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Product
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(12-2012)

## SMALL GRAINS LOSS ADJUSTMENT STANDARDS HANDBOOK

| TITLE: SMALL GRAINS LOSS | NUMBER:25430 (07-2010) <br> ADJUSTMENT STANDARDS |
| :--- | :--- |
| HANDBOOK |  |
| EFFECTIVE DATE: <br> 2013 and (06-2011) |  |
| SUBJECT (12-2012) |  |

## REASONS FOR AMENDMENT

Major changes: See changes or additions in text which have been highlighted. Three stars ( ${ }^{* * *)}$ identify information that has been removed.

1. Subsection 6 C, After Heading Method: Clarified instructions when less than five representative heads are found in a sample.
2. Subsection 8 C, After Heading Appraisal Method: Changed instructions for the "after heading" appraisal method due to a perceived flaw in the calculation method. Also, revised the appraisal worksheet forms to agree with the item instructions.
3. Subsection 10, Reference Material, Table S: Revised the moisture adjustment for 27.3 percent moisture.

SMALL GRAINS LOSS ADJUSTMENT STANDARDS HANDBOOK CONTROL CHART

| Control Chart For: Small Grains Loss Adjustment Standards Handbook |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { SC } \\ \text { Page(s) } \end{gathered}$ | $\begin{gathered} \text { TC } \\ \text { Page(s) } \end{gathered}$ | Text Page(s) | Reference Material | Date | Directive Number |
| Remove | 1-2 |  | $\begin{aligned} & 17-18 \\ & 25-30 \end{aligned}$ | 85-86 | $\begin{aligned} & 6-2011 \\ & 7-2010 \\ & 7-2010 \\ & 7-2010 \end{aligned}$ | $\begin{gathered} \hline \text { FCIC-25430-1 } \\ \text { FCIC-25430 } \\ \text { FCIC-25430 } \\ \text { FCIC-25430 } \end{gathered}$ |
| Insert | 1-2 |  | $\begin{aligned} & 17-18 \\ & 25-30 \end{aligned}$ | 85-86 | $\begin{aligned} & 12-2012 \\ & 12-2012 \\ & 12-2012 \\ & 12-2012 \end{aligned}$ | FCIC-25430-2 <br> FCIC-25430-2 <br> FCIC-25430-2 <br> FCIC-25430-2 |
| Current <br> Index | 1-2 | 1-4 | $\begin{gathered} 1-2 \\ 3-10 \\ 11-16 \\ 17-18 \\ 19-24 \\ 25-30 \\ 31-42 \\ 43-44 \\ 45-46 \\ 47-48 \\ 49-52 \\ 53-54 \\ 55-64 \\ 65-66 \end{gathered}$ | $\begin{aligned} & 67-84 \\ & 85-86 \\ & 87-97 \end{aligned}$ | $\begin{gathered} \hline 12-2012 \\ 6-2011 \\ 7-2010 \\ 6-2011 \\ 7-2010 \\ 12-2012 \\ 7-2010 \\ 12-2012 \\ 7-2010 \\ 6-2011 \\ 7-2010 \\ 6-2011 \\ 7-2010 \\ 6-2011 \\ 7-2010 \\ 6-2011 \\ 7-2010 \\ 12-2012 \\ 7-2010 \end{gathered}$ | FCIC-25430-2 FCIC-25430-1 FCIC-25430 FCIC-25430-1 FCIC-25430 FCIC-25430-2 FCIC-25430 FCIC-25430-2 FCIC-25430 FCIC-25430-1 FCIC-25430 FCIC-25430-1 FCIC-25430 FCIC-25430-1 FCIC-25430 FCIC-25430-1 FCIC-25430 FCIC-25430-2 FCIC-25430 |

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(RESERVED)

## 1. INTRODUCTION

## THIS HANDBOOK MUST BE USED IN CONJUNCTION WITH THE LOSS ADJUSTMENT MANUAL (LAM).

The FCIC-issued loss adjustment standards for this crop are the official standard requirements for adjusting Multiple Peril Crop Insurance (MPCI) losses in a uniform and timely manner. The FCICissued standards for this crop and crop year are in effect as of the signature date for this crop handbook at www.rma.usda.gov/handbooks/25000/index.html. All reinsured companies will utilize these standards for both loss adjustment and loss training for the applicable crop year. These standards which include crop appraisal methods, claims completion instructions, and form standards supplement the general (not crop-specific) loss adjustment standards identified in the Loss Adjustment Manual.

## 2. SPECIAL INSTRUCTIONS

This handbook remains in effect until superseded by reissuance of either the entire handbook or selected portions (through slipsheets or bulletins). If slipsheets have been issued for a handbook, the original handbook as amended by slipsheet pages shall constitute the handbook. A bulletin can supersede either the original handbook or subsequent slipsheets.

## A. DISTRIBUTION

(1) The following is the minimum distribution of forms completed by the adjuster and signed by the insured (or insured's authorized representative) for the loss adjustment inspection:
(a) One legible copy to the insured.
(b) The original and all remaining copies as instructed by the Approved Insurance Provider (AIP).
(2) It is the AIP's responsibility to maintain original insurance documents relative to policyholder servicing as designated in their approved plan of operations.

## B. TERMS, ABBREVIATIONS, AND DEFINITIONS

(1) Terms, abbreviations, and definitions general (not crop specific) to loss adjustment are identified in the LAM.
(2) Terms, abbreviations, and definitions specific to small grains loss adjustment and this handbook, which are not defined in this section, are defined as they appear in the text.
(3) Abbreviations:

CIH
FGIS
CAT

Crop Insurance Handbook
Federal Grain Inspection Service
Catastrophic Risk Protection

DSSH

SP
(4) Definitions:

Document and Supplemental Standards Handbook, FCIC-24040 Special Provisions

## Headed

Heading
Khorasan

## Local Market Price

## Harvest

Combining or threshing the insured crop for grain or cutting for hay or silage on any acreage. A crop which is swathed prior to combining is not considered harvested.

When the plant's head has emerged from the leaf sheath and is visible to the naked eye.

At least 50 percent of the crop has headed.
The common name for a variety of wheat (triticum turanicum) that is marketed under trademarks such as Kamut. Khorasan is considered to be spring wheat for the purposes of the crop provisions.

The cash grain price per bushel for the applicable quality level indicated below and offered by buyers in the area in which the insured normally markets the insured crop. The local market price will reflect the maximum limits of quality deficiencies allowable for the applicable quality level indicated below. Factors not associated with the specified quality levels, including but not limited to protein, oil or moisture content, or milling quality will not be considered.
(a) U.S. No. 2 for Wheat (subclass hard amber durum for durum wheat and subclass northern spring for hard red spring wheat), except Khorasan; barley (including hull-less barley); oats (including hull-less oats); rye; and flax.
(b) The quality factor levels required for durum wheat to grade U.S. No. 2 for Khorasan.
(c) No. 2 grade buckwheat determined in accordance with the applicable state grading standards or for states without state grading standards, refer to the SP.

Nurse crop (companion crop) A crop planted into the same acreage as another crop, that is intended to be harvested separately, and which is planted to improve growing conditions for the crop with which it is grown.

Small Grains

Swathed

Wheat including only common wheat, club wheat, durum wheat and Khorasan; barley, including hull-less barley and excluding black barley; oats, and hull-less oats; rye; flax; and buckwheat.

Severance of the stem and grain head from the ground without removal of the seed from the head and placing into a windrow.

## 3. INSURANCE CONTRACT INFORMATION

The AIP is to determine that the insured has complied with all policy provisions of the insurance contract. Crop provisions which are to be considered in this determination include (but are not limited to):

## A. INSURABILITY

The following may not be a complete list of insurability requirements. Refer to the Basic Provisions, Crop Provisions, and SP for a complete list.
(1) The crop insured will be each small grain the insured elects to insure in the county in which the insured has a share, for which premium rates are provided by the actuarial documents; and
(a) That is planted for harvest as grain (a grain mixture in which barley or oats is the predominate grain may also be insured if allowed by the Barley or Oat SP, or if a written agreement allows insurance for such mixture. The crop insured will be the grain which is predominate in the mixture. The production from such mixture will be considered as the predominate grain on a weight basis); and
(b) Buckwheat will be insured only if it is produced under a contract with a business enterprise equipped with facilities appropriate to handle and store buckwheat production. For buckwheat, that is grown under, and in accordance with, the requirements of a processor contract executed on or before the acreage reporting date (the insured must provide a copy of all processor contracts to the AIP on or before the acreage reporting date) and is not excluded from the processor contract at any time during the crop year (Refer to the LAM and the SP for information on determining the insurable acreage and production guarantee when a processor contract is in force.); and
(c) That is not, unless insurance is allowed by written agreement:

1 Interplanted with another crop except as allowed in (1) (a), above;
$\underline{2}$ Planted into an established grass or legume; or

Planted as a nurse crop, unless planted as a nurse crop for new forage seeding, but only if seeded at a normal rate and intended for harvest as grain.
(d) The AIP agrees in writing to insure a crop prohibited under (c) above if the insured requests. The insured's request to insure such crop must be in writing, and submitted to the AIP not later than 15 days after the acreage reporting date.

Refer to the SP for additional criteria in establishing insurability.
(2) Any production harvested from plants growing in the insured crop may be counted as production of the insured crop on a weight basis.
(3) Any acreage of the insured crop (barley and wheat) damaged before the final planting date, to the extent that the growers in the area (surrounding area for oats, rye, and flax) would normally not further care for the crop, must be replanted unless the AIP agrees that replanting is not practical. Refer to the LAM for replanting provision issues. Refer to Section 4 of this handbook for replanting payment procedures.
(4) A late planting period is applicable to small grains, except to any winter barley or wheat acreage covered under the terms of the Wheat or Barley Winter Coverage Endorsement.
(5) Buckwheat insurable acreage will be:
(a) For acreage only based processor contracts and acreage and production based processor contracts which specify a maximum number of acres, the lesser of:

1 The planted acres; or
$\underline{2}$ The maximum number of acres specified in the contract.
(b) For production only based processor contracts, the lesser of:

1 The number of acres determined by dividing the production stated in the processor contract by the approved yield; or
$\underline{2}$ The planted acres.

## B. PROVISIONS AND PROCEDURES NOT APPLICABLE TO CAT COVERAGE

Refer to the LAM for provisions and procedures not applicable to CAT.

## C. UNIT DIVISION

Refer to the insurance contract for unit provisions. Unless limited by the Crop or SP, a basic unit, as defined in the Basic Provisions, may be divided into optional units if, for each optional unit, all the conditions stated in the applicable provisions are met.

For information on Enterprise and Whole-Farm units, refer to the LAM.

## D. QUALITY ADJUSTMENT

(1) Refer to the LAM for information on speculative type contract prices in quality adjustment. THE QUALITY ADJUSTMENT FACTOR CANNOT BE GREATER THAN 1.000 or less than zero (.000).
(2) Refer to the LAM for instructions on who can obtain samples for grading, and who can make determinations of deficiencies, conditions and substances that would cause the crop to qualify for quality adjustment.
(3) Document quality adjustment information as described in the instructions for the "Narrative" section of the claim form (Subsection 9B), or on a Special Report.
(4) For additional quality adjustment definitions, instructions, qualifications, sampling requirements, graders, and testing requirements, refer to the LAM and the Official United States Standards for Grain. Refer to the LAM and State Grading Standards for buckwheat standards.
(5) The adjuster must refer to the SP to determine if production is eligible for quality adjustment as identified in the Small Grains Crop Provisions.

Quality adjustment discount factors for U.S. grades specified in the SP will also apply to hull-less barley and hull-less oats at the same levels applicable to barley/oats.

Small Grains production is also eligible for quality adjustment if substances or conditions are present that are identified by the Food and Drug Administration or other public health organizations of the United States as being injurious to human or animal health.

Under section 15 (j) of the Basic Provisions, if due to insured causes, a Federal or State agency has ordered the appraised insured crop or production to be destroyed, on the claim form enter the factor " .000 " in column 35 for appraised production or column 65 for harvested production, as applicable. Instruct the insured to complete and submit a Certification Form stating the date the crop or production WAS DESTROYED and the method of destruction (refer to item 40 and the Narrative in the claim form instructions). Also, refer to LAM paragraphs 96 J (2) and 102A for additional information. Otherwise, MAKE NO ENTRY.
(6) When due to insurable cause(s), use of quality adjustment for small grains is handled by determining the appropriate discount factors from the SP, summing them together, if applicable, and subtracting from 1.000 to get the applicable Quality Adjustment Factor (percent of production to count). Refer to the SP for chart discount factors, instructions for calculating non-chart discount factors, and other discounts allowed. Also, refer to the LAM for examples and guidance in determining reduction-in-values (RIV's) needed to calculate non-chart discount factors. Refer to the SP for quality adjustment determination for buckwheat.
(7) If a local market cannot be found for the small grains, refer to the LAM.
(8) For small grains for which RIV's apply, and which can be conditioned/reconditioned, refer
to the Quality Statements in the SP and the LAM for instructions.
(9) Refer to the LAM for special instructions regarding mycotoxin infected grain.
(10) Moisture adjustment is applied prior to any applying any qualifying adjustment for quality such as test weight, kernel damage, etc. Moisture adjustment charts are provided in
TABLES P through S.
(11) For specialty use barley, quality adjustment will be provided as specified in the crop provisions and SP. No additional quality adjustment will be made for any specialty type.

## E. MALTING BARLEY PRICE AND QUALITY ENDORSEMENT

Production from all acreage insured under the malting barley price and quality endorsement and any production of feed barley varieties must not be commingled prior to making loss determinations.
(1) Malting Barley Price and Quality Endorsement provides two coverage options (Option A and Option B). A producer may select only one option to cover all acreage planted to approved varieties of malting barley in the county during the crop year.
(a) Option A, provides insurance coverage for producers who grow malting barley regardless of whether grown under a malting contract or price agreement.

1 To be eligible for coverage under this option, the insured must provide acceptable malting barley production reports by practice, and the number of acres planted to malting varieties for at least the four most recent crop years prior to the crop year immediately preceding the current crop year.

2 Any malting barley produced under a malting barley contract or malting barley price agreement, the insured must provide a copy of the current year contract or agreement on or before the acreage reporting date if the insured selects the additional value price based on the contract or price agreement.
$\underline{3}$ The amount of production to count against the malting barley production guarantee will be determined as stated in the Malting Barley Price and Quality Endorsement.

4 If the malting barley production has been reconditioned to upgrade the quality, refer to the Malting Barley Price and Quality Endorsement.

5 The additional value price per bushel designated in the actuarial documents will be used if production is not grown under a malting barley contract or malting barley price agreement or the malting barley contract or malting barley price agreement is not provided to the AIP by the acreage reporting date. In addition, this additional value price per bushel will be used if the conditions described in the Malting Barley and Price and Quality Endorsement, Option A, section 3 (e) are met.

## EXAMPLE 1 - Under Option A:

(1) Feed barley APH = 55 bushels per acre
(2) Historical malt sales per acre $=52$ bushels
(3) Selected insurance Coverage Level $=75 \%$
(4) Malt production guarantee per acre $=39.0$ bushels
(5) Additional value price election from actuarial documents $=\$ 0.40$ per bushel
(6) Projected price for feed barley $=\$ 1.92$
(7) Insured provided malting barley price agreement for the sale of 5720 bu. at $\$ 2.72$ bu. The additional value price for production grown under a malting barley price agreement is $\$ 0.80$ ( $\$ 2.72$ malting barley price agreement price minus $\$ 1.92$ projected price).

The insured has 400 acres that are insured under the Small Grains Crop Provisions with 200 acres planted to feed barley and 200 acres planted to approved malting varieties.

The total production from the 200 acres of malting barley is 7250 bushels, all of which fail to meet the quality standards in the endorsement. 4750 bushels are sold for $\$ 2.31 \mathrm{bu}$. and an additional 2500 bu . are sold for $\$ 2.20 \mathrm{bu}$. after a conditioning cost of $\$ 0.05$ bu.

The amount of insurance protection is determined as follows:
(a) 4290 bushels eligible for coverage using the additional value price from the malting price agreement [the lesser of 4290 bushels ( 5720 bushels grown under a malting barley price agreement x .75 coverage level) or 7800 bushels ( 200 acres planted to approved malting barley varieties x 39.0 bushel per acre ( 52 bushels per acre malting barley approved yield $x .75$ coverage level) malting barley production guarantee)] x $\$ .80$ additional value price $=\$ 3432.00$ amount of insurance protection for the bushels grown under the malting barley price agreement;
(b) 3510 bushels eligible for coverage using the additional value price from the actuarial documents ( 7800 bushel total malting barley production guarantee 4290 bushels covered using the additional value price from the malting barley price agreement) x $\$ .40$ additional value price $=\$ 1404.00$ amount of insurance protection for the bushels not grown under a malting barley price agreement;
(c) $\$ 3432.00+\$ 1404.00=\$ 4836.00$ total amount of insurance protection for the unit.
(d) The total amount of production to count is determined as follows:

1 Damaged production that is not reconditioned:
(i) $\$ 2.31$ price per bushel - $\$ 1.92$ projected price for feed barley $=$ \$0.39;
(ii) $\$ 0.39 \div \$ 0.62$ weighted average additional value price ( $\$ 4836.00$
total insurance protection $\div 7800$ bushel production guarantee $=$ $\$ 0.62$ weighted average additional value price) $=0.63$; and
(iii) $0.63 \times 4750$ bushels of damaged production sold at $\$ 2.31=2993$ bushels of production to count.

