

United States  
Department of  
Agriculture



Federal Crop  
Insurance  
Corporation



Product  
Development  
Division

# SOYBEAN LOSS ADJUSTMENT STANDARDS HANDBOOK

FCIC-25440-1 (04-2007)

**2007 and Succeeding Crop Years**



UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON, D.C. 20250

FEDERAL CROP INSURANCE HANDBOOK	Number: 25440 (11-2005) 25440-1 (04-2007)
<b>SUBJECT:</b>  <b>SOYBEAN LOSS ADJUSTMENT STANDARDS HANDBOOK 2007 AND SUCCEEDING CROP YEARS</b>	<b>OPI: Product Administration and Standards Division</b>
	<b>APPROVED:</b> <b>DATE:</b>  <i>/S:/ TIM B. WITT</i> <b>04/04/2007</b>
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**THIS HANDBOOK CONTAINS THE OFFICIAL FCIC-ISSUED LOSS ADJUSTMENT STANDARDS FOR THIS CROP FOR THE 2007 AND SUCCEEDING CROP YEARS. ALL REINSURED COMPANIES WILL UTILIZE THESE STANDARDS FOR BOTH LOSS ADJUSTMENT AND LOSS TRAINING.**

#### **SUMMARY OF CHANGES/CONTROL CHART**

The following list contains significant changes to this handbook, as determined by us. It may not represent all changes made. All changes made to this handbook are applicable regardless of whether or not listed

Major Changes: See changes or additions in text which have been **highlighted**. Three stars (\*\*\*\*) identify where information has been removed.

Changes for Crop Year 2007 (FCIC-25440-1) issued **APRIL, 2007**:

1. **Subsection 6 B (1):** Revised to indicate that the Stand Reduction Method is used for stages VC through R3.5.
2. **Subsection 6 B (1) (b):** Clarified that the example is for Indeterminate soybeans.
3. **Subsection 6 B (2):** Clarified that for R-stage plants destroyed, the Stand Reduction Methods is used for stages R4 through R6.5
4. **Subsection 8 A (5):** Revised to clarify the procedure is for VC - R3.5 Stage Appraisals.
5. **Subsection 8 A (6):** Revised to clarify the procedure is for R4 through R6.5 Stage Appraisals.

## **SOYBEAN LOSS ADJUSTMENT STANDARDS HANDBOOK**

### **SUMMARY OF CHANGES/CONTROL CHART (Continued)**

6. **Subsection 8 B, item 18: Stand Reduction** - Revised stage in accordance with the new Soybean Stand Reduction Loss Charts (**TABLE F**).
7. **Subsection 8 B, item 19: R-Stage Plants Destroyed** - Revised stage in accordance with the new Soybean Stand Reduction Loss Charts (**TABLE F**).
8. **Subsection 8 B, item 31: Total -** : Revised stage in accordance with the new Soybean Stand Reduction Loss Charts (**TABLE F**).
9. **Subsection 8 B, item 32: Remaining** - Revised stage in accordance with the new Soybean Stand Reduction Loss Charts (**TABLE F**).
10. **Subsection 8 B:** Appraisal Worksheet Examples - Made updates to appraisal worksheet examples based on the new **TABLE F** values.
11. **Subsection 9 B:** Production Worksheet Example - Made updates to the production worksheet example based on the revised appraisal worksheet examples.
12. **Section 10, TABLE F:** Inserted revised **TABLE F**.

