21-APT-A
(Released January 2020)

UNITED STATES DEPARTMENT OF AGRICULTURE
Federal Crop Insurance Corporation
APPLE TREE CROP INSURANCE COMPREHENSIVE
TREE VALUE (CTV) ENDORSEMENT
(This is a Continuous Endorsement.)

1. In return for payment of the required additional premium as contained in the actuarial documents, this endorsement is attached to and made part of your Apple Tree Crop Provisions (Crop Provisions) subject to the terms and conditions described herein. In the event of a conflict between the Crop Provisions and this endorsement, this endorsement will control.
2. You must elect this endorsement on or before sales closing date. This endorsement:
   (a) Will continue in effect until canceled.
   (b) May be canceled by either you or us for any succeeding crop year by giving written notice to the other party on or before the cancellation date contained in the Crop Provisions.
3. To be eligible for this endorsement, you must have an Apple Tree insurance policy in force and have not elected coverage under the Catastrophic Risk Protection Endorsement. If at any time your Apple Tree insurance policy is cancelled or terminated, this endorsement is automatically cancelled or terminated as of the same date.
4. You are required to insure all eligible trees within the county.
5. Definitions:
   (a) **Average revenue value** – The value per tree for each applicable stage as determined in section 7(b) and (c) of this endorsement.
   (b) **CTV amount of insured damage** – The dollar amount determined by multiplying the CTV damage value by the coverage level.
   (c) **CTV amount of protection** – The dollar amount (by unit) calculated by multiplying the number of insurable trees reported by you in each stage II - III block times your maximum CTV reference price for the stage, adding these values, and then multiplying the result by the coverage level selected by you subject to any limit contained in the Special Provisions.
   (d) **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 - III block in all the stands of damaged trees identified as a result of the most recent cause of loss times your CTV reference price for the stage, 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.
   (e) **CTV underreport factor (unit)** – A factor determined by us and used to adjust your CTV indemnity in section 11(b)(2) when you have 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.
   (f) **CTV unit deductible** – The dollar amount determined by multiplying the actual number of insurable trees in each stage II - III block in the unit on the day before the loss (but not reduced for any insured damage that occurred during the crop year) times your maximum CTV reference price, adding these values, and then multiplying the result by the deductible (1.0 minus the coverage level).
   (g) **CTV unit value** – The amount determined by multiplying the number of actual insurable trees in each stage II – III block in the unit, as determined by us, on the day before the loss (but not reduced for any insured damage that occurred during the crop year) times your maximum CTV reference price for the stage, adding these values, and then multiplying the result by the coverage level selected by you.
   (h) **Maximum actual CTV reference price** – The price per tree, by type, density practice, and stage, determined in accordance with section 7 of this endorsement 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 this endorsement.
   (i) **Minimum actual CTV reference price** – The price per tree, by type, density practice, and stage, determined in accordance with section 7 of this endorsement that is used in calculating the portion of the CTV damage value for fully (100-percent) damaged trees for this endorsement.
   (j) **Maximum CTV reference price** – The price per tree, by type, density practice, and stage, listed on the actuarial documents 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 this endorsement.
   (k) **Minimum CTV reference price** – The price per tree, by type, density practice, and stage, listed on the actuarial documents for CTV that is used in calculating the portion of the CTV damage value for fully (100-percent) damaged trees for this endorsement. The minimum CTV reference price applies only to stage II trees.
   (l) **Reference revenue value** – The value per tree, by type, density practice, and stage, contained in the actuarial documents for CTV that is used in calculating the actual CTV (minimum/maximum) reference prices for producers using their actual records of production and sales.
6. The coverage level and price percentage elected by you under section 3 of the Crop Provisions will apply to this endorsement.
7. Your CTV reference prices may be based on your actual records of sales of apples (converted to a tree basis).
   (a) Such records must:
      (1) Be verifiable;
      (2) Be provided for all trees insured under your policy for the four most recent crop years (commingled records for

insured and uninsured trees will be used if such records cannot be separated);
(3) Be submitted by the applicable sales closing date contained in the Special Provisions; and
(4) Show the dates of sale, the buyers' name and address, and the pounds and dollar amount sold.

(b) All references in section 7(c) and (d) to maximum and minimum CTV reference prices, average revenue value, and calculated results apply on a stage and type basis except as otherwise specified.