2 Damaged production that is reconditioned:
(i) $\$ 2.20$ price per bushel - $\$ 1.92$ projected price for feed barley $=\$ .28$;
(ii) $\$ 0.28-\$ 0.05$ reconditioning cost $=\$ 0.23$;
(iii) $\$ 0.23 \div \$ 0.62$ weighted average additional value price $=0.37$; (if this result is less than zero, no production will be counted) and
(iv) $0.37 \times 2500$ bushels of damaged production sold at $\$ 2.20=925$ bushels of production to count;

3 Total production to count against the malt barley guarantee is 3918 bushels (2993 + 925)
(b) Option B, provides insurance coverage for producers who grow all of their malting barley under contract only. The insured must provide the AIP a copy of the Malting Barley contract for the current crop year on or before the acreage reporting date. Refer to the Malting Barley Price and Quality Endorsement for definition of malting barley contract.

1 The insured must have had a malting barley contract and produced and sold at least 75 percent of the contracted amount for the crop year such contract was applicable, or such other amount specified in the SP.
$\underline{2}$ The amount of production to count against the malting barley production guarantee will be determined as stated in the Malting Barley Price and Quality Endorsement.
$\underline{3}$ The maximum amount of production that may be insured under Option B is limited to the lesser of the amount of malting barley contained in the current crop year's malting barley contract or 200 percent of the amount contracted for the crop year used to meet the 75 percent requirement in paragraph $\underline{1}$ above.

4 If the malt barley production has been reconditioned to upgrade the quality, refer to the Malting Barley Price and Quality Endorsement.

## EXAMPLE 2 - Under Option B:

(1) Feed barley APH = 55 bushels per acre
(2) Historical malt sales per acre $=52$ bushels
(3) Selected insurance Coverage Level $=75 \%$
(4) Malt production guarantee per acre $=39.0$ bushels
(5) Additional value price election $=\$ 0.68$ per bushel
(6) Projected price for feed barley $=\$ 1.92$
(7) Insured provided malting barley contract for the sale of 10,000 bushels at $\$ 2.60$ per bushel. The additional value price for production grown under malting barley contract is $\$ 0.68$ ( $\$ 2.60$ malting barley contract price minus $\$ 1.92$ projected price).

The insured has 400 acres that are insured under the Small Grains Crop Provisions with 200 acres planted to feed barley and 200 acres planted to approved malting varieties.

The total production from the 200 acres of malting barley is 7250 bushels, all of which fail to meet the quality standards in the endorsement. 4750 bushels are sold for $\$ 2.31$ per bushel and an additional 2500 bushels are sold for $\$ 2.20$ per bushel after a conditioning cost of $\$ 0.05$ per bushel.

The amount of insurance protection is determined as follows:
(a) The lesser of 41.3 bushels per acre production guarantee ( 55 bushels x 75 percent coverage level) for feed barley or 37.5 bushels per acre ( 10,000 bushels contracted $\div 200$ acres $=50.0$ bushels per acre and $50.0 \times 75$ percent coverage level = 37.5);
(b) 37.5 bushels per acre $\times 200$ acres $=7500$ bushels total malting barley production guarantee; and
(c) 7500 bushels $x \$ 0.68$ additional value price $=\$ 5100.00$ total amount of insurance for the unit.
(d) The total amount of production to count is determined as follows:

1 Damaged production that is not reconditioned:
(i) $\$ 2.31$ price per bushel - $\$ 1.92$ projected price for feed barley $=$ \$0.39;
(ii) $\$ 0.39 \div \$ 0.68$ additional value price $=0.57$; and
(iii) $0.57 \times 4750$ bushels of damaged production sold at $\$ 2.31=2708$ bushels of production to count.
$\underline{2}$ Damaged production that is reconditioned:
(i) $\$ 2.20$ price per bushel $-\$ 1.92$ projected price for feed barley $=\$ .28$;
(ii) $\$ 0.28-\$ 0.05$ reconditioning cost $=\$ 0.23$;
(iii) $\$ 0.23 \div \$ 0.68$ additional value price $=0.34$ (if this result is less than zero, no production will be counted); and
(iv) $0.34 \times 2500$ bushels of damaged production sold at $\$ 2.20=850$

3 Total production to count is 3558 bushels $(2708+850)$
(2) All grades and quality determinations must be based on the results of an objective test made by a qualified person following approved procedure as outlined in the Malting Barley Price and Quality Endorsement.
(3) Whenever any production fails one or more of the quality criteria specified in the Malting Barley Price and Quality Endorsement and grades U.S. No. 3 or better, the claim may not be settled until the earlier of:
(a) The date such production was sold, used for feed, donated, or otherwise utilized for any purpose; or
(b) May 31 of the calendar year immediately following the calendar year in which the insured malting barley is normally harvested. If the insured retains any insured production after this date, the AIP will defer completion of the claim if the insured agrees to such deferment or if the insured does not agree to deferment the claim will be completed with no adjustment for quality deficiencies including all remaining unsold insured production.
(4) If the production meets all quality criteria contained in the Endorsement or grades U.S. No. 4 or lower in accordance with the grades and grade requirements for the subclasses Sixrowed and Two-rowed barley, or for the class Barley in accordance with the Official United States Standards for Grain, and is not accepted by a buyer for malting purposes, the claim will be settled within 30 days in accordance with the Common Crop Insurance Policy.
(5) When any sale price is used in determining production to count and it is less than the market value of the damaged production, the sale price will be the market value.
(6) If more than one additional value price is applicable when determining the indemnity, production to count will be valued at the highest additional value price (conditional upon the variety being acceptable under the terms of the highest price contract) until the number of bushels covered at the higher additional value price is reached and the remainder of the production to count will be multiplied by the lower additional value price.

## F. WHEAT OR BARLEY - WINTER COVERAGE ENDORSEMENT

(1) The Winter Coverage Endorsement is available only in counties for which the SP designate both fall and spring final planting dates and for which the actuarial table provides a premium rate for this coverage.
(2) Whenever any winter wheat or barley is damaged during the insurance period and at least 20 acres or 20 percent of the insured planted acreage in the unit, whichever is less, does not have an adequate stand to produce at least 90 percent of the production guarantee, the insured may take one of the following options:
(a) Destroy the remaining crop on such acreage, and accept an appraisal for the damaged acreage that will count against the unit guarantee, in accordance with the Small Grains Crop Provisions. (This acreage may be used for any purpose, including planting and separately insuring another crop if insurance is available. If the insured elects to plant such acreage to a spring type of the same crop, he/she must elect whether to insure the crop at the time the winter crop is released, and pay additional premium for the insurance. This planted acreage will be considered as a separate unit from the original winter wheat or barley unit);

If the acreage is destroyed and planted to a spring type of the same crop, the insured must; (1) plant the spring type in such a manner that it results in a clear and discernable break in the planting pattern between it and any remaining acreage of the winter type, and (2) store or market the spring production in a manner that the AIP can verify the amount of such production separate from any winter type production.
(b) Continue to care for the damaged crop and maintain the winter wheat or barley production guarantee for the acreage; or
(c) Replant the damaged acreage, if practical, to an appropriate variety of the insured crop and receive a replanting payment in accordance with the replant payment provisions contained in the Small Grains Crop Provisions (such acreage will be considered to be a part of the original winter wheat or barley unit), and the production guarantee for winter wheat or barley will remain in effect.

## 4. REPLANTING PAYMENT PROCEDURES

## A. GENERAL INFORMATION

(1) Replanting payments made on acreage replanted using a practice that was uninsurable as an original planting will require the deduction of the replanting payment for such acreage from the original unit liability. If the unit dollar loss (final claim) is less than the original unit liability minus such replanting payment, the actual indemnity dollar amount will not be affected by the replanting payment. The premium will not be reduced.
(2) No replanting payment will be made on acreage on which a prior replanting payment has been made during the current crop year.
(3) SPECIALTY TYPE BARLEY: When it is no LONGER PRACTICAL to replant to the same specialty type barley (e.g., the processor will not accept any production from acreage planted after a specific date), however it is practical to replant to a different barley type and the insured elected to replant to a different specialty type (provided all insurability requirements are met), or an "All Others" type, a revised acreage report (if previously filed) must be processed PRIOR to processing a replant claim. In some cases, the Small Grains Crop Provisions allow insurance to continue based on a winter type when a spring type is replanted. In this event, a revised acreage report may not be required.
(a) Regular rules for acreage report revision apply (refer to the LAM).
(b) The applicable price election of the replanted barley type will be used to determine any replanting payment and to establish the premium and liability for the replanted acreage.
(c) Acreage that is replanted to a different type may have an increase or decrease in liability from that originally reported.

## B. QUALIFICATIONS FOR REPLANTING PAYMENT

(1) To qualify for a replanting payment (wheat, barley, oats, flax, and buckwheat only), the:
(a) insured crop must be damaged by an insurable cause;
(b) AIP must determine that it is practical to replant (refer to the LAM);
(c) acres being replanted must have been initially planted on or after the "Initial Planting" date established by the SP;
(d) bushel per acre appraisal (or appraisal plus any appraisals for uninsured causes of loss) must be less than 90 percent of the per acre production guarantee for the acreage the insured intends to replant (Refer to Section 5, "Small Grains Appraisals");
(e) amount of acreage replanted must be AT LEAST the lesser of 20 acres or 20 percent of the insured planted acreage for the unit (as determined on the final planting date or within the late planting period if a late planting period is applicable);

Any acreage planted after the end of the late planting period will not be included when determining if the 20 acres or 20 percent qualification is met. Refer to the LAM.
(f) acreage must have been initially planted to spring type of the insured crop in those counties with only a spring final planting date;
(g) damage must occur after the fall final planting date in those counties where both a fall and spring final planting date are designated. If the SP provide more than one fall final planting date, the fall final planting date applicable to policies with the Wheat or Barley Winter Coverage Endorsement will be used for this purpose, regardless of whether or not the endorsement is actually in effect;
(h) replanted crop must be seeded at a rate sufficient to achieve a total (undamaged and new seeding) plant population that will produce at least the yield used to determine the production guarantee;
(i) insured must comply with any winter coverage endorsement if it has been elected;
(j) AIP has given consent to replant.
(2) Acreage initially planted to winter type of the insured crop (including rye) in any county for which the SP contain only a fall final planting date (including final planting dates in December, January, and February) WILL NOT be allowed a replanting payment.

In the Narrative of the Claim Form or on a Special Report, show the bushel per acre appraisal for each field or subfield and the calculations to document that qualifications for a replanting payment have been met.

## C. MAXIMUM REPLANTING PAYMENT

The maximum amount of the replanting payment per acre will be the LESSER OF:
(1) 20 percent of the production guarantee times the price election for oats, flax, or buckwheat or the projected price for wheat or barley, times the insured share; or
(2) the maximum bushels allowed in the policy (4 bushels for wheat, 2 bushels for flax or buckwheat, 5 bushels for barley or oats) multiplied by the price election for oats, flax, or buckwheat or the projected price for wheat or barley, times the insured share.

Compute the number of bushels per acre allowed for a replanting payment as follows. Show all calculations in the Narrative of the claim form or on a Special Report.

## EXAMPLE 1

Owner/operator (100 percent share)
30 acres wheat replanted
$20 \%$ of prod. guar. $(25.0 \mathrm{bu} . \times 20 \%)=5.0 \mathrm{bu} . \times 1.000$ (share $)=5.0 \mathrm{bu}$.
4.0 bu. (maximum bu. allowed in policy) $\times 1.000$ (share) $=4.0$ bu.

The lesser of 5.0 and 4.0 is 4.0
Bushels per acre allowed $=4.0$ bu.
Enter the number of bushels per acre allowed (4.0 bu.) in Section I, column 31, "Appraised Potential" of the claim form.

## EXAMPLE 2

Landlord/tenant 50/50 share
30 acres wheat replanted
$20 \%$ of prod. guar. ( 25.0 bu. x $20 \%$ ) $=5.0$ bu. x .500 (share) $=2.5$ bu.
4.0 bu. (maximum bu. allowed in policy) x .500 (share) $=2.0 \mathrm{bu}$.

The lesser of 2.5 and 2.0 is 2.0
Bushels per acre allowed $=2.0$ bu.
Enter the number of bushel allowed ( 2.0 bu .) if share has been applied, or the number of bushels allowed ( 4.0 bu.) if share has yet to be applied in Section I, column 31, "Appraised Potential" of the claim form. (Follow individual AIP guidelines). Indicate in the Narrative if bushels allowed for replanting have/have not been reduced for share on claim form according to individual AIP guidelines.

## D. REPLANTING PAYMENT INSPECTIONS

Replanting payment inspections are to be prepared as final inspections on the claim form only when qualifying for a replanting payment. Non-qualifying replanting payment inspections are to be handled as preliminary inspections. If qualified for a replanting payment, a Certification Form may be prepared on the initial farm visit. Refer to the LAM.

## 5. SMALL GRAINS APPRAISALS

## A. GENERAL INFORMATION

Potential production for all types of inspections will be appraised in accordance with procedures specified in this handbook and the LAM.

## B. SELECTING REPRESENTATIVE SAMPLES FOR APPRAISALS

(1) Determine the minimum number of required samples for a field or subfield by the field size, the average stage of growth, age (size) and general capabilities of the plants, and variability of potential production and plant damage within the field or subfield.
(2) Split the field into subfields when:
(a) variable damage causes the crop potential to appear to be significantly different within the same field; or
(b) the insured wishes to destroy a portion of a field.
(3) Each field or subfield must be appraised separately.
(4) Take not less than the minimum number (count) of representative samples required in TABLE A for each field or subfield.

## C. MEASURING ROW WIDTH FOR SAMPLE SELECTION

Use these instructions for all appraisal methods that require row width determinations.
(1) Use a measuring tape marked in inches or convert a tape marked in tenths, to inches, to measure row width (refer to the LAM for conversion table).
(2) Measure across three OR MORE row spaces, from the center of the first row to the center of the fourth row (or as many rows as needed), and divide the result by the number of row spaces measured across, to determine an average row width to the nearest one-half inch.

For seeding implements that produce inconsistent row widths (e.g., air seeded drills) the adjuster may need to measure the seeding implement row spacing.

## EXAMPLE:

| Row 1 | Row 2 | Row 3 | Row 4 |
| :---: | :---: | :---: | :---: |
|  | \| |  | I |
| Row Space | Row Space | Row Space |  |
| 6.0 " | 6.0" | 6.0 " |  |
|  | . 18 inches |  |  |
| 18.0 inches $\div 3$ | ow spaces $=6.0$ | h average row | idth |

(3) Apply the average row width to TABLE B for all small grains, except buckwheat to determine the Square Foot Factor required for the sample row. For buckwheat, apply average row width to TABLE C to determine the Factor required for the sample. The length of row measured will be 10 feet.
(4) When two or more rows are used for a pattern, divide the length of a single row pattern by the number of rows in the pattern. The combined length of all rows must equal the single row length.
(5) Where rows are skipped for tractor and planter tires, refer to the LAM.
(6) For broadcast acreage, use a 3-foot square grid (9 square feet).

## D. STAGES OF GROWTH FOR ALL SMALL GRAINS AND BUCKWHEAT

Refer to TABLES D-I for explanation of growth stages for the Small Grains crops and buckwheat.

## 6. APPRAISAL METHODS

## A. GENERAL INFORMATION

These instructions provide information on the following appraisal methods for:

| WHEAT, BARLEY, OATS, AND RYE |  |
| :--- | :--- |
| Appraisal Method... | Use... |
| Before Heading - Tillering Incomplete | for spring planted acreage with no emerged <br> seed, and from Seedling to Tillered stage. |
| Before Heading - Tillering Complete | from Tillered stage through Boot stage. |
| After Heading | from Heading stage through Maturity stage. |


| FLAX |  |
| :--- | :--- |
| Appraisal Method... | Use... |
| Before boll development | for spring planted acreage with no emerged <br> seed, and from Seedling through Blossom <br> stage. |
| After boll development | from Green Boll stage through Maturity <br> stage. |


| BUCKWHEAT |  |
| :--- | :--- |
| Appraisal Method... | Use... |
| Stand Reduction | for spring planted acreage with no emerged <br> seed, and to appraise plants from Emergence <br> to Harvest Ready stage. |
| Plant Damage | to appraise plants from Flowering Stage to <br> Harvest Ready stage. |
| Seed Count | to appraise plants in the Harvest Ready <br> stage. |

## B. BEFORE HEADING METHOD

Use Part I, Before Heading, of the appraisal worksheet to record appraisal determinations for this appraisal method for wheat, barley, oats, and rye.
(1) Tillering Incomplete (Seedling to Tillered Stage). Refer to TABLES D and F-H.