## **SOYBEAN LOSS ADJUSTMENT STANDARDS HANDBOOK**

### **SUMMARY OF CHANGES/CONTROL CHART (Continued)**

Control Chart For: Soybean Loss Adjustment Standards Handbook						
	SC Page(s)	TC Page(s)	Text Page(s)	Reference Material	Date	Directive Number
Remove	1-4	1-2	13-14	53-56	11-2005	FCIC-25440
			19-22		11-2005	FCIC-25440
			25-26		11-2005	FCIC-25440
			45-46		11-2005	FCIC-25440
Insert	1-4	1-2	13-14	53-56.6	04-2007	FCIC-25440-1
			19-22		04-2007	FCIC-25440-1
			25-26		04-2007	FCIC-25440-1
			45-46		04-2007	FCIC-25440-1
Current Index	1-4	1-2	1-13	47-52 53-56.6 57-61	11-2005	FCIC-25440
			13-14		04-2007	FCIC-25440-1
			15-18		11-2005	FCIC-25440
			19-22		04-2007	FCIC-25440-1
			23-24		11-2005	FCIC-25440
			25-26		04-2007	FCIC-25440-1
			27-44		11-2005	FCIC-25440
			45-46		04-2007	FCIC-25440-1

**SOYBEAN LOSS ADJUSTMENT STANDARDS HANDBOOK**

**SUMMARY OF CHANGES/CONTROL CHART (Continued)**

**(RESERVED)**

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## **6. APPRAISAL METHODS**

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### **A. GENERAL INFORMATION**

These instructions provide information on appraisal methods for:

<b>Appraisal Method...</b>	<b>Use...</b>
Stand Reduction Method	for planted acreage with no emerged seed, or on plants through the R6.5 Stage.
Plant Damage Method	when there is defoliation (leaf loss) AND plants that are cutoff or broken over. Plant damage calculations apply to the percent of the crop remaining (after stand reduction).
Seed Count Method	from the R7 stage through full maturity to determine the appraisal after any insured cause of damage.

### **B. STAND REDUCTION METHOD**

- (1) V-Stages for determinate soybeans and VC through R3.5 stage for indeterminate soybean stand reduction. DETERMINE THE AMOUNT OF DIRECT DAMAGE. DEAD, MISSING, OR NON-EMERGED PLANTS are included as direct damage in the VC through R3.5 stages for indeterminate soybeans and the V-stages for determinate soybeans. When damage from an insurable cause results in missing plants or non-emergence, determine the original plants per acre from an undamaged area of the unit if possible.

If the reduction in stand is solely due to non-emerged seed due to insufficient soil moisture, do not complete appraisals prior to the time specified in the LAM. Refer to the paragraph in the LAM regarding deferred appraisals and non-emerged seed.

- (a) Determine the ORIGINAL number of plants, and the REMAINING number of live plants per acre. Use these steps:
  - 1 Determine row width in inches, unless broadcast.
  - 2 Measure a 10 ft. row length for the sample of row soybeans, or use 3-foot by 3-foot square grid for broadcast soybeans.
  - 3 Count the original number of plants in the sample (living and dead/non-harvestable, missing, or non-emerged).
  - 4 Count the remaining number of live plants in the sample.
  - 5 Use the PLANTS PER ACRE CHART to convert the original and remaining plants in the sample to plants per acre (**TABLE E**).
- (b) Use the ORIGINAL AND REMAINING PLANTS PER ACRE values to determine the percent stand loss. Apply these values to the appropriate SOYBEAN STAND REDUCTION LOSS CHART (**TABLE F**).

**EXAMPLE:** Indeterminate soybeans planted in 30-inch rows – V5 stage.

55 living and dead plants = 95,000 original plants/A. (**TABLE E**).

40 live plants = 70,000 remaining plants/A. (**TABLE E**).

Percent loss from stand reduction (**TABLE F**) = 7.0 percent.

- (2) R-Stage Plants Destroyed. For direct damage to R1 through R6.5 stage determinate soybeans, and R4 through R6.5 stage indeterminate soybeans (Part I, item 19 of the appraisal worksheet).
- Count 100 consecutive plants (living and missing, non-emerged, dead/non-harvestable).
  - Determine the number of dead or non-harvestable plants in the 100 plant sample. This is the percentage of dead/non-harvestable plants. Enter this number in item 19 of the appraisal worksheet.

