: 2017		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2013			GT 660
2014			GT1437
2015	90,500	125	A 724
2016	153,250	125	A1226
	Approved APH Yield		1012

**Transitional and Organic APH Database Examples (Continued)**

(e) Three years of actual transitional yields in the APH database and one reduced conventional yield. At this point, the transition period (thirty-six months) as required by the OFPA and NOP standard is complete. The acreage, for the 2018 crop year, may be insured as certified organic.

(e) Transitional APH Database			
Crop Year: 2018		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2014			GT 1437
2015	90,500	125	A 724
2016	153,250	125	A1226
2017	86,125	125	A 689
	Approved APH Yield		1427

(2) Certified organic APH database examples illustrate the maintenance of the certified organic APH database.

After the transition period has been complete, the certified organic APH database is established.

(a) Initial year of the certified organic APH database. Is comprised of the most recent four yields from the transitional APH database.

(a) Certified Organic APH Database			
Crop Year: 2018		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2014			GT1437
2015		125	OF 724
2016		125	OF1226
2017		125	OF 689
	Approved APH Yield		1427

**Transitional and Organic APH Database Examples (Continued)**

(b) One certified organic yield and three actual yields from the transitional APH database.

(b) Certified Organic APH Database			
Crop Year: 2019		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2015		125	OF 724
2016		125	OF1226
2017		125	OF 689
2018	249,000	125	A 1992
Approved APH Yield			695

(c) Two years of certified organic actual yields and two actual yields from the transitional APH database.

(c) Certified Organic APH Database			
Crop Year: 2020		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2016		125	OF1226
2017		125	OF 689
2018	249,000	125	A1992
2019	109,750	125	A 878
Approved APH Yield			1675

(d) Three years of certified organic yields and one actual yield from the transitional APH database.

(d) Certified Organic APH Database			
Crop Year: 2021		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2017		125	OF 689
2018	249,000	125	A1992
2019	109,750	125	A 878
2020	205,875	125	A1647
Approved APH Yield			1302

**Transitional and Organic APH Database Examples (Continued)**

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Examples of transitioning without an organic plan:

- (1) Transitioning acreage to certified organic without an organic plan or written documentation from a certifying agency.

For the 2021 crop year, an insured begins transitioning conventional acreage using organic practices without an organic plan or written documentation from a certifying agency therefore:

- (a) The acreage must be insured under the conventional farming practice.

The APH database below illustrates the conventional APH database prior to transitioning the acreage.

(a) Conventional APH Database			
Crop Year: 2021		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2011	119,125	125	A 953
2012	183,625	125	A1469
2013	89,750	125	A 718
2014	168,125	125	A1345
2015	125,125	125	A1001
2016	151,250	125	A1210
2017	117,000	125	A 936
2018	209,000	125	A1672
2019	103,125	125	A 825
2020	224,500	125	A1796
	Approved APH Yield		716

**Transitional and Organic APH Database Examples (Continued)**

(b) If the conventional acreage had been transitioned according to a plan, then a separate transitional APH database would be established. If the insured chooses to transition without a plan, a separate APH database is not established, and the AIP must reduce the approved APH yield to account for the change in practice as specified in this handbook. The resulting initial year APH database is the following:

(b) Conventional APH Database			
Crop Year: 2021		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2011	119,125	125	A 953
2012	183,625	125	A1469
2013	89,750	125	A 718
2014	168,125	125	A1345
2015	125,125	125	A1001
2016	151,250	125	A1210
2017	117,000	125	A 936
2018	209,000	125	A1672
2019	103,125	125	A 825
2020	224,500	125	A1796
	Variability Index Adjusted Yield		716
	Approved APH Yield		573*

\*The approved APH yield must be reported with perennial special case “PM” and limitation code “11.”

**Transitional and Organic APH Database Examples (Continued)**

(c) The example below illustrates the actual transitional yields the insured accumulated while transitioning the conventional acreage without an organic plan or other documentation from a certifying agency.

(c) Conventional APH Database			
Crop Year: 2020		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2010	168,125	125	A1345
2011	125,125	125	A1001
2012	151,250	125	A1210
2013	117,000	125	A 936
2014	209,000	125	A1672
2015	103,125	125	A 825
2016	224,500	125	A1796
2017	90,500	125	A 724
2018	153,250	125	A1226
2019	86,125	125	A 689
	Variability Index Adjusted Yield		1599
	Approved APH Yield		1279*

\*The approved APH yield must be reported with perennial special case “PM” and limitation code “11.”

**Transitional and Organic APH Database Examples (Continued)**

(2) Establish a certified organic APH database only when the insured has an organic plan and certificate from a certifying agency. In this situation, the insured has completed the transitional period for organic acreage and has provided an organic plan and certificate. Since the acreage was transitioned without a plan, any applicable actual yield(s) from the transitional acreage must be considered when determining the certified organic approved APH yield.

(a) Initial year of the certified organic APH database. Is comprised of the three actual transitional acreage yields and one reduced conventional yield from the conventional APH database.

(a) Certified Organic APH Database			
Crop Year: 2020		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2016			GT1437
2017		125	OF 724
2018		125	OF1226
2019		125	OF 689
Approved APH Yield			1427

(b) One actual certified organic yield and three yields from the transitional period.

(b) Certified Organic APH Database			
Crop Year: 2021		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2017		125	OF 724
2018		125	OF1226
2019		125	OF 689
2020	249,000	125	A 1992
Approved APH Yield			695



**Transitional and Organic APH Database Examples (Continued)**

Example of acreage changing from certified organic practice to conventional:

When certified organic acreage converts back to the conventional practice due to drift, revocation of the certificate, etc., the conventional APH database must be established using the most recent four years of yields from the certified organic APH database.

- (a) The APH database below illustrates the certified organic APH database prior to converting back to conventional APH database.

(a) Certified Organic APH Database			
Crop Year: 2021		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2015	249,000	125	A1992
2016	109,750	125	A 878
2017	205,875	125	A1647
2018	79,000	125	A 632
2019	187,500	125	A1500
2020	74,500	125	A 596
Approved APH Yield			1691

- (b) Establish the conventional APH database using the most recent four years from the certified organic APH database. (See CIH 2022 Exhibit 15W for applicable yield descriptor and Exhibit 22 for applicable perennial special case depending on the reason why the insured is converting back to a conventional APH database.)

(b) Conventional APH Database			
Crop Year: 2021		Unit No. 0001-0000	
Year	Total Prod	Acres	Yield
2017	205,875	125	A1647
2018	79,000	125	A 632
2019	187,500	125	A1500
2020	74,500	125	A 596
Approved APH Yield			1531