If the sample contains scattered late seedlings and the majority of plants are fully tillered or in the jointing stage, appraise under the tillering complete method.

For spring planted acreage, 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) This method is based on the number of LIVE PLANTS (out of dormancy for winter wheat, winter barley, winter oats or rye) in a 10 ft . sample row length.
(b) Using the tiller factors table (TABLE J), convert single plant counts to tillers to count for the type of small grain being appraised.
(c) Convert tillers to potential bushels per acre using a 10 ft . row-length and the Square Foot Factor from TABLE B and the Tiller-to-Bushel Yield-Factor using TABLE K.
(d) For damage due to hail: Small grain in the seedling to tillered stage very rarely suffers damage due to hail. What appears to be cutoff stems is simply leaf material that will regenerate. Delay inspection 7 to 10 days after damage. Plants should then be showing signs of new shoots or tillers at the base of the plant.
(e) For damage other than hail:

1 WHENEVER POSSIBLE, delay appraisals when damage occurs before tillering is complete until the number of potential tillers can be identified. Use judgment as to the number of tillers that will produce a normal head.
$\underline{2}$ If an immediate release is requested, use the "TILLERING-INCOMPLETE APPRAISAL METHOD."
(2) Before Heading - Tillering Complete for Barley, Oats, Rye or Wheat (Tillered Through Boot Stage).

If less than $50 \%$ is headed, use Before Heading Appraisal Method, if $50 \%$ or more has reached the headed stage use the After Heading Appraisal Method.
(a) This method is based on the number of LIVE TILLERS with potential to produce a normal head in a 10 ft . row length.
(b) For the type of small grain being appraised, convert each tiller counted to potential bushels per acre (TABLE K).
(c) For damage due to hail, delay inspection 7 to 10 days after damage. DO NOT ATTEMPT to determine the potential of LIVE plants damaged by hail after tillering is complete. Defer the appraisal to the after-heading method. If deferral is not practical (such as the insured's need to graze the acreage), explain to the insured that ALL LIVE tillers with potential to produce a normal head of the insured crop (or insurable mixture) will be considered to have yield potential, and will be counted to determine the appraisal.
(d) For uneven stands, where most plants are fully tillered, determine the average number of tillers per sample.
(e) If the sample contains scattered late seedlings but the majority of the plants are fully tillered or in the jointing stage, count each seedling as one tiller.

## C. AFTER HEADING METHOD

Use Part II, After Heading, of the appraisal worksheet to record appraisal determinations for this appraisal method for wheat, barley, oats, and rye.
(1) Use this method to appraise small grain from the heading stage through maturity. Base after-heading appraisals on:
(a) The number of harvestable heads in a 10 ft . sample row length. Harvestable heads are those that can be mechanically harvested. Do not include any empty or barren heads (e.g., heads which failed to fill or do not contain any harvestable kernels) in the number of harvestable heads. Terrain and the insured's farming practices must be considered when determining cutting height.
(b) The average number of kernels per head determined from FIVE representative heads in the sample. If there are less than 5 heads in the sample, the number of kernels in all heads in the sample will be counted.
(c) The average number of kernels from the five representative heads converted to bushels per acre by dividing the average number of kernels per square foot (Part II, item 35 of the appraisal worksheet) by the number of kernels in one square foot that equal ONE bushel per acre (TABLE L).
(2) Selection of representative heads.
(a) When the kernels are all filled, select FIVE sample heads from the AVERAGE HEAD LEVEL in the sample row. If there are less than 5 heads in the sample, the number of kernels in all heads in the sample will be counted. Do not select large heads and sucker heads to get an average. Do not include any barren heads when selecting the five representative heads (e.g. heads which failed to fill or do not contain any harvestable kernels).

(b) IF KERNELS ARE NOT YET FILLED, use average number of kernels per head (TABLE M). Unless you have valid justification to apply the kernel-to-bushel yield factor for shriveled wheat or thin barley, assume that unfilled kernels will not be shriveled after they fill and mature.
(c) Appraising unharvested production after a crop has reached maturity may be done by arranging with the insured to harvest representative areas. Use production harvested to determine yield per acre.
(3) Use the following method(s) to appraise windrowed (swathed) grain after heading for Barley, Oats, Rye or Wheat:
(a) Inspect the field or subfield for representative rows of standing grain (spots missed in the field, corners, etc.) and appraise the standing grain using the "After-Heading" method.

Where head damage is prevalent in the windrows (swath) and remaining standing rows are used for the appraisal, the damage to the sample rows must be comparable to the damage in the windrows before this method can be used.
(b) Select representative samples from the windrowed grain and appraise as follows:

1 Head count. Select representative stubble rows and count the stubble straw for the 10 ft . row length. Where windrows contain excessive weeds (which are due to insurable causes, etc.), use judgment in determining the number of grain heads from the stubble-straw count. EXAMPLE: If 10 percent of the grain heads in the representative sample windrow is weeds (wild oats, etc.), use only 90 percent of the stubble-straw count for the head-count sample on the worksheet.
$\underline{2}$ Kernel count. Select 10 representative heads from 35 to 40 feet of windrow and determine the average number of kernels per head for the kernel count.

## D. FLAX APPRAISAL METHOD FOR BEFORE BOLL DEVELOPMENT

Use Part I, Before Boll Development, of the appraisal worksheet to record appraisal determinations for flaxseed from Seedling Stage through Blossom Stage.

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 LAM regarding deferred appraisals and non-emerged seed.
*** (1) Count the number of LIVE PLANTS capable of producing flaxseed in a 10 ft . sample row length.
(2) Total the number of live plants from all samples.
(3) Divide the result of item (3) by the number of samples taken to determine the average number plants for all samples.
(4) Multiply the result of item (4) by the appropriate Square Foot Factor in TABLE B.
(5) Multiply the result of item (5) by the yield factor on the appraisal worksheet to determine the bushel per acre appraisal.

## E. FLAX APPRAISAL METHOD FOR AFTER BOLL DEVELOPMENT

Use Part II, After Boll Development, of the appraisal worksheet to record appraisal determinations for flaxseed from the Green Boll Stage through Maturity Stage.
*** (1) Count the number of plants in a 10 ft . sample row length and determine the average number of plants per sample.
(2) Select FIVE representative plants in the sample and determine the average number of bolls per plant.
(3) Select TEN representative bolls in the sample and determine the average number of kernels per boll.
(4) Determine the total average kernels by multiplying the result from item (2) by item (3) by item (4).
(5) Determine the average kernels per square foot by dividing the result in item (5) by the Square Foot Factor (TABLE B). This result is divided by the yield factor stated on the appraisal worksheet to determine the bushel per acre appraisal.

## F. BUCKWHEAT STAND REDUCTION METHOD

(1) Stand reduction occurring up to and including the $\mathrm{N}-8$ stage of growth (TABLE I). Dead, missing or non-emerged plants in addition to live remaining plants are used when determining stand reduction occurring in the earlier stages of growth losses. 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 field if possible.
(a) Determine the original number of plants and the remaining number of live plants per acre by using the following steps:

1 Determine row width to nearest one-half inch, unless broadcast.
$\underline{2}$ Measure a 10 ft . row length of the buckwheat, or use a 3-foot by 3-foot square grid for broadcast buckwheat.

3 Determine the original number of plants in the sample (living and dead, missing, or non-emerged).

4 Determine the number of destroyed plants (dead, missing or non-emerged) in the sample.

5 Divide the number of destroyed plants by the number of original plants to arrive at percentage of plants destroyed.
(b) Use TABLE $\mathbf{N}$ to convert percentage of destroyed plants to the percent of loss due to vegetative stand reduction.
(2) Determine the stand reduction occurring at the N-9 stage of growth to the harvest ready stage. The number of dead, missing or non-emerged plants are used when determining stand reduction for the later stages of growth losses.
(a) Select 100 consecutive plants including those missing or destroyed. Count the number of plants totally destroyed. (Refer to TABLE I for information on stage determinations).
(b) Divide the result in (a) by 100 to determine the damage due to late-stage plants destroyed (rounded to three decimal places).
(c) Subtract the result in (b) from 1.000 to determine the potential remaining.

## G. BUCKWHEAT PLANT DAMAGE METHOD

Plant damage on buckwheat shall include any damage resulting in cut-off and/or broken over plants beginning with the N-4 stage (TABLE I). Use the following procedure to determine the percentage of plant damage (plant damage is applied to the percent of the crop remaining after any determinations for stand reduction):
(1) Determine the original number of nodes at date of damage for 20 consecutive plants. (The number of original nodes per plant for the stage times 20 (e.g., N-8 stage or 8 nodes times $20=160$ original nodes).
(2) Determine the number of nodes cut-off or broken over, which will not be harvestable. For cut-off plants, count only those nodes that are completely severed from the main stem of the Buckwheat plant. Classify those plants not completely severed as broken over nodes. Care should be taken when considering broken over nodes in determining loss. Only plants with nodes broken over, at a node height above the cutter or swather cutting height should be included for plant damage determination. In situations where excessive numbers of plants are broken over the adjuster should defer the adjustment until a more accurate determination of harvestable plants can be determined.
(3) Total the number of nodes cut-off or broken over. Divide this total by the number of nodes at the date of damage to arrive at the percent of plant damage.
(4) Refer to TABLE $\mathbf{O}$ to determine the percent of loss to plant damage.
(5) Multiply the percent of damage determined above by the potential remaining to determine the net percentage of loss due to plant damage.

## H. BUCKWHEAT SEED COUNT METHOD

(1) Seed count appraisals are done when more than $70 \%$ of the seeds have turned black or brown. For seeds not turned black or brown, the adjuster may need to defer the adjustment for a period of time in order to determine the extent the immature seeds will finish filling in order to accurately determine the loss. This will depend upon the proximity of the appraisal to the time the crop is scheduled to be windrowed or frost will occur.
(2) Performing the seed count appraisal:
(a) In each representative sample, measure 10 ft . of row for drilled buckwheat, or a 3-foot by 3 -foot square area for broadcast buckwheat.
(b) Count all of the harvestable plants.
(c) From these plants, select 5 plants which best represent the sample.

EXAMPLE: Count the number of brown or black seeds from the 5 plants, which when felt with the fingers do not fold or collapse. For seeds not yet black or brown count only those seeds which should produce harvestable seed. These seeds should be dark green with signs of mottling (brownish streaks). Seeds which are white and firm with milk should only be counted if 2 or more weeks remain prior to harvest or to expected normal frost.
(d) Determine the average seeds per plant by dividing the total seeds counted by 5 .
(e) Determine the average plants per foot by dividing the plants in the sample by 10 .
(f) Refer to TABLE C to determine the appropriate Factor to be used for adjusting the sample size to acreage.
(g) The SEED SIZE FACTOR adjusts the above determinations to bushels. Use .0167 as the factor for large seeded varieties, or .0144 for small seeded varieties (Refer to EXHIBIT 3 for Varieties of Buckwheat).

## 7. APPRAISAL DEVIATIONS AND MODIFICATIONS

## A. DEVIATIONS

Deviations in appraisal methods require FCIC written authorization (as described in the LAM) prior to implementation.

## B. MODIFICATIONS

Modifications in appraisal methods require AIP authorization (as described in the LAM).
The following appraisal modifications are to be used ONLY when conditions warrant. Document on a Special Report or in the narrative of the claim form the authorization to use appraisal modification(s).
(1) Streak Mosaic (used ONLY before heading).
(a) Use a minimum of 50 plants to determine the percent of live plants with disease.
(b) Use the factor table below to reduce the before-heading bushel-per-acre appraisal shown on the Appraisal Form.

| MOSAIC YIELD REDUCTION CHART (BEFORE HEADING) |  |
| :---: | :---: |
| Percent Live Plants with Disease | Factor to be Applied |
| $0-11$ | None |
| $12-37$ | .90 |
| $38-62$ | .75 |
| $63-86$ | .50 |
| $87-100$ | .20 |

(2) Freeze (used ONLY at late boot and early heading stages of growth).

Use the after-heading method and the following procedure to determine appraisal.
(a) Delay appraisal 7 to 10 days after the freeze.
(b) A growing point that has been damaged loses its turgidity (full firm texture) and greenish color within a few days after a freeze.
(c) The flowering stage is the most freeze sensitive stage in wheat. Flowering proceeds from florets near the center of wheat spikes to florets at the top and bottom of the spikes over a 2-to 4-day period (refer to EXHIBIT 1). The center or one or both ends of the spikes might be void of grain because those florets were at a sensitive stage when they were frozen. Grain might develop in other parts of the spikes, because flowering had not started or was already completed in those florets when the freeze occurred.
(d) Examine the florets of a representative number of heads from the sample row for freeze damage to the pistils or immature kernels.

1 Damaged: When all of the florets have brown, discolored pistils or immature kernels, the kernels will not mature: Do not count florets as potential kernels.
$\underline{2}$ Partially damaged: For heads with partial freeze damage, count as potential kernels only the florets that have pistils or immature kernels with pale green or white coloration.

3 Undamaged: When all of the pistils or immature kernels in the florets have a pale green or white coloration, freeze damage has not occurred: Count each floret as a potential kernel.

Freeze damage late in the heading stages may result in shrunken kernels and/or loss of test weight. Losses due to freeze damage must be deferred until an accurate appraisal can be determined. Whenever possible, determine damage from a graded sample.

## 8. APPRAISAL WORKSHEET ENTRIES AND COMPLETION PROCEDURES

## A. APPRAISAL WORKSHEET FORM STANDARDS

(1) The entry items in subsection C are the minimum requirements for the Small Grains Appraisal Worksheets for the different appraisal methods. All of these entry items are "Substantive," (i.e., they are required.)
(2) Appraisal Worksheet Completion Instructions. The completion instructions for the required entry items on the Appraisal Worksheets in the following subsections are "Substantive," (i.e., they are required.)
(3) The Privacy Act and Nondiscrimination Statements are required statements that must be printed on the form or provided to the insured as a separate document. These statements are not shown in the example form in this exhibit. The current Nondiscrimination Statement and Privacy Act Statement can be found on the RMA website at http://www.rma.usda.gov/regs/required.html or successor website.
(4) Refer to the DSSH for other crop insurance form requirements (e.g., font point size, etc.).

## B. GENERAL INFORMATION FOR WORKSHEET ENTRIES AND COMPLETION PROCEDURES

(1) Include the AIP's name in the appraisal worksheet title if not preprinted on the AIP's worksheet, or when a worksheet entry is not provided.
(2) Include the claim number on the appraisal worksheet (when required by the AIP), when a worksheet entry is not provided.
(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) When a remarks section is not included on the form, document pertinent information about the appraisal, including any appropriate calculations, on a Special Report and attach to the worksheet.
(5) Standard appraisal worksheet items are numbered consecutively in subsections C - E. Example appraisal worksheets are also provided to illustrate how to complete entries.
(6) For all zero appraisals, refer to the LAM.

## C. WORKSHEET ENTRIES AND COMPLETION INFORMATION FOR WHEAT, BARLEY, OATS, AND RYE

## Verify or make the following entries:

## Item

No. Information Required
Company: Name of AIP, if not preprinted on the worksheet. (Company Name).
Claim Number: Claim number as assigned by the AIP.

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. Unit Number: Unit number from the Summary of Coverage after it is verified to be correct.
4. Crop: Barley Feed, Barley Malt, Oats, Rye, or Wheat.
5. Crop Year: Four-digit crop year, as defined in the policy, for which the claim has been filed.

## PART I - BEFORE HEADING

For samples not yet tillered, partially tillered and where tillering is complete. AFTER A SMALL GRAIN HAS REACHED THE HEADING STAGE, USE PART II.
6. Field ID: Field or subfield identification symbol.
7. Drill Space: Row width to nearest one-half inch. If broadcast, enter "B." Refer to Subsection 5C for row width determination information.
8. Tillering Incomplete Column No. Plants: Number of live plants capable of producing grain in each sample where tillering is incomplete. If tillering is complete on the sample, MAKE NO ENTRY.
9. Total: Total number of plants in all samples from item 8.
10. Tiller Factor: Using the Tiller Factor (TABLE J) convert single plant counts to tillers to count for the type of small grain being appraised. Document in the remarks section or on a Special Report the type of wheat being appraised.
11. Tillers to Count: Multiply total plants (item 9) by tiller factor (item 10) and enter to the nearest WHOLE number.
12. Tillering Completed Column No. Tillers: Number of live tillers capable of producing grain in each sample where tillering is complete. If tillering is incomplete on the sample, MAKE NO ENTRY.

Scattered late seedlings in the sample row are to be counted as ONE tiller per seedling.
13. Total: Total number of tillers in all samples from item 12.
14. Total No. Tillers: Sum of items 11 and 13.
15. Total No. of Plots: Total number of sample plots in item 8 and 12.
16. Avg. No. Tillers: Results of dividing item 14 by item 15, rounded to the nearest tenth.
17. Sq. Ft. Factor: Square foot factor from TABLE B in relation to row spacing.
18. Avg. Till. Per Sq. Ft.: Result of dividing item 16 by item 17, rounded to the nearest tenth.
19. Yield Factor: Tiller to Bushel Yield Factor TABLE K.
20. Bu. Per Acre Appraisal: Result of multiplying item 18 by item 19, rounded to the nearest tenth.