Include any cutoffs and/or breakovers, from stage R4 through stage R6.5, on a factored basis, based on how many damaged plants are required to equal 1 undamaged plant (e.g., 2-for-1, or 3-for-1, etc.) if stand reduction is the only damage.

**EXAMPLE:** Entry for 10 dead/non-harvestable plants, plus 10 plants cutoff/broken over plants factored on a 2-for-1 basis = 15 plants.

## C. **PLANT DAMAGE METHOD** (Part I - Appraisal Worksheet, items 22 and 23)

- (1) Use the plant damage method for DEFOLIATION damage on determinate soybean plants beginning with the V9 stage, through the R6 stage.

For indeterminate soybeans, beginning with the R1 stage, use the plant damage method for plants CUT OFF or BROKEN OVER in stages R1 through R3.5. Any plants cut off and/or broken over in stages R4 through R6.5 are included in item 19, "R-stage plants destroyed" of the Stand Reduction Method (on a factored basis).

Use the following procedure to record individual plant-count entries in the Field Notes (plant damage is applied to the percent of the crop remaining):

- Determine the number of original nodes (above the cotyledony node) at date of damage for a representative 20-plant sample. (The number of original nodes will be number of nodes per plant for the stage times 20 (e.g. V9 stage, 9 nodes times 20 = 180 original nodes)).
- Determine the number of nodes cutoff and/or broken over on each plant in the 20-plant sample and enter in item 34 of the Field Notes section.

An individual plant may have nodes broken over as well as nodes cut off above the break. In such cases, both are recorded.

- Total the number of nodes cutoff and/or broken over. Divide the total by the total number of nodes at date of damage to arrive at the percent of nodes destroyed.

- (3) Separate appraisal worksheets are required for each unit appraised, and for each field or subfield which has a differing base (APH) yield or farming practice (applicable to replant, preliminary, and final claims). Refer to section 5 for sampling requirements.
- (4) For every inspection, complete items 1 through 12 and items 56 through 59. Complete Part I and II as instructed below. The following appraisal worksheet shows the required entries for the V and R stages, with and without plant damage.
- (5) **V-Stages for Determinate Soybeans and VC through R3.5 Stage for Indeterminate Soybean Appraisals:**
- (a) If stand reduction is the ONLY damage, complete Part I (except for items 19, 21, 22 and 23 and the field notes) and items 30, 31, and 32.
  - (b) If plant damage (cutoffs and/or breakovers) has occurred, complete items 13 through 18, items 20 through 29, and the field notes. If stand reduction has occurred, appraise plant damage on the remaining stand (refer to items 21, 22 and 23). Defoliation is applied for DETERMINATE soybeans only in the stages V9 – VN.
- (6) **R1 through R6 Stage Determinate Soybeans, and R4 through R6.5 Stage Indeterminate Soybean Appraisals:**
- (a) If stand reduction is the ONLY damage, complete Part I (except items 16, 17, 18, 21, 22, 23, and the field notes). Cutoffs or breakovers from the R1 through R6 stage for determinate soybeans, and R4 through R6.5 stage for indeterminate soybeans are factored and are to be included in item 19.
  - (b) If plant damage (cutoffs or breakovers through R3.5, and/or defoliation (refer to **TABLE H** or **TABLE I**) through R6.5 for indeterminate soybeans or R6 for determinate soybeans) has occurred, complete Part I (except items 16, 17 and 18). Appraise plant damage on the remaining stand if stand reduction has occurred (refer to items 21, 22 and 23). Do not include cutoffs or breakovers in item 19 on a factored basis.
- (7) R7 through Full Maturity Appraisals, use Part II, the Seed Count Method.

Standard appraisal worksheet items are numbered consecutively in subsection B. An example appraisal worksheet is also provided to illustrate how to complete entries.

