



UNITED STATES DEPARTMENT OF AGRICULTURE
FEDERAL CROP INSURANCE CORPORATION
Fire Insurance Protection - Smoke Index Endorsement

In return for your payment of premium and administrative fee for the coverage, the Fire Insurance Protection - Smoke Index (FIP-SI) Endorsement will be attached to and made part of the Common Crop Insurance Policy, Basic Provisions (Basic Provisions) and the Grape Crop Provisions for the insured crop, subject to the terms and conditions in your policy. This Endorsement provides coverage for a portion of the deductible of your underlying insurance policy, that is not otherwise covered, when the insured county is within the area of a minimum number of Smoke Events as covered by and determined under the provisions of this Endorsement. Secondary effects of fires, including erosion, landslides, or changes in water quality may be associated with the Smoke Event, but will not trigger a loss under this Endorsement. The coverage provided by this Endorsement may be combined with the Supplemental Coverage Option (SCO) Endorsement or the Catastrophic Risk Protection Endorsement (CAT).

1. Definitions

County - In addition to the definition in the Basic Provisions, county boundaries may be modified within the actuarial documents for purposes of determining coverage and County Loss Trigger.

County Loss Trigger - The minimum number of cumulative Smoke Events that must occur during the Insurance Period to trigger an indemnity payment.

Expected Crop Value - The value of the crop based upon the Underlying Policy and determined by dividing the Underlying Policy liability for the eligible acreage with the same coverage level, type, and practice by the Underlying Policy coverage level, as applicable, and then again by the percentage of price election or percentage of projected price, as applicable, of the Underlying Policy. When SCO coverage is in effect with the Underlying Policy, use only the liability and coverage level for the Underlying Policy, not the SCO liability or coverage level. Any adjustment in liability on the underlying crop policy will apply.

Insurance Period - In lieu of section 11 of the Basic Provisions, the period beginning on the insurance attachment date of June 1 and ending on the end of insurance date provided in the Underlying Policy Special Provisions.

National Oceanic and Atmospheric Administration (NOAA) - An agency within the United States Department of Commerce, or its successor.

National Environmental Satellite, Data, and Information Service (NESDIS) - An office within NOAA that manages NOAA HMS data.

NOAA Hazard Mapping System (HMS) data - NOAA/NESDIS Satellite Analysis Branch's daily analysis of near real-time polar and geostationary satellite observations, combined with expert knowledge, to provide active fire and smoke information for North America.

Payment Factor - The Smoke Loss Factor divided by the Smoke Coverage Range, not to exceed 1.000 (100%). The payment factor is used to calculate the indemnity.

Smoke Coverage Percentage - A factor between 1 and 100 percent, elected, in whole percent increments, used to determine the Smoke Protection Amount.

Smoke Coverage Range - The difference between 95 percent and the higher of the coverage level of your Underlying Policy or, if applicable, the upper end of your

SCO coverage range. The Smoke Coverage Range is expressed as a whole percentage and applies to all Smoke Events covered by this Endorsement.

Smoke Index Data Provisions (SIDP) - A document that describes the methodology utilized by FCIC, incorporating NOAA's HMS data, that identifies a county subjected to a Smoke Event.

Smoke Event - A day with heavy smoke density in a county, as determined by the FCIC in accordance with the SIDP and identified in the actuarial documents. A Smoke Event will be measured in 24-hour intervals and will be determined using NOAA's HMS data. FCIC will use Coordinated Universal Time (UTC), not your local time zone, to determine the measurement of a heavy smoke day under this Endorsement. The SIDP establish procedures in the event of gaps in HMS smoke data.

Smoke Loss Factor - A factor determined by FCIC based on the number of Smoke Events and located in the actuarial documents.

Smoke Protection Amount (SPA) - The maximum dollar amount of insurance as determined by section 6 of this Endorsement. The SPA applies to all Smoke Events covered under this Endorsement.

Supplemental Coverage Option (SCO) - A county-level crop insurance option that provides additional coverage for a portion of a producer's Underlying Policy deductible.

Underlying Policy - The Basic Provisions published at 7 C.F.R. part 457 and the Grape Crop Provisions, to which this Endorsement is attached. A crop covered by any plan of insurance not under the Basic Provisions will not qualify as an Underlying Policy for this Endorsement.

2. Conditions of Insurance

- (a) There must be an Underlying Policy in force with us to elect coverage under this Endorsement.
- (b) This Endorsement is applicable only in those counties where coverage is offered in the actuarial documents.
- (c) To be eligible to receive an indemnity payment, the County Loss Trigger must occur within the Insurance Period, as defined in this Endorsement.
- (d) You may change your coverage (e.g., lowering coverage on the Underlying Policy or increasing the Smoke Coverage Percentage) by the sales closing date specified in the Special Provisions.
- (e) The sales closing and cancellation dates of your Underlying Policy will also be applicable to this

Endorsement.