## PART II - AFTER HEADING

21. Field ID: Field or subfield identification symbol.
22. Drill Space: Row width to nearest one-half inch. If broadcast, enter "B." Refer to Subsection 5C for row width determination information.
23. No. of Kernels (Five Heads) From Each Sample Plot: Total number of kernels in FIVE representative heads from each sample plot. Do not include any empty or barren heads when selecting the five harvestable heads. If there are less than 5 heads in the sample, count the number of kernels in all heads in the sample.
24. No. Heads Sampled: Number of representative heads sampled (" 5 " is preprinted on the appraisal worksheet). If there are less than 5 heads sampled, line through " 5 " and enter the number of heads actually sampled..
25. 

Avg. No. Kernels Per Head: Result of dividing item 23 by item 24, rounded to the nearest tenth.
26. Total Number Heads From Each Sample Plot: Number of heads counted in each sample plot. Do not include any empty or barren heads when counting the number of harvestable heads.
27. Total Kernels Per Sample: Result of multiplying item 25 times item 26, rounded to the nearest tenth.
28. Total Kernels All Samples: Total number of kernels in all samples from item 27.
30. Avg. Kernels Per Sample: Result of dividing item 28 by item 29, rounded to nearest tenth.
31. Sq. Ft Factor: Square Foot Factor from TABLE B.
32. Avg. Kernels Per Sq. Ft.: Result of dividing item 30 by item 31, rounded to the nearest tenth.
33. Yield Factor: Enter the Kernels to Bushel Yield Factor from TABLE L for "Not shriveled" (even if the kernels are not yet filled), unless you have sufficient justification to apply the "shriveled" small grain factor.
34. Bu. Per Acre Appraisal: Result of dividing item 32 by item 33, rounded to the nearest tenth.

The following required entries are not illustrated on the Appraisal Worksheet example below.
35. Insured's Signature and Date: Insured's (or insured's authorized representative's) signature and date. BEFORE obtaining insured's signature, REVIEW ALL ENTRIES on the Appraisal Worksheet WITH THE INSURED , (or insured's authorized representative's) particularly explaining codes, etc., which may not be readily understood.
36. Code No., Adjuster's Signature, and Date: Signature of adjuster, code number, and date signed after the insured (or insured's authorized representative) has signed. If the appraisal is performed prior to signature date, document the date of appraisal in the Remarks/Narrative section of the Appraisal Worksheet (if available); otherwise, document the appraisal date in the Narrative of the Production Worksheet.

Page Number: Page numbers - (Example: Page 1 of 1, Page 1 of 2, Page 2 of 2, etc.).

APPRAISAL WORKSHEET (Wheat, Barley, Oats, Rye, Rice)
Claim No.: XXXXXXXX


This form example does notillustrate all required entry items (e.g.,signatures, dates, etc)
APPRAISAL WORKSHEET (Wheat, Barley, Oats, Rye, Rice)
Claim No.: XXXXXXXX


This form example does notillustrate all required entryitems (e.g.,signatures, dates, etc).

## D. WORKSHEET ENTRIES AND COMPLETION INFORMATION FOR FLAX

Verify or make the following entries:

Item
No. Information Required

Company: Name of AIP, if not preprinted on the worksheet. (Company Name).
Claim No.: Claim number as assigned by the AIP.

1. Insured's Name: Name of the insured that identifies exactly the person (legal entity) to whom the policy is issued.

Policy No.: Insured's assigned policy number.
3.

Unit No.: Unit number from the acreage report after it is verified to be correct.
4. Crop: "Flax."
5. Crop Year: Four-digit crop year, as defined in the policy, for which the claim has been filed.

## PART I - BEFORE BOLL DEVELOPMENT

6. Field ID: Field or subfield identification symbol.
7. Row Space: Row width to nearest one-half inch. If broadcast, enter "B." Refer to Subsection 5C for row width determination information.
8. 
9. 

No. Plants: Number of live plants capable of producing flaxseed in each sample.
Total Plants: Total number of plants in all samples from item 8.
10. No. Samples: Total number of sample plots from item 8
11. Avg. No. Plants: Result of dividing item 9 by item 10 (to tenths).
12. Sq. Ft. Factor: Square Foot Factor from TABLE B.
13. Avg. Plants Per Sq. Ft.: Result of dividing item 11 by item 12 (to tenths).
14. Bu. Per Acre Appraisal: Result of multiplying item 13 by 80 (yield factor), rounded to nearest tenth.

## PART II - AFTER BOLL DEVELOPMENT

15. Field ID: Field or subfield identification symbol.
16. Row Space: Row width to nearest one-half inch. If broadcast, enter "B." Refer to Subsection 5C for row width determination information.
17. No. Plants Per Sample: Number of plants in each sample.
18. Avg. Bolls Per Plant: Select FIVE representative plants from each sample plot. Count the number of bolls and divide by " 5 ." Enter the average number of bolls per plants (rounded to the nearest whole number.
19. Avg. Kernels Per Boll: Select TEN representative bolls from each sample and count the flaxseed kernels. Divide the number of flaxseed kernels by "10." Enter the average number of kernels per boll (Round to the nearest whole number.)
20. Total (Number of Plants): Total number of plants in all samples from item 17.
21. Total (Number Bolls): Total number of bolls in all samples from item 18.
22. Total (Number Kernels): Total number of kernels in all representative heads from item 19.
23. No. Samples: Total number of sample plots.
24. Avg. Plants: Result of dividing item 20 by item 23 (to tenths).
25. Avg. Bolls: Result of dividing item 21 by item 23 (to tenths).
26. Avg. Kernels: Result of dividing item 22 by item 23 (to tenths).
27. Total Avg. Kernels: Result of multiplying item 24 by item 25 by item 26 (rounded to tenths after last calculation.)
28. Sq. Ft. Factor: Square Foot Factor from TABLE B.
29. Avg. Kernel Per Sq. Ft.: Result of dividing item 27 by item 28, rounded to the nearest tenth.
30. Bu. Per Acre Appraisal: Result of dividing item 29 by " 100 " (yield factor), rounded to the nearest tenth.

## The following required entries are not illustrated on the Appraisal Worksheet example below.

31. Insured's Signature and Date: Insured's (or insured's authorized representative's) signature and date. BEFORE obtaining insured's signature, REVIEW ALL ENTRIES on the Appraisal Worksheet WITH THE INSURED , (or insured's authorized representative's) particularly explaining codes, etc., which may not be readily understood.
32. Adjuster's Signature, Code Number, and Date: Signature of adjuster, code number, and date signed after the insured (or insured's authorized representative) has signed. If the appraisal is performed prior to signature date, document the date of appraisal in the Remarks/Narrative section of the Appraisal Worksheet (if available); otherwise, document the appraisal date in the Narrative of the Production Worksheet.

Page Number: Page numbers - (Example: Page 1 of 1, Page 1 of 2, Page 2 of 2, etc.).


This form example does not illustrate all required entry items (e.g., signatures, dates, etc.).


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## E. WORKSHEET ENTRIES AND COMPLETION INFORMATION FOR BUCKWHEAT

Verify or make the following entries:

## Item

No. Information Required
Company: The AIP's name if not pre-printed on the worksheet (Company Name).

1. Insured's Name: Name of insured that identifies EXACTLY the person or legal entity to whom the policy is issued.
2. Policy Number: Insured's assigned policy number.
3. Claim Number: The claim number assigned by the AIP.
4. Unit Number: Unit number from the Summary of Coverage after it is verified as correct.
5. Crop Year: Crop year, as defined in the policy for buckwheat for which the claim has been filed.
6. Stage: The stage of growth at the time damage occurred as shown in TABLE I, "GROWTH STAGES OF BUCKWHEAT."
7. Cause of Loss: Name of insured causes(s) of loss for this crop as listed in the LAM. If an insured cause of loss is coded as "Other," explain in the "Remarks."
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., Jul 7).
9. Variety: Variety of buckwheat planted on the acreage represented on this appraisal worksheet (refer to EXHIBIT 3). After the variety entry, record either "LS" (Large Seeded) or "SS" to indicate whether the variety is large or small seeded. If the variety is not found in EXHIBIT 3, the adjuster should consult with the processor, county extension, etc. to determine if "LS" or "SS." Only one variety should be represented on an appraisal worksheet. If multiple varieties exist within the same unit complete multiple worksheets.
10. Row Width: Row width to nearest one-half inch. If broadcast, enter "B." Refer to Subsection 5C for row width determination information.
11. Acres: Number of determined acres to tenths, in the field or subfield being appraised.
12. Field ID: Field or subfield identification symbol as shown on a sketch map or aerial photo.
13. 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 3digit code number from the actuarial documents.

## STAND REDUCTION AND PLANT DAMAGE

14. Sample Number: MAKE NO ENTRY. Sample identification numbers are on the appraisal form. If more than eight samples are needed, (refer to TABLE A for minimum sample requirements) use additional pages, and number the samples $9,10,11$, etc.

Complete items 15 through 17 only if the acreage is in growth stage of Emergence through $\mathrm{N}-8$ at time of damage; otherwise, MAKE NO ENTRY.
15. Number of Original Plants: Original number of buckwheat plants in 10 ft . of row for drilled acreage, or the number of plants in a 3-foot by 3-foot area for broadcast seeding.
16. Number of Plants Totally Destroyed: The number of plants totally destroyed from the sample ( 10 ft . of row, or the 3 foot square area for broadcast seeding) in item 15 above.
17. \% of Stand Reduction: The result of dividing item 16 by item 15, rounded to the nearest $5 \%$. This result is the stand reduction percentage incurred during the emergence through N 8 stages of growth. (Refer to TABLE I for information on growth stage determinations.)
18. Number of Late Growth Stage Plants Destroyed: (Complete this entry only for acreage that has reached the $\mathrm{N}-9$ growth stage, but has less than $70 \%$ of seeds that have turned brown or black at time of loss; otherwise MAKE NO ENTRY). Select 100 consecutive plants including those missing or destroyed. Count the number of plants destroyed.
19. Damage Due to Stand Reduction or Late Stage Plants Destroyed:
a. If the appraisal is for early stage stand reduction refer to item 17 and to TABLE N, to arrive at the entry for percent of damage converted to three decimal places.
b. If the appraisal is for stage $\mathrm{N}-9$ or later (Late Stage Plants Destroyed) stand reduction, enter the amount shown in item 18 divided by 100 , rounded to 3 decimal places.
20. Potential Remaining (1.000 - Item 19): 1.000 minus item 19 entry.
21. \% Plant Damage: Percentage of plant damage as outlined in Section 6 G, rounded to the nearest 5\% . Use Notes section to record nodes cutoff/broken over.
22. \% Damage From Plant Damage (TABLE O): Using the percentage entered in item 21, refer to TABLE O for the appropriate percentage of damage to be entered. Convert percentage determined to three decimal places.
23. Net Plant Damage ( $\mathbf{2 0} \times 22$ ): Item 20, potential remaining, times item 22, percent damage due to plant damage, rounded to three decimal places.
24. Net Potential Remaining (20-23): Item 20 minus item 23, to three decimal places.
25. Total: Total of item 24, to three decimal places.
26. Average Potential Remaining: Item 25 divided by number of samples, rounded to three decimal places.
27. APH Yield: Approved APH yield in whole bushels as found on the APH form.
28. Appraisal: Item 26 times item 27, in bushels, rounded to tenths.

## SEED COUNT

29. Sample Number: MAKE NO ENTRY. Sample identification numbers are on the appraisal form. If more than ten samples are needed, (refer to TABLE A for minimum sample requirements) use additional pages, and number the samples $11,12,13$, etc.
30. Harvestable Plants: Total number of harvestable plants in 10 ft . of row, or the total number of harvestable plants in a 3-foot by 3-foot area for broadcast seeding.
31. Plants per Foot: Item 30 divided by 10, rounded to tenths.
32. Total Seeds (5 Rep. Plants): Total number of seeds from 5 representative plants. If there were no remaining or harvestable plants in the representative sample area, or the plants have no seeds, enter " 0 ."
33. Total: Total of item 31.
34. Total: Total of item 32.
35. No. of Samples: Total number of samples.
36. Total Rep. Plants: Total number of representative plants counted.
37. Factor (TABLE C): The Factor found in TABLE C for the row width listed in item 10.
38. Seed Size Factor: Enter .0167 for large seeded varieties or .0144 for small seeded varieties (Refer to EXHIBIT 3).
39. Average Plants/Foot: Item 33 divided by item 35, rounded to the nearest tenth.
40. Average Seeds/Plants: Item 34 divided by item 36, rounded to the nearest tenth.
41. Appraisal (Bu./A): The result of multiplying items 37, 38, 39 and 40, rounded to tenths.
42. Remarks: Enter pertinent information about the appraisal. Include any appropriate calculations which resulted in damage to the crop.

## The following required entries are not illustrated on the Appraisal Worksheet example below.

43. Insured's Signature, and Date: Insured's ( or insured's authorized representative's) signature and date. BEFORE obtaining the insured's signature, REVIEW ALL ENTRIES on the Appraisal Worksheet WITH THE INSURED (or insured's authorized representative's), particularly explaining codes, etc., which may not be readily understood.
44. Adjuster's Signature, Code No., and Date: Signature of adjuster, code number, and date signed after the insured (or insured's authorized representative) has signed. If the appraisal is performed prior to signature date, document the date of appraisal in the Remarks section of the Appraisal Worksheet (if available); otherwise, document the appraisal date in the Narrative of the Production Worksheet.
45. Page Number: Page numbers - (Example: Page 1 of 1, Page 1 of 2, etc.).


This form example does not illustrate all required entry items (e.g., signatures, dates, etc.).


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## 9. CLAIM FORM ENTRIES AND COMPLETION PROCEDURES

## A. CLAIM FORM STANDARDS

(1) The entry items in subsection C are the minimum Claim Form (hereafter referred to as "Production Worksheet") requirements. All of these entry items are considered "Substantive," (i.e., they are required.)
(2) Production Worksheet Instructions. The completion instructions for the required entry items on the Production Worksheet in the following subsections are "Substantive," (i.e., they are required.)
(3) The Privacy Act and Nondiscrimination Statements are required statements that must be printed on the form or provided to the insured as a separate document. These statements are not shown in the example form in this exhibit. The current Non-Discrimination Statement and Privacy Act Statement can be found on the RMA website at http://www.rma.usda.gov/regs/required.html or successor website.
(4) The certification statement required by the current DSSH must be included on the form directly above the insured's signature block and immediately followed by the statement below.
"I understand the certified information on this Production Worksheet will be used to determine my loss, if any, to the above unit. The insurance provider may audit and approve this information and supporting documentation. The Federal Crop Insurance Corporation, an agency of the United States, subsidizes and reinsures this crop insurance."
(5) Refer to the DSSH for other crop insurance form requirements (e.g., point size of font, etc.)

## B. GENERAL INFORMATION FOR ENTRIES AND COMPLETION PROCEDURES

(1) The Production Worksheet is a progressive form containing all notices of damage for all preliminary, replant, and final inspections on a unit.
(2) If a Production Worksheet has been prepared on a prior inspection, verify each entry and enter additional information as needed. If a change or correction is necessary, strike out all entries on the line and re-enter correct entries on a new line. The adjuster and insured should initial any line deletions.
(3) Refer to the LAM for instructions regarding the following:
(a) Acreage report errors.
(b) Delayed notices and delayed claims.
(c) Corrected claims or fire losses (double coverage) and cases involving uninsured causes of loss, unusual situations, controversial claims, concealment, or misrepresentation.
(d) Claims involving a Certification Form (when all the acreage on the unit has been appraised to be put to another use, when acreage is being appraised for a replanting payment and all acreage on the unit has been initially planted, or other reasons described in the LAM).
(e) "No Indemnity Due" claims (which must be verified by an APPRAISAL or NOTIFICATION from the insured that the production exceeded the guarantee).
(f) Late planting.
(4) Refer to the Prevented Planting Handbook for information on prevented planting.
(5) The adjuster is responsible for determining if any of the insured's requirements under the notice and claim provisions of the policy have not been met. If any have not, the adjuster should contact the AIP.
(6) Instructions labeled "PRELIMINARY" apply to preliminary inspections only. Instructions labeled "REPLANT" apply to replant inspections only. Instructions labeled "FINAL" apply to final inspections only. Instructions not labeled apply to ALL inspections.
(7) The AIP may complete a separate Production Worksheet for each type planted in the unit.
(8) If the AIP determines the claim is to be DENIED, refer to Paragraph 67 K of the LAM for PW completion instructions.