## **B. WORKSHEET ENTRIES AND COMPLETION INFORMATION**

**Verify or make the following entries:**

<b>Item No.</b>	<b><u>Information Required</u></b>
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### **PART I - STAND REDUCTION AND PLANT DAMAGE**

1. **Insured's Name:** Name of the insured that identifies EXACTLY the person (legal entity) to whom the policy is issued.
2. **Policy Number:** Insured's assigned policy number.
3. **Crop Year:** Four-digit crop year, as defined in the policy, for which the claim has been filed.
4. **Unit No.:** Five-digit unit number from the Summary of Coverage after it is verified to be correct (e.g., 00100).
5. **Field ID:** Field or subfield identification symbol.
6. **Practice:** Three-digit code number entered exactly as specified on the actuarial documents, for the practice carried out by the insured. If "No Practice Specified," enter appropriate 3-digit code number from the actuarial documents.
7. **Company:** Name of insurance provider, if not preprinted on the worksheet (Company Name).
8. **Date of Damage:** First three letters of the month during which MOST of the insured damage (including progressive damage) occurred. Include SPECIFIC DATE where applicable, as in the case of hail damage (e.g., Aug. 11).
9. **Acres:** Number of determined acres, to tenths, in field or subfield being appraised.
10. **Variety:** Variety name of soybeans being appraised, if known, followed by "D" if determinate type, or "I" if indeterminate.
11. **Row Width:** Row width to nearest inch. If broadcast, enter "B." Refer to subsection 5C for row width determination information.
12. **Claim Number:** Claim number as assigned by the insurance provider.

## DIRECT DAMAGE

13. **Sample No.:** If more than five samples are needed, (refer to **TABLE A** for minimum sample requirements) use additional pages, and number the samples 6, 7, 8, etc.
14. **DOD:** Stage of growth on date of damage. (Refer to subsection 5D.)
15. **DOA:** Stage of growth on date of appraisal.
16. **Original (1000): (V-Stage Appraisals Only)** Original stand (living and dead, missing, or non-emerged). Enter to nearest 500 as decimal to tenths; e.g. enter 110,000 as 110.0. Refer to (**TABLE E**) and entry in item 31.
17. **Remaining: (V-Stage Appraisals Only)** Remaining stand (live plants). Refer to (**TABLE E**) and entry in item 32. Enter to nearest 500 as decimal to tenths; e.g. enter 12,500 as 12.5.
18. **Stand Reduction: (Percent of Loss – V-Stages for Determinate Soybeans and VC through R3.5 Stage for Indeterminate Soybean Appraisals Only):** Stand reduction percent loss to tenths from the appropriate Soybean Stand Reduction Loss Chart (**TABLE F**).
19. **R-Stage Plants Destroyed:** For stand reduction in the R stages (**R1 through R6.5 Stage Determinate Soybeans, and R4 through R6.5 Stage Indeterminate Soybean**), enter the number (percent) of dead or non-harvestable plants in a 100 plant (living and missing/dead/non-harvestable) sample. Include cutoffs and/or breakovers from the R4 through R6.5 stages on a factored basis **only if stand reduction is the only damage**. Refer to subsection 6 B (2). **For indeterminate soybeans in the R1 through R3.5 stage, MAKE NO ENTRY.**
20. **Total Direct Damage:** Total direct damage to tenths from item 18 or 19, as appropriate.
21. **% Crop (Remaining):** Enter the result of subtracting item 20 from 100%. If there is no direct damage, enter 100. If there is no plant damage (item 42) leave blank.

## PLANT DAMAGE

22. **Gross:** If there is plant damage to the sample, complete the field notes and enter the item 42 entry for the same sample.
23. **Net:** Item 21 times item 22 (nearest tenth percent), if there is an entry in item 22.
24. **Total % Damage:** Enter the total direct and plant damage (item 20 plus item 23, to nearest tenth percent).
25. **Total:** Total of item 24 entries to nearest tenth percent. If more than five samples, enter accumulated total only on last page.