(c) For insurable acreage containing one stage of trees, your maximum and minimum actual CTV reference prices will be the lesser of:
(1) The prices determined by:
(i) Dividing the gross sales reported by you by the number of insurable trees under your policy (see section 7(a)(2) for commingled records) for each crop year and rounding the result to two decimal places;
(ii) Adding the results of subsection (c)(1)(i) and dividing by four (4);
(iii) Rounding the result of subsection (c)(1)(ii) to two decimal places to determine the average revenue value;
(iv) Dividing the result of subsection (c)(1)(iii) by the reference revenue value for the stage;
(v) Dividing the applicable maximum and minimum CTV reference prices contained in the actuarial documents by 0.90 and rounding the results to two decimal places;
(vi) Multiplying the unrounded result of subsection (c)(1)(iv) times the results of subsection (c)(1)(v); and
(vii) Rounding the results of subsection (c)(1)(vi) to nearest whole dollar; or
(2) The prices determined by multiplying the applicable maximum and minimum CTV reference prices contained in the actuarial documents times 1.333 rounded to the nearest whole dollar.

(d) For insurable acreage containing two or more stages of trees, your maximum and minimum actual CTV reference prices for each stage will be the lesser of:
(1) The prices determined by:
(i) Dividing the gross sales reported by you by the number insurable trees under your policy (see section 7(a)(2) for commingled records) for each crop year and rounding the result to two decimal places;
(ii) Adding the results of subsection (d)(1)(i), dividing by four (4) and rounding the result to two decimal places;
(iii) Multiplying the result of subsection (d)(1)(ii) times the applicable factor for each stage shown in the table below;

	Standard Density											
	Idaho		Michigan		New York		Oregon		Pennsylvania		Washington	
Stage	II	III	II	III	II	III	II	III	II	III	II	III
Stage Factor	.533	1.000	.344	1.000	.230	1.000	.533	1.000	.230	1.000	.533	1.000

	High Density											
	Idaho		Michigan		New York		Oregon		Pennsylvania		Washington	
Stage	II	III	II	III	II	III	II	III	II	III	II	III
Stage Factor	.358	1.000	.167	1.000	.213	1.000	.358	1.000	.213	1.000	.358	1.000

(iv) Rounding the results of subsection (d)(1)(iii) to two decimal places to determine the average revenue values;
(v) Dividing the results of subsection (d)(1)(iv) by the reference revenue value for the stage;
(vi) Dividing the applicable maximum and minimum CTV reference prices contained in the actuarial documents by 0.90 and rounding the results to two decimal places;
(vii) Multiplying the unrounded results of subsection (d)(1)(v) times the applicable results of subsection (d)(1)(vi); and
(viii) Rounding the results of subsection (d)(1)(vii) to nearest whole dollar; or
(2) The prices determined by multiplying the applicable maximum and minimum CTV reference prices contained in the actuarial documents times 1.333 rounded to nearest whole dollar.

Example:
A standard density conventional apple orchard in the state of Washington contains 2000 insurable varietal group B (for fresh production) trees consisting of stage II and III trees. The insured provides the most recent four years of acceptable sales records.

The average gross sales per tree for the 4-year period are:

Crop Year	
2019	$48.53
2018	$58.21
2017	$81.69
2016	$41.36
Average Gross Sales	$57.45

The average revenue value for each stage is:

Stage II	$57.45 × .533 (stage factor)	=	$30.62
Stage III	$57.45 × 1.000 (stage factor)	=	$57.45

The reference revenue value for each stage is:	CTV reference prices Minimum	Maximum
Stage II: $17.59	$6	$69
Stage III: $32.98	$11	$161

The maximum and minimum actual CTV reference prices for each stage are:

Preliminary maximum actual CTV reference price = Stage II = $133 = {($30.62 ÷ $17.59) × ($69 ÷ 0.90)}
Stage III = $312 = {($57.45 ÷ $32.98) × ($161 ÷ 0.90)}

Final maximum actual CTV reference price = Stage II = $92 {the lesser of the preliminary price $133 or $92 ($69 × 1.333)}
Stage III = $214 {the lesser of the preliminary price $312 or $214 ($161 × 1.333)}

Preliminary minimum actual CTV reference price = Stage II = $12 ($30.62 ÷ $17.59) × ($6 ÷ 0.90)}
Stage III = $21 ($57.45 ÷ $32.98) × ($11 ÷ 0.90)}

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

(e) In addition to requirements of section 6 of the Crop Provisions, you must report your maximum and minimum actual CTV reference prices by stage block for each unit.