## C. FORM ENTRIES AND COMPLETION INFORMATION

## Verify or make the following entries:

## Item

## No. Information Required

1. Crop/Code \#: "Barley" (0091), "Buckwheat" (0114), "Flax" (0031), "Oats" (0016), "Rye" (0094), or "Wheat" (0011).
2. Unit \#: Unit number from the Summary of Coverage after it is verified to be correct.
3. Location Description: Land location that identifies the legal description, if available, and the location of the unit (e.g., section, township, and range; FSA Farm Numbers; FSA Common Land Units (CLU) and tract numbers; GPS identifications; or Grid identifications) as applicable for the crop.
4. Date(s) of Damage: First three letters of the month(s) during which the determined insured damage occurred for the inspection and cause(s) of loss listed in item 5 below. If no entry in item 5 below, MAKE NO ENTRY. For progressive damage, enter the month that identified when the majority of the insured damage occurred. Include the SPECIFIC DATE where applicable as in the case of hail damage (e.g., Aug 11). Enter additional dates of damage in the extra spaces, as needed. If more space is needed, document the additional dates of damage in the Narrative, (or on a Special Report). Refer to the illustration in item 6 below.

If there is no insurable cause of loss, and a no indemnity due claim will be completed, MAKE NO ENTRY.
5. Cause(s) of Damage: Name of the determined insured cause(s) of damage for this crop as listed in the LAM for the date of damage listed in item 4 above. If an insured cause(s) of damage is coded as "Other," explain in the Narrative. Enter additional causes of damage in the extra spaces, as needed. If more space is needed, document the additional determined insured causes of damage in the Narrative (or on a Special Report). Refer to the illustration in item 6 below.

If it is evident that no indemnity is due, enter "NO INDEMNITY DUE" across the columns in Item 5 (refer to the LAM for more information on no indemnity due claims).
6. Insured Cause \%:

PRELIMINARY: MAKE NO ENTRY.
REPLANT AND FINAL: Whole percent of damage for the insured cause of damage listed in item 5 above. Enter additional "Insured Cause $\%$ " in the extra spaces, as needed. If additional space is needed, enter the additional determined "Insured Cause \%" in the Narrative (or on a Special Report). The total of all "Insured Cause \%" including those entered in the Narrative must equal $100 \%$. If there is no insurable cause of loss, and a no indemnity due claim will be completed, MAKE NO ENTRY.

Example entries for items 4-6 and the Narrative, reflecting entries for multiple dates of damage, the corresponding insured causes of damage and insured cause percents:

| 4. Date(s) of Damage | MAY | JUN 30 | JUN 30 | AUG | AUG |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 5. Cause(s) of Damage | Excess Moisture | Tornado | Hail | Drought | Heat |
| 6. Insured Cause \% | 10 | 20 | 15 | 25 | 20 |

Narrative: Additional date of damage - SEP 5; Cause of Loss - Freeze; Insured cause percent $-10 \%$.
7. Company/Agency: Name of company and agency servicing the contract.
8. Name of Insured: Name of the insured that identifies EXACTLY the person (legal entity) to whom the policy is issued.
9. Claim \#: Claim number as assigned by the AIP.
10. Policy \#: Insured's assigned policy number.
11. Crop Year: Four-digit crop year, as defined in the policy, for which the claim is filed.
12. Additional Units:

## PRELIMINARY AND REPLANT: MAKE NO ENTRY.

FINAL: Unit number(s) for ALL non-loss units for the crop at the time of final inspection. A non-loss unit is any unit for which a Production Worksheet has not been completed.
Additional non-loss units may be entered on a single Production Worksheet.
If more spaces are needed for non-loss units, enter the unit numbers, identified as "Non-Loss Units," in the narrative or on an attached Special Report.
13. Est. Prod. Per Acre:

PRELIMINARY AND REPLANT: MAKE NO ENTRY.
FINAL: Estimated yield per acre, in whole bushels, of ALL non-loss units for the crop at the time of final inspection.
14. Date(s) Notice of Loss:

## PRELIMINARY:

a. Date the first or second notice of damage or loss was given for the unit in item 2, in the $1^{\text {st }}$ or $2^{\text {nd }}$ space, as applicable. Enter the complete date (MM, DD, and YYYY) for each notice.
b. A notice of damage or loss for a third preliminary inspection (if needed) requires an additional set of Production Worksheets. Enter the date of notice for a third preliminary inspection in the 1 st space of item 14 on the second set of Production Worksheets.
c. Reserve the "Final" space on the first page of the first set of Production Worksheets for the date of notice for the final inspection.
d. If the inspection is initiated by the AIP, enter "Company Insp." instead of the date.
e. If the notice does not require an inspection, document as directed in the Narrative instructions.

REPLANT AND FINAL: Transfer the last date (in the 1st or 2nd space from the first or second set of Production Worksheets) to the FINAL space on the first page of the first set of Production Worksheets if a final inspection should be made as a result of the notice. Always enter the complete date of notice (MM,DD, and YYYY) for the FINAL inspection in the FINAL space on the first page of the first set of Production Worksheets. For a delayed notice of loss or delayed claim, refer to the LAM.

## 15. Companion Policy(s):

a. If no other person has a share in the unit (insured has 100 percent share), MAKE NO ENTRY.
b. In all cases where the insured has LESS than a 100 percent share of a loss-affected unit, ask the insured if the OTHER person sharing in the unit has a multiple-peril crop insurance contract (i.e., not crop-hail, fire, etc.). If the other person does not, enter "NONE."
(1) If the other person has a multiple-peril crop insurance contract and it can be determined that the SAME AIP services it, enter the contract number. Handle these companion policies according to AIP instructions.
(2) If the OTHER person has a multiple-peril crop insurance contract and a DIFFERENT AIP or agent services it, enter the name of the AIP and/or agent (and contract number) if known.
(3) If unable to verify the existence of a companion contract, enter "Unknown" and contact the AIP for further instructions.
c. Refer to the LAM for further information regarding companion contracts.

## SECTION I - ACREAGE APPRAISED, PRODUCTION AND ADJUSTMENTS

Make separate line entries for varying:
(1) Rate classes, types, class, sub-class, intended use, irrigated practice, cropping practice, or organic practices, as applicable;
(2) APH yields;
(3) Appraisals;
(4) Adjustments to appraised mature production (moisture and/or quality adjustment factors);
(5) Stages or intended use(s) of acreage;
(6) Shares (e.g., 50 percent and 75 percent shares on the same unit); or
(7) Appraisals for damage due to hail or fire if Hail and Fire Exclusion is in effect.

## Verify or make the following entries:

## Item

## No. Information Required

16. Field ID: The field or subfield identification symbol from a sketch map or an aerial photo. Refer to the "Narrative."

Where acreage is PARTLY replanted, omit the field ID symbol for the fields that have not been replanted and that have been consolidated into a single line entry.

## 17. Multi-Crop Code:

REPLANT: MAKE NO ENTRY.
PRELIMINARY AND FINAL: The applicable two-digit code for first crop and second crop. REFER TO THE LAM FOR INSTRUCTIONS REGARDING ENTRY OF FIRST CROP AND SECOND CROP CODES.
18. Reported Acres: In the event of over-reported acres, handle in accordance with the individual AIP's instructions. In the event of under-reported acres, enter the reported acres to tenths for the field or sub field. If there are no under-reported acres MAKE NO ENTRY.
19. Determined Acres: Refer to the LAM for definition of acceptable determined acres used herein. Enter the determined acres to tenths for the field or subfield for which consent is given for other use and/or:
a. Put to other use without consent;
b. Abandoned;
c. Damaged by uninsured causes;
d. For which the insured failed to provide acceptable records of production.

Refer to the LAM for procedures regarding when estimated acres are allowed and documentation requirements.

REPLANT: Determine the total acres, to tenths, of replanted acreage (DO NOT ESTIMATE). Make a separate line entry for any PART of a field NOT replanted.
a. Determine the planted acreage of any fields NOT replanted. Consolidate it into a single line entry UNLESS the usual reasons for separate line entries apply. Record the field identities (from a map or aerial photo) in the "Narrative."
b. ACCOUNT FOR ALL PLANTED ACREAGE IN THE UNIT.

PRELIMINARY AND FINAL: Determined acres to tenths.

Acreage breakdowns WITHIN a unit or field may be estimated (refer to the LAM) if a determination is impractical.
20. Interest or Share: Insured's interest in the crop to three decimal places as determined at the time of inspection. If shares vary on the same UNIT, use separate line entries.
21. Risk: Three-digit code for the correct "Rate" as specified on the actuarial document maps. If a "Rate" or "High Risk Area" is not specified on the actuarial document maps, MAKE NO ENTRY. Verify with the Summary of Coverage and if the "Rate" is found to be incorrect, revise according to the AIP's instructions. Refer to the LAM.
22. Type: Three-digit code number, entered exactly as specified on the actuarial documents for the type grown by the insured. If "No Type Specified," is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If type is not specified on the actuarial documents, MAKE NO ENTRY.
23. Class: Three-digit code number, entered exactly as specified on the actuarial documents for the class grown by the insured. If "No Class Specified" is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If no class is specified on the actuarial documents, MAKE NO ENTRY.
24. Sub-Class: Three-digit code number, entered exactly as specified on the actuarial documents for the sub-class grown by the insured. If "No Sub-Class Specified" is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If no sub-class is specified on the actuarial documents, MAKE NO ENTRY.
25. Intended Use: Three-digit code number, entered exactly as specified on the actuarial documents for the intended use of the crop grown by the insured. If "No Intended Use Specified" is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If no intended use is specified on the actuarial documents, MAKE NO ENTRY.
26. Irr. Practice: Three-digit code number, entered exactly as specified on the actuarial documents for the irrigated practice carried out by the insured. If "No Irrigated Practice Specified" is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If no irrigated practice is specified on the actuarial documents, MAKE NO ENTRY.
27. Cropping Practice: Three-digit code number, entered exactly as specified on the actuarial documents for the cropping practice (or practice) carried out by the insured. If "No Cropping Practice" or "No Practice Specified" is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If a cropping practice is not specified on the actuarial documents, MAKE NO ENTRY.
28. Organic Practice: Three-digit code number, entered exactly as specified on the actuarial documents for the organic practice carried out by the insured. If "No Organic Practice Specified" is shown in the actuarial documents, enter the appropriate three-digit code number from the actuarial documents (e.g., 997). If an organic practice is not specified on the actuarial documents, MAKE NO ENTRY.

PRELIMINARY: MAKE NO ENTRY.
REPLANT: Replant stage abbreviation as shown below.

## STAGE EXPLANATION

"R". . . . . . . . . . . . . . . Acreage replanted and qualifying for replanting payment.
"NR". . . . . . . . . . . . . . Acreage not replanted or not qualifying for a replanting payment. Enter "NR" if the combined potential production appraisal and uninsured cause appraisal totals 90 percent or more of the guarantee for replanting claims.

FINAL: Stage abbreviation as shown below.

## STAGE EXPLANATION

"P". . . . . . . . . . . . . . . . . Acreage abandoned without consent, put to other use without consent, damaged solely by uninsured causes, or for which the insured failed to provide records of production which are acceptable to the AIP.
"H". . . . . . . . . . . . . . . . . Harvested.
"UH".
Unharvested or put to other use with consent.

## PREVENTED PLANTING: Refer to the Prevented Planting Handbook for proper

 codes for any eligible prevented planting acreage.
## GLEANED ACREAGE: Refer to the LAM for information on gleaning.

30. Use of acres: Use the following "Intended Use" abbreviations.

## USE

## EXPLANATION

"Replant". . . . . . . . . . . Acreage replanted and qualifying for replanting payment
"Not Replanted". . . . . . Acreage not replanted or not qualifying for a replanting payment
"To Millet," etc. . . . . . . Use made of the acreage
"WOC". . . . . . . . . . . . . Other use without consent
"SU". . . . . . . . . . . . . . . Solely uninsured
"ABA". . . . . . . . . . . . . . . Abandoned without consent
"H". . . . . . . . . . . . . . . . . Harvested
"UH". ................. Unharvested

Verify any "Intended Use" entry. If the final use of the acreage was not as indicated, strike out the original line and initial it. Enter all data on a new line showing the correct "Final Use." Refer to the LAM regarding "WOC" and short rated acreage.

## PREVENTED PLANTING: Refer to the Prevented Planting Handbook for proper codes for any eligible prevented planting acreage.

## GLEANED ACREAGE: Refer to the LAM for information on gleaning.

## 31. Appraised Potential:

REPLANT: Enter the bushels per acre allowed for replanting to the nearest tenth as determined from the replant calculation documented in the Narrative. (Refer to Section 4, for qualifications and computations.)

PRELIMINARY AND FINAL: Per-acre appraisal in bushels, to tenths, of POTENTIAL production for the acreage appraised as shown on the appraisal worksheet. Refer to Section 5, "Small Grains Appraisals" for additional instructions. If there is no potential on UH acreage, enter "0."

MALTING BARLEY: For any acreage that is appraised BEFORE the grain is mature, the entire appraisal per acre will be counted. Any acreage that is appraised AFTER the grain reaches maturity is subject to adjustment based on standards contained in the Malting Barley Price and Quality Endorsement.

32a. Moisture \%:

## REPLANT: MAKE NO ENTRY.

PRELIMINARY AND FINAL: Moisture percent to nearest tenth only if in excess of the percentage stated in the applicable crop provisions. Moisture adjustment is applied prior to applying any qualifying adjustment for quality. There is no moisture adjustment applicable to flax.

MALTING BARLEY: MAKE NO ENTRY for malting barley insured under the Malting Barley Price and Quality Endorsement.

32b. Factor:

## REPLANT: MAKE NO ENTRY.

PRELIMINARY AND FINAL: Moisture factor - For appraised mature grain production in excess of amount allowed in the applicable crop provisions, obtain factor from TABLES P-S for the applicable crop.
33. Shell \%, Factor, or Value: MAKE NO ENTRY.

## 34. Production Pre-QA:

REPLANT: Enter the result of multiplying column 31 times column 19, rounded to the nearest tenth. If no entry in column 31, MAKE NO ENTRY.

PRELIMINARY AND FINAL: Result of multiplying column 31 times column 19, times column 32b, if applicable, rounded to tenths. If no entry in column 31, MAKE NO ENTRY.

## 35. Quality Factor:

## REPLANT: MAKE NO ENTRY.

PRELIMINARY AND FINAL: For mature unharvested production which due to insurable causes qualifies for quality adjustment as provided in the Crop Provisions, enter the Quality Adjustment Factor (QAF) as a three place decimal calculated in accordance with the Quality Statements in the SP (e.g., 1.000-. 750 discount factor $=.250$ QAF.) If the QAF is zero, enter ". 000 ." Document all calculations in the Narrative of the Production Worksheet, or on a Special Report. Copies of all supporting documentation should be included in the insured's claim file. For additional quality adjustment definitions, instructions, documentation, qualifications, and testing requirements, refer to the LAM and the Official United States Standards for the crop. Also, refer to the quality adjustment instructions in the "Narrative," herein.

If appraised mature production is determined by the AIP to have zero market value, enter ".000." Refer to the SP and the LAM.

## MALTING BARLEY:

a. Enter ". 000 " for mature, unharvested malting barley production, which due to insurable causes, WILL NOT meet the applicable standards in the Malting Barley Price and Quality Endorsement.
b. MAKE NO ENTRY if the mature, unharvested malting barley production meets the applicable standards in the Malting Barley Price and Quality Endorsement.

## 36. Production Post QA:

REPLANT: Transfer the entry in item 34.
PRELIMINARY AND FINAL: Result of multiplying column 34 times column 35, rounded to tenths. If no entry in column 35, transfer entry from column 34.
37. Uninsured Cause:

## REPLANT: MAKE NO ENTRY.

PRELIMINARY AND FINAL: Result of per acre appraisal for uninsured causes (taken from appraisal worksheet or other documentation) multiplied by column 19, rounded to tenths. Refer to the LAM for information on how to determine uninsured cause appraisals. If no uninsured causes, MAKE NO ENTRY.
a. Hail and Fire exclusion NOT in effect.
(1) Enter the result of multiplying column 19 entry by NOT LESS than the insured's production guarantee per acre for yield protection or for revenue protection not less than the amount of production that when multiplied by the harvest price equals the revenue protection guarantee, in bushels, to tenths, for the line, (calculated by multiplying the elected coverage level percentage times the approved APH yield per acre shown on the APH form) for any "P" stage acreage.
(2) On preliminary inspections, advise the insured to keep the harvested production from any acreage damaged SOLELY by uninsured causes separate from other production. Refer to the LAM for information on how to determine uninsured cause appraisals.
(3) For acreage that is damaged PARTLY by uninsured causes, enter result of multiplying the APPRAISED UNINSURED loss of production per acre in bushels, to tenths, by column 19 entry for any such acreage.
b. When there is late-planted acreage, the applicable production guarantee for such acreage is the production guarantee per-acre that has been reduced for late-planted acreage, multiplied by column 19 entry.
c. Refer to the LAM when a Hail and Fire Exclusion is in effect and damage is from hail or fire.
d. Enter the result of adding uninsured cause appraisals to hail and fire exclusion appraisals.
e. For fire losses, if the insured also has other fire insurance (double coverage), refer to the LAM.
38. Total to Count: Result of adding column 36 and column 37.
39. Total:

PRELIMINARY: MAKE NO ENTRY.
REPLANT AND FINAL: Total determined acres (column 19), to tenths.
40. Quality:

REPLANT: MAKE NO ENTRY.