## COMPUTATIONS

**Verify or make the following entries:**

- | <b>Item<br/>No.</b> | <b><u>Information Required</u></b>  |
|---------------------|---|
| 26.                 | <b>Sample Average Damage:</b> Sample average damage to nearest tenth percent (item 25, total number of samples from all pages). |
| 27.                 | <b>% Potential:</b> Percent potential to nearest tenth percent (subtract item 26 entry from 100%).                              |
| 28.                 | <b>APH Yield:</b> Enter the approved APH yield to nearest whole bushel from the APH form.                                       |
| 29.                 | <b>Appraisal Bu/A:</b> Appraisal to nearest tenth bushel (item 27 times 28).  |

## SOYBEAN FIELD NOTES

Complete the field notes on a representative 20 consecutive plant sample from the sample area used for stand reduction if stand reduction has occurred. If not, select a representative 20-plant sample.

**Verify or make the following entries:**

- | <b>Item<br/>No.</b> | <b><u>Information Required</u></b>  |
|---------------------|---|
| 30.                 | <b>Sample Number:</b> Match the sample with the same numbered sample used in item 13. If more than five samples are needed, use additional pages, and number the samples 6, 7, 8, etc.  |
| 31.                 | <b>Total:</b> (V-Stages for Determinate Soybeans and VC through R3.5 Stage for Indeterminate Soybean only) Total plants (living, dead, missing, and non-emerged) counted in 10 feet of row. For broadcast, count plants in a 3'x3' sample area. |
| 32.                 | <b>Remaining:</b> (V-Stages for Determinate Soybeans and VC through R3.5 Stage for Indeterminate Soybean only) Remaining live plants in 10 ft. of row. For broadcast, count plants in a 3 ft. x 3 ft. sample area.                              |
| 33.                 | <b>Total Nodes:</b> Total number of nodes on the 20-plant sample, determined by multiplying the nodes per plant for the stage at date of damage times 20.   |
| 34.                 | <b>Nodes Cutoff/Broken Over:</b> For V stages through R3.5, total number of nodes cutoff and/or broken over on each plant in the sample, entered under appropriate plant number.  |
| 35.                 | <b>% Defoliation:</b> Percent defoliation on each plant in the sample. (Refer to Fig. 1 on the chart in subsection 6 B (2)).  |

Defoliation is counted only in the V9 through R6.5 stages for determinate beans, and the R1 through R6.5 stages for indeterminate beans.

FOR ILLUSTRATION PURPOSES ONLY  
SOYBEAN APPRAISAL WORKSHEET

PART I – STAND REDUCTION AND PLANT DAMAGE METHOD

1 Insured <b>I. M. INSURED</b>				2 Policy Number <b>XXXXXXX</b>				3 Crop Year <b>YYYY</b>				4 Unit No. <b>00100</b>				5 Field ID <b>A</b>				6 Practice <b>003</b>								
7 Company <b>ANY COMPANY</b>				8 Date of Damage <b>AUG</b>				9 Acres <b>10.0</b>		10 Variety <b>WELLS - I</b>		11 Row Width <b>30"</b>		12 Claim Number <b>XXXXX</b>		COMPUTATIONS												
																								24 Total Damage (20 + 23) <b>50.0</b>				
13 Sample No.	STAGE OF GROWTH			V-STAGE		18 V-Stage Stand Reduction % Loss	19 R-Stage Plants Destroyed	20 Total Direct Damage	21 % Crop Remaining	22 Gross (Item 42)	23 Net (21 x 22)	26 Sample Average Damage <b>50.0</b>																
	14 DOD	15 DOA	16 Original (1000)	17 Remaining (1000)																								
	1	<b>V4</b>	<b>V5</b>	<b>120.0</b>	<b>25.0</b>	<b>46.0</b>		<b>46.0</b>			<b>46.0</b>		27 % Potential <b>50.0</b>															
	2	<b>V4</b>	<b>V5</b>	<b>125.0</b>	<b>22.5</b>	<b>50.0</b>		<b>50.0</b>			<b>50.0</b>																	
	3	<b>V4</b>	<b>V5</b>	<b>120.0</b>	<b>20.0</b>	<b>54.0</b>		<b>54.0</b>			<b>54.0</b>		28 APH Yield <b>43</b>															
												25 Total <b>150.0</b>									29 Appraisal (BU/A) = <b>21.5</b>							
SOYBEAN FIELD NOTES																												
SAMPLE NUMBER	PLANTS PER 10 FEET			PLANT NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOTAL	% OF NODES	% DAMAGE	TOTAL
30 1	31 Total <b>69</b>	32 Remaining <b>14</b>	34 Nodes Cut Off/Broken Over																						36	38	40	
33 Total Nodes			35 % Defoliation																						37	39	41 + 42 =	
30 2	31 Total <b>71</b>	32 Remaining <b>13</b>	34 Nodes Cut Off/Broken Over																						36	38	40	
33 Total Nodes			35 % Defoliation																						37	39	41 + 42 =	
30 3	31 Total <b>68</b>	32 Remaining <b>11</b>	34 Nodes Cut Off/Broken Over																						36	38	40	
33 Total Nodes			35 % Defoliation																						37	39	41 + 42 =	
56 Remarks																												