3. Life of Endorsement

- (a) This is a continuous Endorsement, in accordance with section 2 of the Basic Provisions.
- (b) If at any time your Underlying Policy for the crop is canceled, voided, or terminated, coverage under this Endorsement is automatically canceled, voided, or terminated as of the same date.
- (c) If you change the coverage level on the Underlying Policy, or add, change, or remove any SCO coverage by the sales closing date, this Endorsement will remain in effect and will provide coverage based on the revised Smoke Coverage Range, unless you cancel this Endorsement by the cancellation date.

4. Report of Acreage

You are not required to file a separate report of acreage when you elect this Endorsement. The number of eligible acres of the insured crop under this Endorsement will be the number of insurable acres specified on your current crop year acreage report filed and accepted by us for the Underlying Policy.

5. Insurable Acreage

- (a) You may elect this Endorsement to cover eligible acreage in the county that is insured by the Underlying Policy. Any crop acreage that is not insured by the Underlying Policy is not covered by this Endorsement.
- (b) In lieu of the provisions regarding units and unit division in the Underlying Policy, protection provided by this Endorsement will be based on all eligible acreage of the crop in the county insured by the Underlying Policy, regardless of whether such acreage is owned, rented for cash, or rented for a share of the crop, including acres on which you are insuring another person's share of the crop.

6. Smoke Protection Amount

- (a) If there are multiple coverage levels, types, or practices for the insured crop in the county, your SPA will be determined separately for each coverage level, type, and practice, if applicable, and then summed for the crop.
- (b) To calculate your SPA for all eligible acreage of the crop in the county with the same coverage level, type, practice, and SCO:
 - (1) Determine your Smoke Coverage Range;
 - (2) Determine the Expected Crop Value;
 - (3) Multiply your Expected Crop Value by your Smoke Coverage Range; and
 - (4) Multiply the result of (3) by the Smoke Coverage Percentage elected by you.

7. Annual Premium and Administrative Fee

- (a) You will owe a separate annual premium and administrative fee per insured crop, per county for this Endorsement, in addition to any annual premium and administrative fee owed for the Underlying Policy.
- (b) Premium for this Endorsement is calculated by multiplying your SPA determined from section 6 by the premium rate and any premium adjustment percentages that may apply. All information needed to calculate the premium rate is contained in the actuarial documents.

- (c) The administrative fee for this Endorsement is determined in accordance with section 7(e) of the Basic Provisions.

8. Cause of Loss

- (a) This Endorsement provides protection for Smoke Events that meet the County Loss Trigger when the minimum number of Smoke Events occur in the county as identified in the actuarial documents. Triggered counties will be determined after the end of the Insurance Period.
- (b) Individual vineyard yields are not considered under this Endorsement. It is possible that your individual vineyard may experience reduced yield(s) and you do not receive an indemnity under this Endorsement.
- (c) The notice provisions in section 14(b) of the Basic Provisions do not apply to this Endorsement.
- (d) Once published, FCIC's determination in section 8(a) is final and is a matter of general applicability, presumed to be accurate, and will not be changed.

9. Settlement of Claim

- (a) An indemnity is due when the County Loss Trigger is identified for the insured county during the Insurance Period. Indemnities are calculated following the release by FCIC of any county that meets the County Loss Trigger.
- (b) The Indemnity is equal to the lesser of:
 - (1) The SPA; or
 - (2) The SPA multiplied by the Payment Factor.
- (c) In lieu of section 14(f)(1) of the Basic Provisions, we will pay your loss under this Endorsement following the Insurance Period, and within 30 days after the later of:
 - (1) The date FCIC releases the list of counties identified as meeting the County Loss Trigger; or
 - (2) The conditions in section 14(f)(2)-(4) of the Basic Provisions are met.
- (d) Only one indemnity per Insurance Period is allowed under this Endorsement.

10. [Reserved]

11. Written Agreements

- (a) This Endorsement is available only when authorized in the actuarial documents for the crop, type, and practice in the county and cannot be made available through a Written Agreement.
- (b) If a Written Agreement applies to the Underlying Policy, this Endorsement may be elected only when it is available in the actuarial documents for the crop, type, and practice in the county.

12. Examples

The following are examples of the calculation of the SPA and FIP-SI indemnity determinations for the plans of insurance that may be selected for the Underlying Policy. Your information will likely be different, and you should consult the policy information and actuarial documents for your county. The following examples are for illustrative purposes only.

Vineyard owner A insures 100 acres of grapes in County X and has an approved yield of 11.6 tons of grapes per acre, with a 100 percent share. The established price is \$411.00 per ton, as published in the actuarial documents

for County X. The producer elects a FIP-SI Smoke Coverage Percentage of 0.90. (This information, with some changing variables, applies to the following examples, except when indicated otherwise.)