PRELIMINARY AND FINAL: Check the applicable qualifying quality adjustment (QA) condition(s) affecting the unit's production (refer to Table below). Check all qualifying conditions that apply to the unit's appraised and harvested production (refer to the crop provisions and SP).

| Qualifying QA Condition: |
| :--- |
| Test Weight (TW) |
| Kernel Damage (KD) and Total Defects |
| Garlicky (Grade) |
| Aflatoxin |
| Vomitoxin |
| Fumonisin |
| Dark Roast (for Sunflowers only) |
| Sclerotinia (for Sunflowers only) |
| Ergoty |
| COFO (commercially objectionable foreign odor) (includes Musty and Sour Odor) |
| Other |
| None |

a. For all qualifying QA conditions checked, document in the Narrative (or on a Special Report):
(1) Document the level for each qualifying QA condition as indicated by approved test results, and the name and location of each testing facility that verifies the presence of the qualifying QA condition and the date of the test(s); or
(2) Enter "See documentation included in the claim file" (e.g., include copy of the test facility certificate, grade certificate, summary or settlement sheet, etc., that documents the QA condition).
b. If "Other" is checked, in addition to the above documentation requirements, document in the Narrative (or on a Special Report):
(1) A description of the qualifying QA condition;
(2) The name of the controlling authority that considers this qualifying QA condition to be injurious to human and animal health and why.
(3) Refer to subsection 3 D (1) if, due to insured causes, a Federal or State agency has ordered the appraised crop or production to be destroyed.
c. Check "None" if none of the production qualifies for QA.

## 41. Mycotoxins exceed FDA, State, or other health organization maximum limits. Check "Yes:"

REPLANT: MAKE NO ENTRY.

PRELIMINARY AND FINAL: Check "Yes" if any mycotoxins listed in item 40 (including any identified as "Other") exceed the FDA, state, or other health organization maximum limits, otherwise leave blank. Document in the Narrative (or on a Special Report), the disposition of the production that was:
a. Sold, document the name and address of the buyer;
b. Not sold, document the date(s) of the disposition, how the production was used, or how it was destroyed.

Refer to the LAM and the SP for additional information on mycotoxins.
42. Totals: Total of entries in columns 34, 36, 37 and 38. If a column has no entries, MAKE NO ENTRY.

## NARRATIVE:

If more space is needed, document on a Special Report, and enter "See Special Report." Attach the Special Report to the Production Worksheet.
a. If no acreage is released on the unit, enter "No acreage released," adjuster's initials, and date.
b. If notice of damage was given and "No Inspection" is necessary, enter the unit number(s), "No Inspection," date, and adjuster's initials. The insured's signature is not required.
c. Explain any uninsured causes, unusual, or controversial cases.
d. If there is an appraisal in Section I, column 37 for uninsured causes due to a hail/fire exclusion, show the original hail/fire liability per acre and the hail/fire indemnity per acre.
e. Document the actual appraisal date if an appraisal was performed prior to the adjuster's signature date on the appraisal worksheet, and the date of the appraisal is not recorded on the appraisal worksheet.
f. State that there is "No other fire insurance" when fire damages or destroys the insured crop, and it is determined that the insured has no other fire insurance. Also refer to the LAM.
g. Explain any errors found on the Summary of Coverage.
h. Explain any commingled production. Refer to the LAM.
i. Explain any entry for "Production Not to Count" in Section II, column 62 or any production not included in Section II, column 56 or column 49-52 entries (e.g., harvested production from uninsured acreage that can be identified separately from the insured acreage in the unit).
j. Explain a "NO" checked in item 44.
k. Attach a sketch map or aerial photo to identify the total unit:
(1) If consent is or has been given to put part of the unit to another use or to replant;
(2) If acreage has been replanted to a practice uninsurable as an original practice;
(3) If uninsured causes are present; or
(4) For unusual or controversial cases.

Indicate on the aerial photo or sketch map, the disposition of acreage destroyed or put to other use with or without consent.

1. Explain any difference between date of inspection and signature dates. For an ABSENTEE insured, enter the date of the inspection AND the date of mailing the Production Worksheet for signature.
m . When any other adjuster or supervisor accompanied the adjuster on the inspection, enter the code number of the other adjuster or supervisor and date of inspection.
n. Explain the reason for a "No Indemnity Due" claim. "No Indemnity Due" claims are to be distributed in accordance with the AIP's instructions.
o. Explain any delayed notices or delayed claims as instructed in the LAM.
p. Document any authorized estimated acres, as instructed in the LAM, shown in Section I, column 19.
q. Document the method and calculation used to determine acres for the unit. Refer to the LAM.
r. Specify the type of insects or disease when the insured cause of damage or loss is listed as insects or disease. Explain why control measures did not work.
s. Document the bushel per acre appraisal (plus appraisal for uninsured causes of loss, if applicable) for replanted acreage, and the calculations to show that the qualification for a replanting payment have been met. Refer to Section 4.
t. If any acreage to be replanted in the unit does not qualify for a replanting payment, enter the field or subfield ID, "NOT QUAL FOR RP PAYMENT," date of inspection, adjuster's initials, and reason not qualified.
u. For replant claims, indicate if the bushels per acre allowed for replanting have/have not been reduced for share on the Claim Form according to individual AIP guidelines.
v. For production that qualifies for Quality Adjustment (supporting documentation should be included in the insured's claim file):
(1) Explain any ". 000 " quality adjustment (QA) factor entered in Section I, column 35 and Section II, column 65.
(2) Explain any deficiencies, substances, or conditions that are allowed for quality adjustment, as well as any, which were not allowed.
(3) If mycotoxins are present, document the level based on laboratory test results.
(4) Document the DFs or the RIV's and Local Market Price, as applicable, used in establishing the QA factor for mature appraised or harvested production.
(5) Refer to the LAM for documentation requirements when any excess transportation costs or conditioning costs are included in the QA factor.
(6) Document all calculations used in determining QA factors.
(7) Refer to the LAM for additional documentation requirements.
w. Document field ID's date and method of destruction of mycotoxin-infested small grains if it has no market value. For further documentation instructions, refer to the LAM.
x. Document the name and address of the charitable organization when gleaned acreage is applicable. Refer to the LAM for more information on gleaning.
y. Document the type of wheat being appraised, if not indicated on the appraisal worksheet or on a Special Report.
z. Document any other pertinent information, including any data to support any factors used to calculate the production.

## MALTING BARLEY ADDITIONAL REQUIREMENTS:

a. Indicate if more than one additional price is applicable. Indicate the number of bushels of production to count and the associated additional value prices.
b. Explain any uninsured causes, (including uninsurable rejection of malt barley by buyers) or unusual or controversial cases in this item, or on an attachment.
c. Explain any harvested production that is not accepted by a malt barley buyer and state the factors that make the production unacceptable.
d. Identify whether barley is two-rowed or six-rowed (by line, if differing), and indicate the variety name. Verify that the variety is an approved malting variety as specified in the SP.
e. Show all computations of bushels of malting barley before conditioning. The bushels after conditioning are divided by the cost of conditioning to determine the cost per bushel. The conditioning cost is subtracted from the difference in the sale price and the projected price for feed barley. The weighted average cost per bushel for conditioning will not exceed the discount if the production has not been conditioned.
f. Document any market values used for quality adjustment purposes in lieu of the sales price in situations when the malting barley fails any quality standards in the endorsement but is accepted by a buyer and has not been conditioned. In addition, describe the manner in which the market values were determined.

## SECTION II - DETERMINED HARVESTED PRODUCTION

## GENERAL INFORMATION:

(1) Account for ALL HARVESTED PRODUCTION (for ALL ENTITIES sharing in the crop) except production appraised BEFORE harvest and shown in Section I because the quantity cannot be determined later (e.g., high moisture grain going into air-tight storage, released for other uses, etc.).
(2) Columns 49 through 52 are for structure measurements entries (Rectangular, Round, Square, Conical Pile, etc.). If structures are a combination of shapes, break into a series of average measurements, if possible. Enter "Odd Shape" if production is stored in an odd-shaped structure. Document measurements on a Special Report or other worksheet used for this purpose.
(3) If farm-stored production has been weighed prior to storage and acceptable weight tickets are available showing gross weights, enter "Weighed and Stored On Farm" in columns 49 through 52. Refer to the LAM for acceptable weight tickets.
(4) For production commercially stored, sold, etc., make entries in columns 49 through 52 as follows:
(a) Name and address of storage facility or buyer.
(b) "Seed," "Fed," etc.
(5) There will be no "harvested production" entries for replanting payments.
(6) If acceptable sales or weight tickets are not available, refer to the LAM.
(7) If additional lines are necessary, the data may be entered on a continuation sheet. USE SEPARATE LINES FOR:
(a) Separate storage structures.
(b) Varying names and addresses of buyers of sold production.
(c) Varying determinations of production (varying moisture, foreign material (FM), test weight, value, etc.). Average percent of FM or moisture can be entered when the elevator has calculated the average on the summary sheet, and the determined average is acceptable to the adjuster. Separate line entries are not otherwise required. Refer to the LAM for instructions.
(d) Varying shares; e.g., 50 percent and 75 percent shares on same unit.
(e) Conical piles. Do NOT add the cone in the top or bottom of a bin to the height of other grain in the structure. For computing the production in cones and conical piles, refer to the LAM.
(f) Varying types: e.g., a specialty type and a "all others" type barley in the same unit. If there are multiple types planted within the same unit, the AIP may complete a separate Production Worksheet for each type in the unit.
(8) There will generally be no harvested production entries in columns 47 through 66 for preliminary inspections.
(9) If there is harvested production from more than one insured practice (or type) and a separate approved APH yield has been established for each, the harvested production also must be entered on separate lines in columns 47 through 66 by type or practice. If production has been commingled, refer to the LAM.

## Verify or make the following entries:

## Item

## No. Information Required

43. Date Harvest Completed: (Used to determine if there is a delayed notice or a delayed claim. Refer to the LAM.)

PRELIMINARY: MAKE NO ENTRY.

## REPLANT AND FINAL:

a. The earlier of the date the ENTIRE acreage on the unit was (1) harvested, (2) totally destroyed, (3) replanted, (4) put to other use, (5) a combination of harvested, destroyed, or put to other use, or (6) the calendar date for the end of the insurance period.
b. If at the time of final inspection (if prior to the end of the insurance period), there is any unharvested insured acreage remaining on the unit that the insured does not intend to harvest; enter "Incomplete."
c. If at the time of final inspection (if prior to the end of the insurance period), none of the insured acreage on the unit has been harvested, and the insured does not intend to harvest such acreage, enter "No Harvest."
d. If the case involves a Certification Form, enter the date from the Certification Form when the entire unit is put to another use, replanting is complete for the unit, etc. Refer to the LAM.
44. Damage Similar to Other Farms In the Area?:

## PRELIMINARY: MAKE NO ENTRY.

REPLANT AND FINAL: Check "Yes" or "No." Check "Yes" if amount and cause of damage due to insurable causes is similar to the experience of other farms in the area. If "No" is checked, explain in the narrative.
45. Assignment of Indemnity: Check "Yes" only if an assignment of indemnity is in effect for the crop year; otherwise, check "No." Refer to the LAM.
46. Transfer of Right to Indemnity?: Check "Yes" only if a transfer of right to indemnity is in effect for the unit for the crop year; otherwise, check "No." Refer to the LAM.

47a. Share: RECORD ONLY VARYING SHARES on SAME unit to three decimal places.

47b. Field ID: If only one practice and/or type of harvested production is listed in Section I, MAKE NO ENTRY.

If more than one practice and/or type of harvested production is listed in Section I, and a separate approved APH yield exists, indicate for each practice/type the corresponding Field ID (from Section I, column 16).
48. Multi-Crop Code: The applicable two-digit code for first crop and second crop. REFER TO THE LAM FOR INSTRUCTIONS REGARDING ENTRY OF FIRST CROP AND SECOND CROP CODES.
49. Length or Diameter: Internal measurement in feet to tenths of structural space occupied by crop.
a. Length if rectangular or square.
b. Diameter if round or conical pile. Refer to the LAM to convert circumference to diameter if internal diameter measurement is not possible.
50. Width: Internal width measurement in feet to tenths of space occupied by crop in structure if rectangular or square. If round, enter "RND." If conical pile, enter "Cone."
51. Depth: Depth measurement in feet to tenths of space occupied by crop in rectangular, round, or square structure. If conical pile, enter the height of the cone. If there is production in the storage structure from other units or sources, refer to the LAM.
52. Deduction: Cubic feet, to tenths, of crop space displaced by chutes, vents, studs, crossties, etc. Refer to the LAM for computation instructions.
53. Net Cubic Feet: Net cubic feet of crop in the storage structure. Refer to the LAM for computation instructions.
54. Conversion Factor: Enter Conversion Factor as 8 (only if structure measurements are entered).
55. Gross Prod.: Multiply column 53 times column 54, rounded to tenths of a bushel. The results of this calculation represent the amount of gross bushels in the bin.
56. Bu., Ton, Lbs., Cwt.: Circle "Bu." in column heading. Production in bushels, to tenths, before deductions for grain moisture and foreign material for production:
a. Weighed and stored on the farm.
b. Sold and/or stored in commercial storage - Obtain gross production for the UNIT from the summary and/or settlement sheets. (Individual load slips only WILL NOT suffice unless the storage facility or buyer WILL NOT provide summary and/or settlement sheets to the insured, and this is documented in the Narrative.)
c. Stored in odd-shaped structures. The adjuster must compute the amount of gross production. (Refer to the LAM for cubic footage and production computations). A copy of ALL production calculations must be left in the file folder.
d. For mycotoxin-infected grain, enter ALL production even if it has no market value.

## 57. Shell/Sugar Factor: MAKE NO ENTRY.

58a. FM\%: Make entry to nearest tenth. Refer to the LAM for instructions.
Refer to the LAM for FGIS definitions of "FM" and "Dockage."
58b. Factor: Enter the three-place factor determined by subtracting the percent of FM from 1.000, or subtract the entry in 58a from 100 and divide by 100. EXAMPLE: For $4 \%$, enter ". 960 ."

59a. Moisture \%: Enter moisture percent to tenths. Moisture adjustment is applied prior to applying any qualifying adjustment for quality. MAKE NO ENTRY for malting barley insured under the Malting Barley Price and Quality Endorsement and flax.

59b. Factor: If grain moisture is more than the allowable limit, enter the four-place moisture factor from the Moisture Adjustment Factor applicable table (TABLES P-S).

60a. Test Wt.: Enter test weight (ONLY when storage structure measurements are entered) in whole pounds (or pounds to tenths IF so instructed by the AIP). Refer to the LAM for instructions on determining test weight.

60b. Factor: Combination Test Weight Factor - Enter the Factor from the appropriate table (TABLES T-V) for the square footage of floor space in the storage structure. Refer to the LAM for instructions on calculating floor space of a structure.

If the AIP instructs test weights to be entered to the nearest tenth, use the nearest $1 / 2$ pound test weight value on the combination test weight factor chart.

For test weights not shown on the chart, multiply the actual test weight by the last available combination test weight pack factor for the appropriate bin size and divide the result by the last available test weight shown on the chart.

## EXAMPLE FOR TEST WEIGHT NOT SHOWN ON THE CHART:

Wheat with a test weight of 65.0 pounds stored in a less than 255 Sq . Ft. bin $65.0($ actual test weight $) \times 1.091$ (last available factor) $\div 64.0($ last available test weight $)=$ 1.108

For a crop that has no combination test weight factor, enter the result of dividing the actual test weight by the standard bushel weight, to three decimal places. Refer to the LAM for the Standard Bushel Weights.

The standard test weight for buckwheat is 48 pounds for large seeded varieties and 44 pounds for small seeded varieties.
61. Adjusted Production: Result of multiplying columns 55 or 56 times 58b times 59b times 60b. Round to nearest tenth.
62. Prod. Not to Count: Net production NOT to count, in bushels to tenths, WHEN ACCEPTABLE RECORDS IDENTIFYING SUCH PRODUCTION ARE AVAILABLE, from harvested acreage which has been assessed an appraisal of not less than the guarantee per acre, or from other sources (e.g., other units or uninsured acreage) in the same storage structure (if the storage entries include such production).

THIS ENTRY MUST NEVER EXCEED PRODUCTION SHOWN ON THE SAME LINE. EXPLAIN THE TOTAL BIN CONTENTS (bin grain depth, etc.) AND ANY "PRODUCTION NOT TO COUNT" IN THE NARRATIVE.

Make no entry if only the depth for production to count has been entered in column " 51 ," and the depth for production not to count has been entered in the "Narrative" section. Refer to example in the LAM.
63. Production pre-QA: Result, of subtracting column 62 from column 61.

64a. Value: When applicable, enter the Reduction in Value (RIV). RIV must be limited to amounts that are usual, customary, and reasonable. (Refer to the SP and the LAM for further instructions.)

MAKE NO ENTRY when the discount factor is obtained from the charts in the SP.