8. In addition to the exclusions in section 8(b) of the Crop Provisions, trees in stage I blocks are not insurable under this endorsement.
9. Only those trees in stage II blocks considered fully damaged (100 percent damage – reset only) and stage II - III blocks considered destroyed are eligible for an indemnity under this endorsement.
10. In order to receive the full indemnity for destroyed trees under this endorsement:
    (a) You must plant an equivalent number of trees within four calendar years of the date of the removal or destruction, unless otherwise specified on the Special Provisions;
    (b) The trees you plant do not have to be the same crop as the destroyed trees but must be grown to produce fruit or nuts intended to be sold for human consumption; and
    (c) The trees must be planted in accordance with recognized good farming practices and in an area within the state considered by us to be suitable for production of the specific fruit or nut crop.
    (d) You will receive fifty (50) percent of the indemnity within 30 days after we approve your claim for indemnity; the remaining 50 percent will be paid upon our verification that you have met the requirements of this section.
11. In lieu of the requirements of section 13(a) of the Crop Provisions, we will settle your claim for this endorsement as follows:
    (a) A claim for a unit under this endorsement will only be payable if you receive an indemnity for the same unit on your Apple Tree insurance policy. If no indemnity is due under such policy, no indemnity will be due under this endorsement.
    (b) We will determine your loss on a unit basis. In the event of loss or damage covered by your policy, we will settle your claim as specified below:
        (1) Determine the CTV unit value and the CTV underreport factor (URF).
        (2) For trees within a unit that are damaged by an insurable cause of loss, your loss will be determined by:
            (i) Calculating the CTV unit deductible;
            (ii) For the most recent cause of loss:
                (A) Calculating the CTV damage value resulting from the destroyed trees;
                (B) Calculating the CTV damage value resulting from the fully damaged trees;
                (C) Adding the results of 11(b)(2)(ii)(A) and (B);
            (iii) Totaling the CTV damage value for each prior loss that has occurred since the beginning of the crop year;
            (iv) Totaling the results of 11(b)(2)(ii)(C) and (iii);
            (v) Subtracting the result of 11(b)(2)(i) from the result of 11(b)(2)(iv);
            (vi) If the result of 11(b)(2)(v) is less than or equal to zero, no indemnity is due for this loss occurrence. If

the result of 11(b)(2)(v) is greater than zero, multiply the results of 11(b)(2)(v) by the URF and your share;
(vii) Subtracting any previous CTV indemnity for the current crop year from 11(b)(2)(vi) to determine the indemnity due for the damage as a result of the most recent insurable cause of loss;
(viii) Dividing the result of 11(b)(2)(ii)(A) by the result of 11(b)(2)(ii)(C), to two decimal places;
(ix) Dividing the result of 11(b)(2)(ii)(B) by the result of 11(b)(2)(ii)(C), to two decimal places;
(x) Multiplying the result of 11(b)(2)(vii) by 11(b)(2)(viii) and multiplying the result by 50 percent;
(xi) Multiplying the result of 11(b)(2)(vii) by 11(b)(2)(ix); and
(xii) Totaling the results of 11(b)(2)(x) and 11(b)(2)(xi) to determine the amount of the indemnity due at the time of claim.
(xiii) The remaining 50 percent of the indemnity for any destroyed trees will be paid out upon our verification that you have met the requirements specified in section 9 of this endorsement and will be equal to the result of 11(b)(2)(x).

(3) The total amount of indemnities payable on a unit during the crop year is limited to:
(i) The lesser of the CTV amount of protection for the unit or the CTV unit value;
(ii) Times your share.