Example 1: Indemnity determination for Underlying Policy with CAT coverage, FIP-SI election, and 21 Smoke Events:

Resulting liability for the Underlying Policy is \$131,109.

- (a) Determine the Smoke Protection Amount:
Step 1: Determine your Smoke Coverage Range by subtracting the maximum coverage level from the Underlying Policy from 95 percent.
 $0.95 - 0.50 = 0.45$ (Smoke Coverage Range).
Step 2: Determine your Expected Crop Value of the Underlying Policy by dividing the liability of the Underlying Policy by the coverage level of the Underlying Policy, and then by the percentage of price election.
 $\$131,109 \div 0.50 \div 0.55 = \$476,760$ (Expected Crop Value).
Step 3: Calculate the SPA by multiplying the Expected Crop Value by the Smoke Coverage Range and the Smoke Coverage Percentage you elected under this Endorsement.
 $\$476,760 \times 0.45 \times 0.90 = \$193,088$ (SPA).
- (b) Determine the result of the SPA times the Payment Factor:
Step 1: Determine the Payment Factor by dividing the Smoke Loss Factor located in the actuarial documents by the Smoke Coverage Range.
 $0.0621 \div 0.45 = 0.138$ (Payment Factor).
Step 2: Multiply the SPA (result of (a)) by the Payment Factor (result of (b) Step 1).
 $\$193,088 \times 0.138 = \$26,646$.
- (c) The Indemnity payment is \$26,646, the lesser of (a) and (b).

Example 2: Indemnity determination for Underlying Policy with CAT coverage and FIP-SI election and 48 Smoke Events:

Resulting liability for the Underlying Policy is \$131,109.

- (a) Determine the Smoke Protection Amount:
Step 1: Determine your Smoke Coverage Range by subtracting the maximum coverage level from the Underlying Policy from 95 percent.
 $0.95 - 0.50 = 0.45$ (Smoke Coverage Range).
Step 2: Determine your Expected Crop Value of the Underlying Policy by dividing the liability of the Underlying Policy by the coverage level of the Underlying Policy, and then by the percentage of price election.
 $\$131,109 \div 0.50 \div 0.55 = \$476,760$ (Expected Crop Value).
Step 3: Calculate the SPA by multiplying the Expected Crop Value by the Smoke Coverage Range and the Smoke Coverage Percentage you elected under this Endorsement.
 $\$476,760 \times 0.45 \times 0.90 = \$193,088$ (SPA).

- (b) Determine the result of the SPA times the Smoke Payment Factor:
Step 1: Determine the Payment Factor by dividing the Smoke Loss Factor located in the actuarial documents by the Smoke Coverage Range.
 $0.45 \div 0.45 = 1.000$ (Payment Factor).
Step 2: Multiply the SPA (result of (a)) by the Payment Factor (result of (b) Step 1).
 $\$193,088 \times 1.000 = \$193,088$.
- (c) The Indemnity payment is \$193,088, the SPA.

Example 3: Indemnity determination of Underlying Policy with 70 percent coverage, 100 percent of price, FIP-SI elections, and 21 Smoke Events:

Resulting liability for the Underlying Policy is \$333,732.

- (a) Determine the Smoke Protection Amount:
Step 1: Determine your Smoke Coverage Range by subtracting the maximum coverage level from the Underlying Policy from 95 percent.
 $0.95 - 0.70 = 0.25$ (Smoke Coverage Range).
Step 2: Determine your Expected Crop Value of the Underlying Policy dividing the liability of the Underlying Policy by the coverage level of the Underlying Policy, and then by the percentage of price election or percentage of projected price, as applicable.
 $\$333,732 \div 0.70 \div 1.00 = \$476,760$ (Expected Crop Value).
Step 3: Calculate the SPA by multiplying the Expected Crop Value of the Underlying Policy by the Smoke Coverage Range and the Smoke Coverage Percentage you elected under this Endorsement.
 $\$476,760 \times 0.25 \times 0.90 = \$107,271$ (SPA).
- (b) Determine the result of the SPA times the Payment Factor:
Step 1: Determine the Payment Factor by dividing the Smoke Loss Factor located in the actuarial documents by the Smoke Coverage Range.
 $0.0621 \div 0.25 = 0.248$ (Payment Factor).
Step 2: Multiply the SPA (result of (a)) by the Payment Factor (result of (b) Step 1).
 $\$107,271 \times 0.248 = \$26,603$.
- (c) The Indemnity payment is \$26,603 the lesser of (a) and (b).

Example 4: Indemnity determination of Underlying Policy with 70 percent coverage, 100 percent of price, FIP-SI elections, and 41 Smoke Events:

Resulting liability for the Underlying Policy is \$333,732.