## Malting Barley:

Harvested production to count may be reduced or the values used to settle the claim may be adjusted as outlined in the endorsement. For production that is accepted by a buyer, if the price received is less than the total of the additional value price and the feed barley projected price announced by FCIC, the claim is adjusted according to the endorsement.
a. If the malting barley initially fails any quality standards in the endorsement but is accepted by a buyer and has not been conditioned, enter the value per bushel by subtracting the projected price for feed barley from the sale price per bushel of the damaged production. If the sale price of the damaged production is less than the market value of the damaged production, the sale price will be the market value.
b. If the malting barley initially fails any quality standards in the endorsement but is accepted by a buyer and has been conditioned, enter the result of subtracting the conditioning cost per bushel from the difference of subtracting the projected price for feed barley from the sale price per bushel of the damaged production.

The conditioning costs will be shown in the narrative. The cost incurred for any conditioning required to improve the quality of production so that it is marketable as malting barley may be allowed, provided the failure of such production to meet the standards is due to insurable causes.

EXAMPLE: It cost $\$ 90.00$ to condition 1,000 bushels of production. The insured sold 900 bushels of conditioned malting barley. The conditioning cost per bushel is ( $\$ 90.00$ $\div 1,000$ bushels) $\$ 0.09$ per bushel. The conditioning cost per bushel is subtracted from the difference of subtracting the projected price for feed barley from the sale price per bushel of the damaged production. The price per bushel of the barley without conditioning was $\$ 2.10$ and the sold price after conditioning is $\$ 2.20$. The conditioning cost cannot exceed $\$ .10$ per bushel. Sold price of conditioned production (\$2.20) - $\$ 1.92$ $($ projected $)=\$ 0.28 \quad \$ 0.28-\$ 0.09($ conditioning cost $)=\$ 0.19($ entered in column " 64 a ").

Refer to the Malting Barley Price and Quality Endorsement for criteria in determining the additional price elections for Option A and Option B.

64b. Mkt Price: If an entry is in column 64a, enter the Local Market Price for U.S. Grade No. 2 of the crop (refer to the crop provisions). Refer to the LAM for further instructions.

For buckwheat, if an entry is in column 64a enter the price for buckwheat in accordance with the SP.

MAKE NO ENTRY when the discount factor is obtained from the charts in the SP.

## Malting Barley:

a. If the malting barley has not been conditioned, enter the applicable additional value price or weighted average additional value price.
b. If the malting barley initially fails any quality standards in the endorsement but is accepted by a buyer and has been conditioned, enter the applicable additional value price or weighted average additional value price.

Refer to the Malting Barley Price and Quality Endorsement for criteria in determining the additional value prices for Option A and Option B.
65. Quality Factor: For production eligible for quality adjustment, enter the 3-digit quality adjustment factor determined by subtracting the result of column 64 a divided by column 64 b from 1.000, or 1.000 minus the discount factor(s) obtained from the SP.

MALTING BARLEY: For barley that initially fails any quality standard contained in the endorsement, the production may be reduced as follows:
a. For production that initially fails any quality standards contained in the endorsement but is accepted by a buyer for less than the contract price, enter the 2-digit factor determined by dividing column 64a by column 64b.

The quality standards for Option A are stated in the endorsement and for Option B, the minimum acceptance standards contained in the malting barley contract or the quality standards stated in the endorsement.
b. For production that initially fails any quality standard contained in the endorsement, sold as malting barley, but is conditioned before the sale, enter the 2-digit factor determined by dividing column 64 a by column 64 b.
66. Production to Count: Enter result from multiplying column 63 times column 65, in bushels to tenths.
67. Total of column 63. If no entry in column 63, MAKE NO ENTRY.
68. Section II Total:

PRELIMINARY AND REPLANT: MAKE NO ENTRY.

FINAL: Total from column 66.
69. Section I Total:

PRELIMINARY AND REPLANT: MAKE NO ENTRY.

FINAL: Enter figure from Section I, column 38 total.
70. Unit Total:

PRELIMINARY AND REPLANT: MAKE NO ENTRY.
FINAL: Total of items 68 and 69, to tenths.
71. Allocated Prod: Refer to the LAM for instructions for determining allocated production. Enter the total production, rounded to tenths, allocated to this unit that is included in Sections I or II of the Production Worksheet. Document how allocated production was determined and record supporting calculations in the Narrative or on a Special Report.
72. Total APH Prod: Result, rounded to tenths, of subtracting the total of column 37 (item 42 "Totals") and item 71 (Allocated Prod.) from item 70 (Unit Total). If no entries in item 37 and item 71, transfer the entry in item 70. MAKE NO ENTRY when separate APH yields are maintained by type, practice, etc., within the unit.

The following required entries are not illustrated on the Production Worksheet example below.
73. Insured's Signature and Date: Insured's (or insured's authorized representative's) signature and date. BEFORE obtaining insured's signature, REVIEW ALL ENTRIES on the Production Worksheet WITH THE INSURED (or insured's authorized representative's), particularly explaining codes, etc., that may not be readily understood.

Final indemnity inspections and final replanting payment inspections should be signed on bottom line.
74. Adjuster's Signature, Code Number, and Date: Signature of adjuster, code number, and date signed after the insured (or insured's authorized representative) has signed. For an absentee insured, enter adjuster's code number ONLY. The signature and date will be entered AFTER the absentee has signed and returned the Production Worksheet.

Final indemnity inspections and final replanting payment inspections should be signed on bottom line.
75. Page:

PRELIMINARY: Page numbers - " 1, " " 2 ," etc., at the time of inspection.
REPLANT AND FINAL: Page numbers - (Example: Page 1 of 1, Page 1 of 2, Page 2 of 2, etc.)

PRODUCTION WORKSHEET

| 1. Crop/Code \# | $\begin{aligned} & \text { 2. Unit \# } \\ & 0001-0001 \mathrm{BU} \\ & \hline \end{aligned}$ | 3. Location Description | 7. Company | ANY COMPANY |
| :---: | :---: | :---: | :---: | :---: |
| Wheat |  | SW1-96N-3W | Agency | ANY AGENCY |
| 0011 |  |  |  |  |
| 4. Date(s) of Damage | JUN 10 |  |  |  |
| 5. Cause(s) of Damage | HAIL |  |  |  |
| 6. Insured Cause \% | 100 |  |  |  |
| 12. Additional Units | 00200 |  |  |  |
| 13. Est. Prod. Per Acre | 40 |  |  |  |

## SECTION I - DETERMINED ACREAGE APPRAISED, PRODUCTION AND ADJUSTMENTS

## A. ACTUARIAL

| A. ACTUARIAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  | B. POTENTIAL YIELD |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 16. | 17. | 18. | 19. | 20. | 21. | 22. | 23. | 24. | 25. | 26. | 27. | 28. | 29. | 30. | 31. | $\begin{aligned} & 32 \mathrm{a} \text {. } \\ & 32 \mathrm{~b} . \end{aligned}$ | 33. | 34. | 35. | 36. | 37. | 38. |
| $\begin{array}{\|c\|} \hline \text { Field } \\ \text { ID } \end{array}$ | $\begin{aligned} & \text { Multi- } \\ & \text { Crop } \\ & \text { Code } \end{aligned}$ | Reported Acres | $\begin{array}{\|c\|} \hline \text { Determined } \\ \text { Acres } \end{array}$ | Interest or Share | Risk | Type | Class | Sub- <br> Class | Intended Use | Irr Practice | Cropping Practice | Organic <br> Practice | Stage | Use of Acreage | Appraised Potential | $\begin{array}{\|c\|} \hline \text { Moisture } \% \\ \hline-- \text { Factor } \end{array}$ | Shell \%, Factor, or Value | Production Pre QA | Quality <br> Factor | Production Post QA | Uninsured Causes | Total to Count |
| A | NS |  | 10.0 | . 667 |  | 012 |  |  |  |  | 002 |  | UH | Plowed | 4.2 |  |  | 42.0 |  | 42.0 |  | 42.0 |
| B | NS |  | 18.0 | . 500 |  | 012 |  |  |  |  | 005 |  | P | WOC |  |  |  |  |  |  | 360.0 | 360.0 |
| $c$ | NS |  | 70.2 | . 667 |  | 012 |  |  |  |  | 002 |  | H | H |  |  |  |  |  |  |  |  |
| D | NS |  | 19.0 | . 500 |  | 012 |  |  |  |  | 005 |  | H | H |  |  |  |  |  |  |  |  |
|  |  | 39. TOTAL | 117.2 | 40. Quality: TW $\triangle$ KD $\square$ Aflatoxin $\square$ Vomitoxin $\square$ Fumonisin $\square$ Garlicky $\square$ Dark Roast $\square$  <br> Sclerotinia $\square$ Ergoty $\square$ CoFo $\square$ Other $\square$ None $\square$  42. TOTALS  <br> 41. Mycotoxins exceed FDA, State or other health organization maximum limits. Yes $\square$       |  |  |  |  |  |  |  |  |  |  |  |  |  | 42.0 |  | 42.0 | 360.0 | 402.0 |


 had test weight of 52 lbs . U.S. No. 5 Grade $=(\mathrm{DF}=.243) \quad 1.000-.243=.757$ QAF.

## SECTION II - DETERMINED HARVESTED PRODUCTION



## PRODUCTION WORKSHEET



 A wheel measured. See attached Special Report for measurements and calculations.

## SECTION I - DETERMINED ACREAGE APPRAISED, PRODUCTION AND ADJUSTMENTS

| A. ACTUARIAL |  |  |  |  |  |  |  |  |  |  |  |  |  |  | B. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 16. | 17. | 18. | 19. | 20. | 21. | 22. | 23. | 24. | 25. | 26. | 27. | 28. | 29. | 30. |  |
| $\begin{array}{\|c} \text { Field } \\ \text { ID } \end{array}$ | MultiCrop Code | Reported Acres | Determined Acres | Interest or Share | Risk | Type | Class | Sub- <br> Class | Intended <br> Use | Irr <br> Practice | Cropping <br> Practice | Organic <br> Practice | Stage | Use of Acreage | Ap |
| A |  |  | 30.0 | . 500 |  | 012 |  |  |  |  | 002 |  | R | REPLANTED |  |
|  |  |  | 40.0 | . 500 |  | 012 |  |  |  |  | 002 |  | NR | NOT REPLANTED |  |
|  |  | 39. TOTAL | 70.0 | 40. Quality: TW $\square \quad$ KD $\square$ Aflatoxin $\square$ Vomitoxin $\square$ Fumonisin $\square$ Garlicky $\square$ Dark Roast $\square$Sclerotinia $\square$ Ergoty $\square$ CoFo $\square$ Other $\square$ None $\square$41. Do any mycotoxins exceed FDA, State or other health organization maximum limits? Yes $\square$ No $\square$ |  |  |  |  |  |  |  |  |  |  |  |


| B. POTENTIAL YIELD |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31. | 32a. | 33. | 34. | 35. | 36. | 37. | 38. |
|  | 32b. |  |  |  |  |  |  |
| Appraised Potential | $\left.\begin{array}{c}\text { Moisture } \\ \% \\ - \\ \hline \text { Factor }\end{array}\right]$ | Shell \%, Factor, or Value | Production Pre QA | Quality Factor | Production Post QA | Uninsured Causes | Total to Count |
| 2.0 |  |  | 60.0 |  | 60.0 |  | 60.0 |
|  | $-$ |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| $\square$ $\square$ |  | TOTALS | 60.0 |  | 60.0 |  | 60.0 |

[^0]
## 10. REFERENCE MATERIAL

## TABLE A - MINIMUM REPRESENTATIVE SAMPLE REQUIREMENTS

| ACRES IN FIELD OR SUBFIELD | MINIMUM NO. OF SAMPLES* |
| :---: | :---: |
| $0.1-10.0$ | 3 |
| *Add one additional sample for each additional 40.0 acres (or fraction thereof) in the field or <br> subfield. |  |

TABLE B - DRILL SPACING AND SQUARE FOOT FACTOR FOR SMALL GRAINS

| Drill Spacing (In.) | Square Foot Factor | Drill Spacing (In.) | Square Foot Factor |
| :---: | :---: | :---: | :---: |
|  | 9.0 | 12.0 | 10.0 |
| 6.0 | 5.0 | 12.5 | 10.4 |
| 6.5 | 5.4 | 13.0 | 10.8 |
| 7.0 | 5.8 | 13.5 | 11.3 |
| 7.5 | 6.3 | 14.0 | 11.7 |
| 8.0 | 6.7 | 14.5 | 12.1 |
| 8.5 | 7.1 | 15.0 | 12.5 |
| 9.0 | 7.5 | 15.5 | 12.9 |
| 9.5 | 7.9 | 16.0 | 13.3 |
| 10.0 | 8.3 | 16.5 | 13.8 |
| 10.5 | 8.8 | 17.0 | 14.2 |
| 11.0 | 9.2 | 17.5 | 14.6 |
| 11.5 | 9.6 | 18.0 | 15.0 |

Always measure a ten foot row length for small grains.
For drill spacing measurements other than those identified in TABLE B, use the following formula: (Drill Spacing $\div 12$ ") x 10 ft . of row $=$ Square Foot Factor

EXAMPLE: If the drill spacing is determined to be $5 \frac{1}{2}$-inches, divide $5 \frac{1}{2}$ by 12 -inches $=.4583$ factor. Multiply this factor times 10 to determine the square foot factor. In this case $.4583 \times 10.0$ feet $=4.58$ (to the nearest tenth $)=4.6$ Square Foot Factor for a $51 / 2$-inch drill spacing using a 10 -foot length of row.

TABLE C - DRILL SPACING AND FACTORS FOR BUCKWHEAT

| Drill Spacing (In.) |  | Factor | Drill Spacing (In.) |
| :---: | :---: | :---: | :---: |
| $3 \times 3$ (Broadcast) | 4.8 | 10.0 | Factor |
| 4.0 | 13.1 | 10.5 | 5.2 |
| 4.5 | 11.6 | 11.0 | 5.0 |
| 5.0 | 10.5 | 11.5 | 4.8 |
| 5.5 | 9.5 | 12.0 | 4.5 |
| 6.0 | 8.7 | 12.5 | 4.4 |
| 6.5 | 8.0 | 13.0 | 4.2 |
| 7.0 | 7.5 | 13.5 | 4.0 |
| 7.5 | 7.0 | 14.0 | 3.9 |
| 8.0 | 6.5 | 14.5 | 3.7 |
| 8.5 | 6.1 | 15.0 | 3.6 |
| 9.0 | 5.8 | 15.5 | 3.5 |
| 9.5 | 5.5 | 16.0 | 3.4 |

For drill spacing measurements other than those identified in TABLE C, use the following formula: $43560 \div$ (Drill Spacing $\div 12 ") \div 10,000=$ Factor.

EXAMPLE: If the drill spacing is determined to be $31 / 2$-inches, divide $31 / 2$ by 12 inches $=.2917$ factor. Divide 43,560 by .2917 and divide by 10,000 for a factor of 14.9 .

## TABLE D - GROWTH STAGES OF BARLEY

| STAGE | DEFINITION | TIME INTERVAL TO NEXT STAGE |
| :---: | :---: | :---: |
| Seedling | The early growth stage of a plant. | 10 days |
| Tillering | When the seedling begins to send erect shoots from the buds in the crown. | 15 days |
| Jointing | When the tiller elongates and establishes individual nodes. | 15 days |
| Boot | The head has begun to expand the leaf sheath and less than 50 percent of the heads have emerged from the boot. Barley will bloom during the boot stage. | 7 days |
| Heading | At least 50 percent of the crop has headed. |  |
| Milk | When the kernels in the center portion of the head are crushed and a milky liquid substance emerges. | 7 days |
| Soft Dough | When the kernels in the center portion of the head are crushed and a white, semi-solid substance emerges. | 7 days |
| Hard Dough | When kernels in the center portion of the head show evidence of a solid granular substance when crushed but with too much moisture content to harvest. | 7 days |
| Combine Ripe | Barley has reached a hard flinty form and will crack rather than be mashed. |  |



TABLE E - GROWTH STAGES OF FLAX

| STAGE | DEFINITION | TIME <br> INTERVAL TO <br> NEXT STAGE |
| :---: | :--- | :---: |
| Seedling | From emergence to sixth leaf. | 14 days |
| Leafing | From sixth leaf to first blossom. | 30 days |
| Blossom | From first blossom to green boll. | 12 days |
| Green Boll | Green bolls forming through development of white <br> seeds. | 18 days |
| Boll Ripening | When the bolls begin to turn color until kernels <br> reach maturity. | 22 days |
| Mature | Seed is mature. |  |

Refer to EXHIBIT 2 for picture illustration of flax boll and flower.