12. If you have elected the Occurrence Loss Option under section 15 of the Apple Tree Crop Provisions, and paid the additional premium indicated on the actuarial documents for this optional coverage, those provisions will apply to this endorsement. Your indemnity under this endorsement in the event of a loss will be determined as follows:
(a) Determine the CTV unit value and the CTV URF;
(b) For trees within a unit that are damaged by an insurable cause of loss, your loss will be determined by:
(1) Calculating the CTV damage value resulting from the destroyed trees;
(2) Calculating the CTV amount of insured damage resulting from the destroyed trees;
(3) Multiplying the result of 12(b)(2) times the CTV URF times your share;
(4) Calculating the CTV damage value resulting from the fully damaged trees;
(5) Calculating the CTV amount of insured damage resulting from the fully damaged trees;
(6) Multiplying the result of 12(b)(5) times the CTV URF times your share;
(7) Multiplying the result of 12(b)(3) by 50 percent; and
(8) Totaling the results of 12(b)(6) and 12(b)(7) to determine the amount of the indemnity due at the time of claim.
(9) The remaining 50 percent of the indemnity for any destroyed trees will be paid out upon our verification that you have met the requirements specified in section 9 of this endorsement and will be equal to the result of 12(b)(7).
(c) The total amount of indemnities on a unit during the crop year is limited to:
(1) The lesser of the CTV amount of protection for that unit or the CTV unit value;
(2) Times your share.

Example of Additional Coverage and Premium:
Assume that a standard density conventional apple orchard owner – varietal group B:
- Buys 75-percent coverage level (25-percent deductible).
  Elects the 100% price percentage.
- Insures two stages of trees under the endorsement: stage II - III.
- Reports the following numbers and types of trees: 2,000 stage III trees and 800 stage II trees.
- Holds 100-percent interest.
- Is charged an additional premium rate of 0.5 percent.

FCIC's actuarial documents show the following maximum and minimum CTV reference prices:
- Maximum $161/tree, stage III; $69/tree, stage II.
- Minimum $11/tree, stage III; $6/tree, stage II (only stage II and III trees are considered fully damaged for CTVE purposes)

The CTV amount of protection provided by the endorsement for the unit will be calculated as follows:
- $282,900 CTV amount of insurance = [(2,000 stage III trees x $161) + (800 stage II trees x $69)] x 75-percent coverage level.

The additional premium due on the insured crop is:
- $1,415 = $282,900 CTV amount of protection x 100-percent share x 0.005 premium rate.

Loss Example:
The apple orchard is damaged due to freeze in December. Five hundred (500) of the stage II and 500 of the stage III trees were considered destroyed. (No fully damaged trees – applies to reset trees only.) The CTV unit value is determined to be the same as the CTV amount of protection, and the CTV URF is 1.000. The indemnity will be calculated as follows:
- The CTV unit deductible is $94,300 = [(2,000 x $161) + (800 x $69) x 25-percent deductible.
- The CTV damage value for the destroyed trees is $115,000 = [(500 x $161) + (500 x $71)].
- The CTV damage value for the most recent cause of loss is $115,000.
- The total CTV damage value for the unit since the beginning of the crop year is $115,000. (no prior indemnities)
- Subtracting from the total CTV damage value the CTV unit deductible is $20,700 = $115,000 – $94,300.
- Multiplying by the URF and your share is $20,700 = $20,700 x 1.000 x 1.000.
- The percent of the indemnity that is attributed to the destroyed trees is 100 percent = $20,700.
- Fifty percent of the indemnity for the destroyed trees will be paid within 30 days of the time of claim and is equal to $10,350.

- The remaining 50 percent of the indemnity for the destroyed trees will be paid upon verification that you have met the requirements specified in section 9 of this endorsement and is equal to $10,350 = $20,700 x 100 percent x 50 percent.

Loss Example– Occurrence Loss Option:
The apple orchard is damaged due to freeze in December. Seven hundred (700) of the stage II and 700 of the stage III trees were considered destroyed. (No fully damaged trees – applies to reset trees only.) The CTV unit value is determined to be the same as the CTV amount of protection, and the CTV URF is 1.000. The indemnity will be calculated as follows:

- The CTV damage value for the destroyed trees is $161,000 = [(700 x $161) + (700 x $69)].
- The CTV amount of insured damage for the destroyed trees is $120,750 = $161,000 x 75-percent coverage level.
- The CTV amount of insured damage for the destroyed trees multiplied by the CTV URF and share is $120,750 = $120,750 x 1.000 x 1.000.
- The CTV amount of insured damage for destroyed trees times 100 percent is $120,750.
- Fifty percent of the indemnity for the destroyed trees will be paid within 30 days of the time of claim and is equal to $60,375.
- The remaining 50 percent of the indemnity for the destroyed trees will be paid upon verification that you have met the requirements specified in section 9 of this endorsement: $60,375 = $120,750 x 50 percent.