- (a) Determine the Smoke Protection Amount:
Step 1: Determine your Smoke Coverage Range by subtracting the maximum coverage level from the Underlying Policy from 95 percent.
 $0.95 - 0.70 = 0.25$ (Smoke Coverage Range).
Step 2: Determine your Expected Crop Value of the Underlying Policy by dividing the liability of the Underlying Policy by the coverage level of the Underlying Policy, and then by the percentage of

price election or percentage of projected price, as applicable.

$\$333,732 \div 0.70 \div 1.00 = \$476,760$ (Expected Crop Value).

Step 3: Calculate the SPA by multiplying the Expected Crop Value of the Underlying Policy by the Smoke Coverage Range and the Smoke Coverage Percentage you elected under this Endorsement.

$\$476,760 \times 0.25 \times 0.90 = \$107,271$ (SPA).

- (b) Determine the result of the SPA times the Payment Factor:

Step 1: Determine the Payment Factor by dividing the Smoke Loss Factor located in the actuarial documents by the Smoke Coverage Range.

$0.3724 \div 0.25 = 1.487$ (maximum 1.000) (Payment Factor).

Step 2: Multiply the SPA (result of (a)) by the Payment Factor (result of (b) Step 1).

$\$107,271 \times 1.000 = \$107,271$.

- (c) The Indemnity payment is \$107,271 the SPA.

Example 5: Indemnity determination of Underlying Policy with 70 percent coverage, 100 percent of price, SCO election of 86 percent coverage, FIP-SI election, and 23 Smoke Events:

Resulting liability for the Underlying Policy is \$333,732.

- (a) Determine the Smoke Protection Amount:

Step 1: Determine your Smoke Coverage Range by subtracting the higher of the coverage level from the Underlying Policy (70 percent) or the upper end of the SCO coverage range (86 percent) from 95 percent.

$0.95 - 0.86 = 0.09$ (Smoke Coverage Range).

Step 2: Determine your Expected Crop Value of the Underlying Policy by dividing the liability of the Underlying Policy by the coverage level of the Underlying Policy, and then by the percentage of price election or percentage of projected price, as applicable.

$\$333,732 \div 0.70 \div 1.00 = \$476,760$ (Expected Crop Value).

Step 3: Calculate the SPA by multiplying your Expected Crop Value of the Underlying Policy by the Smoke Coverage Range and the Smoke Coverage Percentage you elected under this Endorsement.

$\$476,760 \times 0.09 \times 0.90 = \$38,618$ (SPA).

- (b) Determine the result of the SPA times the Payment Factor:

Step 1: Determine the Payment Factor by dividing the Smoke Loss Factor located in the actuarial documents by the Smoke Coverage Range.

$0.0823 \div 0.09 = 0.914$ (Payment Factor).

Step 2: Multiply the SPA (result of (a)) by the Payment Factor (result of (b) Step 1).

$\$38,618 \times 0.914 = \$35,297$.

- (c) The Indemnity payment is \$35,297, the lesser of (a) and (b).

Example 6: Indemnity determination of Underlying Policy with 70 percent coverage, 100 percent of price, SCO election of 86 percent coverage, FIP-SI election, and 30 Smoke Events:

Resulting liability for the Underlying Policy is \$333,732.

- (a) Determine the Smoke Protection Amount:

Step 1: Determine your Smoke Coverage Range by subtracting the higher of the coverage level from the Underlying Policy (70 percent) or the upper end of the SCO coverage range (86 percent) from 95 percent.

$0.95 - 0.86 = 0.09$ (Smoke Coverage Range).

Step 2: Determine your Expected Crop Value of the Underlying Policy by dividing the liability of the Underlying Policy by the coverage level of the Underlying Policy, and then by the percentage of price election or percentage of projected price, as applicable.

$\$333,732 \div 0.70 \div 1.00 = \$476,760$ (Expected Crop Value).

Step 3: Calculate the SPA by multiplying your Expected Crop Value of the Underlying Policy by the Smoke Coverage Range and the Smoke Coverage Percentage you elected under this Endorsement.

$\$476,760 \times 0.09 \times 0.90 = \$38,618$ (SPA).

- (b) Determine the result of the SPA times the Payment Factor:

Step 1: Determine the Payment Factor by dividing the Smoke Loss Factor located in the actuarial documents by the Smoke Coverage Range.

$0.1721 \div 0.09 = 1.912$ (maximum 1.0000) (Payment Factor).

Step 2: Multiply the SPA (result of (a)) by the Payment Factor (result of (b) Step 1).

$\$38,618 \times 1.000 = \$38,618$.

- (c) The Indemnity payment is \$38,618, the lesser of (a) and (b).