57 Adjuster's Signature <b>I. M. ADJUSTER</b>	Code No. <b>XXXXXX</b>	Date <b>MM/DD/YYYY</b>	58 Insured's Signature <b>I. M. INSURED</b>	Date <b>MM/DD/YYYY</b>
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## TABLE E - PLANTS PER ACRE (Page 4 of 4)

If the number of counted plants in ten feet of row is greater than the top number in the appropriate row width column, divide the number of plants by 2, and proceed as above. Multiply the plants per acre found in the left column by 2 to arrive at the actual number of plants per acre. (Refer to **EXAMPLE 1** below.) If the number of counted plants in ten feet of row is fewer than the lowest number in the appropriate row width column, multiply the number of plants by 2, and proceed as above. Divide the plants per acre found in the left column by 2 to arrive at the actual number of plants per acre. (Refer to **EXAMPLE 2** below.) If the plant population is above 125,000, round to the nearest 5,000. If the population is below 125,000, round to the nearest 2,500. (Refer to examples below.)

**EXAMPLE 1:** Row Width = 30 in.

110 Original Plants in 10 ft. of Row

$$110 \div 2 = 55$$

55 Original Plants = 95,000 plants per acre

$$95,000 \text{ plants per acre} \times 2 = 190,000$$

**EXAMPLE 2:** Row Width = 30 in.

4 Original Plants in 10 ft. of Row

$$4 \times 2 = 8$$

8 Original Plants = 15,000 plants per acre

$$15,000 \text{ plants per acre} \div 2 = 7,500$$

If the planted row width is not listed on the table, divide the row width, in inches, by 12. Multiply this result by 10 to arrive at the square feet in the sample. Count the number of plants in the sample and divide by the square feet to arrive at plants per square foot. Multiply plants per square foot by 43,560 sq. ft. per acre to arrive at plants per acre. If the plant population is above 125,000, round to the nearest 5,000. If the population is below 125,000, round to the nearest 2,500. (Refer to examples below.)

**EXAMPLE 1:** Row Width = 15 in.

42 Original Plants in 10 ft. of row

$$(15 \text{ in.} \div 12 \text{ in.}) \times 10 \text{ ft.} = 12.5$$

$$42 \div 12.5 = 3.36$$

$$3.36 \times 43,560 = 146,362 \text{ (round to 145,000)}$$

**EXAMPLE 2:** Row Width = 7 1/2 in.

15 Original Plants in 10 ft. of row

$$(7.5 \text{ in.} \div 12 \text{ in.}) \times 10 \text{ ft.} = 6.25$$

$$15 \div 6.25 = 2.40$$

$$2.40 \times 43,560 = 104,544 \text{ (round to 105,000)}$$

