TABLE F - GROWTH STAGES OF OATS

| STAGE | DEFINITION | TIME <br> INTERVAL <br> TO NEXT <br> STAGE |
| :---: | :--- | :---: |
| Seedling | The early growth stage of a plant. | 5 days |
| Tillering | When the Seedling begins to send erect shoots from the buds <br> in the crown. | 32 days |
| Jointing | When the tiller elongates and establishes individual nodes. | 11 days |
| Boot | The head has begun to expand the leaf sheath and less than <br> 50 percent of the heads have emerged from the boot. | 8 days |
| Heading | At least 50 percent of the crop has headed. | 4 days |
| Bloom | At least 50 percent of all emerged heads are showing sign of <br> bloom (anthers visible outside of the glumes). | 8 days |
| Milk | When the kernels in the center portion of the head are <br> crushed and a milky liquid substance emerges. | 6 days |
| Dough | When the kernels in the center portion of the head show <br> evidence of a granular substance when crushed but with too <br> much moisture to harvest |  |
| Combine |  |  |
| Ripe |  |  | | Oats have reached a hard flinty form and will crack rather |
| :--- |
| than be mashed. |$\quad 1$



TABLE G - GROWTH STAGES OF RYE

| STAGE | DEFINITION | TIME INTERVAL TO NEXT STAGE |
| :---: | :---: | :---: |
| Seedling | The early growth stage of a plant. | 10 days |
| Tillering | When the seedling begins to send erect shoots from the buds in the crown. | 15 days |
| Jointing | When the tiller elongates and establishes individual nodes. | 15 days |
| Boot | The head has begun to expand the leaf sheath and less than 50 percent of the heads have emerged from the boot. | 2 days |
| Heading | At least 50 percent of the crop has headed. |  |
| Milk | When the kernels in the center portion of the head are crushed and a milky liquid substance emerges. | 10 days |
| Soft Dough | When the kernels in the center portion of the head are crushed and a white, semi-solid substance emerges. | 11 days |
| Hard Dough | When kernels in the center portion of the head show evidence of a solid granular substance when crushed but with too much moisture content to harvest. | 10 days |
| Combine Ripe | Rye has reached a hard flinty form and will crack rather than be mashed. |  |



## TABLE H - GROWTH STAGES OF WHEAT

| STAGE | DEFINITION | TIME <br> INTERVAL <br> TO NEXT <br> STAGE |
| :---: | :--- | :---: |
| Seedling | The early growth stage of a plant. | 16 days |
| Tillering | When the seedling begins to send erect shoots from the buds <br> in the crown. | 17 days |
| Jointing | When the tiller elongates and establishes individual nodes. | 12 days |
| Boot | The head has begun to expand the leaf sheath and less than 50 <br> percent of the heads have emerged from the boot. | 2 days |
| Heading | At least 50 percent of the crop has headed. | 9 days |
| Bloom | At least 50 percent of all emerged heads are showing sign of <br> bloom (anthers visible outside of the glumes). | 10 days |
| Milk | When the kernels in the center portion of the head are crushed <br> and a milky liquid substance emerges. | 11 days |
| Soft Dough | When the kernels in the center portion of the head are crushed <br> and a white, semi-solid substance emerges. | 10 days |
| Hard Dough | When kernels in the center portion of the head show evidence <br> of a solid granular substance when crushed but with too much <br> moisture content to harvest. | Wheat has reached a hard flinty form and will crack rather <br> than be mashed. |
| Combine |  |  |
| Ripe | What\|||||| |  |



## TABLE I - GROWTH STAGES OF BUCKWHEAT

| STAGE OF GROWTH | DESCRIPTION | INTERVAL TO NEXT STAGE |
| :---: | :---: | :---: |
| Cotyledonary nodes are established 10 days after planting. 7 |  |  |
| N-1 | From emergence to flowering. | 7 |
| N-2 |  | 7 |
| N-3 |  | 7 |
| N-4 | Flowering begins and lasts until harvest or plant death. | 6 |
| N-5 |  | 6 |
| N-6 |  | 6 |
| N-7 |  | 6 |
| N-8 | Seed set occurs. | 6 |
| N-9 - N-12 and up | Seed development. | 6 |
| Harvest Ready | Immediately upon frost (late or fall frost) or when 70 percent of the seeds have turned black or brown. |  |

Generally, Buckwheat will emerge and establish cotyledonary nodes within 10 days of planting. The first four nodes ( $\mathrm{N}-1$ thru N-4) take approximately 7 days each to be established. Thereafter, nodes attach approximately every 6 days. For example: The N-6 stage will occur about 40 days after emergence (Nodes N-1 to N-4 at 7 days each or 28 days and 6 days each for N-5 and N-6 or 12 days).

## BUCKWHEAT TYPES AND STAGES OF GROWTH

(1) These instructions provide plant-type and growth stage information for use when appraising potential buckwheat production during various stages of growth. A picture of buckwheat is shown in EXHIBIT 2. Examples of stage development are shown in EXHIBIT 4.
(2) Buckwheat types. Buckwheat varieties fall into two general types, large-seeded and smallseeded, with several varieties for each type. However, due to the demands of the export market the predominate type planted is large-seeded.

## TABLE I - GROWTH STAGES OF BUCKWHEAT (Continued)

(3) Buckwheat is an indeterminate plant, that will produce flowers and seeds throughout the growing season until harvested or killed by frost. Two types of nodes can be found on a buckwheat plant, primary nodes (located on the main stem) and ancillary nodes (located on branches). Leaves, flowers, and seeds will set from any of these nodes; however, varieties planted today at recommended plant densities generally produce most of the harvestable seed from the primary nodes located near the top of the plant. Reduced stands or plants incurring node loss from being cutoff or broken over will tend to compensate by producing seed from the ancillary nodes. Flowering normally begins at the $4^{\text {th }}$ or $5^{\text {th }}$ node and progresses upward or outward on an ancillary branch. Once flowering takes place, seed will set upon successful pollination within 10 days and be fully mature within an additional 14 days. Successful pollination will occur in approximately $15 \%$ of the flowers set and depending upon weather conditions only a limited percentage of those seeds that have actually set will become harvestable seed. Once the seed is brown or black it is considered mature. When $70 \%$ of the seeds are brown or black the crop is considered harvest ready.
(4) Growth Stage Determination:
(a) The growth stage determination is based on at least 50 percent of the plants in a field or subfield having reached the stage described. The main stem or the primary nodes are used for stage determination ignoring the nodes located on any ancillary branches. Stage of growth is determined by the examination of 10 consecutive plants with a complete main stem. The number of nodes determined divided by 10 will provide the growth stage to be used and designated as N-\#. Fields should be split into sub-fields to reflect distinctly different stages from different sample areas throughout the field.
(b) For hail damage the stage of growth at the time of damage can be determined by inspecting the plant to determine the plant material exposed at the time of the storm. In the absence of hail, and as verification, the stage can be determined by counting back from the date of adjustment by the time intervals between stages. In the event of a storm, which results in all plants having nodes removed, stage can be determined by counting forward from the plant date using the time interval chart.
(c) Determination of all stages except the harvest ready stage requires node identification. In turn, the determination of stage dictates the loss adjustment procedures used for adjusting Buckwheat. Stages are determined by counting the nodes above the cotyledonary node.
(d) A node is the part of the stem from which leaves and ancillary branches develop. In the absence of leaves or branches, the node is marked by a small knob, which remains circumventing the stem.

## TABLE I - GROWTH STAGES OF BUCKWHEAT (Continued)

(e) The cotyledonary node has 2 cotyledons (seed leaves) located directly opposite each other at the bottom of the main stem. The cotyledons are pulled above the soil surface as seedling develops.
(f) As additional nodes develop above the cotyledon along the main stem, a heart shaped leaf is produced from each node set. Leaves will alternate from one side of the plant to the other as nodes are established along the main stem. From these same nodes, ancillary branches may develop, which also produce nodes and leaves.
(g) To stage the plant, count all nodes above the cotyledonary node which have a fully unfurled leaf. In some cases, two nodes will appear as one node with leaves extending from both sides of the plant. In this situation two nodes should be counted. Examples of stage development are shown in EXHIBIT 4.

TABLE J - TILLER FACTORS (BARLEY, OATS, RYE, AND WHEAT)

| TYPE OF SMALL GRAIN | TILLER FACTOR |
| :---: | :---: |
| Spring Wheat/Durum | 4 |
| Spring Wheat/Durum (North Dakota Only) | 3 |
| Hard Red Winter Wheat (North Dakota Only) | 3 |
| Eastern Soft Winter Wheat (Red or White) | 5 |
| Club Winter Wheat | 6 |
| Pacific Northwest Soft White Winter Wheat for Idaho, <br> Oregon, and Washington | 6 |
| Pacific Northwest Soft White Spring Wheat Irrigated for <br> Idaho, Oregon, and Washington | 6 |
| Pacific Northwest Soft White Spring Wheat Non-Irrigated <br> for Idaho, Oregon, and Washington | 4 |
| Hard Winter Wheat (Red or White) | 5 |
| Spring Barley (North Dakota Only) | 5 |
| All Barley including Eastern Winter Barley | 1.5 |
| Oats | 2 |
| Rye | 6 |

TABLE K - TILLER TO BUSHEL YIELD FACTOR (BARLEY, OATS, RYE, AND WHEAT)

| TYPE OF SMALL GRAIN | YIELD FACTOR |
| :---: | :---: |
| Spring Wheat/Durum | .73 |
| Eastern Soft Winter Wheat (Red or White) <br> For AR, IL, MO, KY, TN, IN, NJ, MI, OH, PA, <br> MD, AND NY | .50 |
| Soft Winter Wheat (Red or White) for States not <br> listed above | .73 |
| Club Winter Wheat | .73 |
| Pacific Northwest Soft White Winter Wheat for <br> Idaho, Oregon, and Washington | .73 |
| Hard Winter Wheat (Red or White) | .73 |
| Eastern Winter Barley for AR, IL, MO, KY, TN, <br> IN, NJ, MI, OH, PA, MD, AND NY | .38 |
| Other Barley | 1.00 |
| Oats | 3.00 |
| Rye | .73 |

TABLE L- KERNELS TO BUSHEL YIELD FACTORS

| TYPE OF SMALL GRAIN | KERNELS PER SQUARE FOOT |
| :---: | :---: |
| All Spring and Winter Wheat | 22 |
| All Shriveled Wheat | 25 |
| All Plump Barley | 16 |
| All Thin Barley |  |
| All Oats That Are Not Shriveled | 18 |
| All Ryriveled Oats |  | 12214.22.

## TABLE M- NUMBER OF KERNELS PER HEAD

| TYPE OF SMALL GRAIN | PRACTICE | KERNELS |
| :---: | :---: | :---: |
| Pacific Northwest Soft White Winter Wheat for Idaho, Oregon, and Washington | I | 45 |
| Pacific Northwest Soft White Winter Wheat for Idaho, Oregon, and Washington | NI | 35 |
| Pacific Northwest Soft White Spring Wheat for Idaho, Oregon, and Washington | I | 40 |
| Pacific Northwest Soft White Spring Wheat for Idaho, Oregon, and Washington | NI | 30 |
| California Winter and Spring Wheat | I | 49 |
| California Winter and Spring Wheat | NI | 44 |
| California Winter Durum Wheat |  | 50 |
| Club Wheat | I | 50 |
| Club Wheat | NI | 40 |
| All Other Wheat |  | 20 |
| Eastern Winter Barley |  | 30 |
| $\begin{gathered} \text { All Other Barley } \\ \text { (two-rowed varieties) } \end{gathered}$ |  | 24 |
| All Other Barley (six-rowed varieties) |  | 42 |
| Oats |  | 35 |
| Rye |  | 20 |

## TABLE N - BUCKWHEAT STAND REDUCTION CHART

|  | PERCENTAGE OF PLANTS DESTROYED |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { STAGE } \\ \text { OF } \\ \text { GROWTH } \end{gathered}$ | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 |
| N-1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.5 | 14.5 | 26.5 | 40.0 | 55.0 | 71.5 | 100.0 |
| N-2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 3.0 | 8.0 | 18.5 | 30.0 | 43.5 | 58.0 | 74.0 | 100.0 |
| N-3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 6.0 | 12.5 | 23.0 | 34.0 | 46.5 | 60.5 | 76.0 | 100.0 |
| N-4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 9.0 | 17.0 | 27.0 | 37.5 | 50.0 | 63.5 | 78.5 | 100.0 |
| N-5 | 0.0 | 1.0 | 2.0 | 3.0 | 3.5 | 4.5 | 6.0 | 7.0 | 8.0 | 9.5 | 10.5 | 13.5 | 20.0 | 27.5 | 36.5 | 46.0 | 57.0 | 69.0 | 82.0 | 100.0 |
| N-6 | 0.5 | 2.0 | 3.5 | 5.5 | 7.5 | 9.5 | 11.5 | 14.0 | 16.0 | 18.5 | 21.5 | 25.0 | 31.5 | 38.0 | 46.0 | 54.5 | 64.0 | 74.0 | 85.0 | 100.0 |
| N-7 | 0.5 | 3.0 | 5.5 | 8.5 | 11.0 | 14.0 | 17.5 | 20.5 | 24.0 | 28.0 | 32.0 | 36.0 | 42.5 | 48.5 | 55.5 | 63.0 | 71.0 | 79.5 | 88.5 | 100.0 |
| N-8 | 0.5 | 4.0 | 7.0 | 11.0 | 14.5 | 18.5 | 23.0 | 27.5 | 32.0 | 37.0 | 42.5 | 47.5 | 53.5 | 59.0 | 65.0 | 71.5 | 78.0 | 84.5 | 91.5 | 100.0 |
|  | PERCENT OF LOSS FROM STAND REDUCTION |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## TABLE O-BUCKWHEAT PLANT DAMAGE CHART

|  | PERCENTAGE OF NODES CUTOFF/BREAKOVER |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { STAGE } \\ \text { OF } \\ \text { GROWTH } \end{gathered}$ | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 |
| N-4 | 0.0 | 0.0 | 0.0 | 1.0 | 2.0 | 3.0 | 5.0 | 7.0 | 9.0 | 11.0 | 13.5 | 16.5 | 20.0 | 24.5 | 29.5 | 35.0 | 41.0 | 47.5 | 55.0 | 62.5 |
| N-5 | 0.0 | 0.0 | 0.5 | 2.0 | 3.5 | 5.0 | 7.0 | 9.0 | 11.5 | 14.0 | 17.0 | 20.5 | 24.5 | 29.0 | 34.0 | 40.0 | 46.0 | 52.5 | 60.0 | 67.0 |
| N-6 | 0.0 | 0.0 | 1.0 | 2.5 | 4.5 | 6.5 | 9.0 | 11.0 | 14.0 | 17.0 | 20.5 | 24.5 | 28.5 | 33.5 | 39.0 | 44.5 | 51.0 | 57.5 | 64.5 | 72.0 |
| N-7 | 0.0 | 0.0 | 1.5 | 3.5 | 6.0 | 8.5 | 10.5 | 13.0 | 16.0 | 19.5 | 23.5 | 28.0 | 33.0 | 38.0 | 43.5 | 49.5 | 55.5 | 62.0 | 69.5 | 76.5 |
| N-8 | 0.0 | 0.0 | 2.0 | 4.0 | 7.0 | 10.0 | 12.5 | 15.0 | 18.5 | 22.5 | 27.0 | 32.0 | 37.0 | 42.5 | 48.0 | 54.0 | 60.5 | 67.0 | 74.0 | 81.0 |
| N-9 | 2.0 | 3.5 | 6.0 | 8.5 | 11.5 | 15.0 | 18.5 | 22.0 | 26.0 | 30.0 | 35.0 | 40.0 | 45.5 | 51.0 | 57.0 | 63.0 | 69.5 | 76.0 | 83.0 | 90.5 |
| N-10 | 3.5 | 6.5 | 9.5 | 12.5 | 16.0 | 20.0 | 24.0 | 28.5 | 33.0 | 37.5 | 42.5 | 48.0 | 53.5 | 59.5 | 65.5 | 71.5 | 78.0 | 85.0 | 92.0 | 99.5 |
| N-11 | 5.0 | 7.5 | 10.5 | 14.5 | 20.0 | 25.5 | 31.0 | 36.5 | 42.0 | 47.5 | 53.0 | 58.5 | 64.0 | 69.5 | 75.0 | 80.5 | 85.5 | 91.5 | 96.0 | 100.0 |
| $\mathrm{N}-12$ and | 6.0 | 8.0 | 11.0 | 16.5 | 24.0 | 31.0 | 38.0 | 44.5 | 51.0 | 57.0 | 63.0 | 69.0 | 74.0 | 79.5 | 84.0 | 89.0 | 93.0 | 97.5 | 100.0 | 100.0 |

up
PERCENT OF LOSS FROM PLANT DAMAGE

TABLE P - WHEAT MOISTURE ADJUSTMENT FACTORS

| Whole Percent | TENTHS OF PERCENT MOISTURE |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | . 1 | . 2 | . 3 | . 4 | . 5 | . 6 | . 7 | . 8 | . 9 |
| 13 |  |  |  |  |  | 1.000 | . 9988 | . 9976 | . 9964 | . 9952 |
| 14 | . 9940 | . 9928 | . 9916 | . 9904 | . 9892 | . 9880 | . 9868 | . 9856 | . 9844 | . 9832 |
| 15 | . 9820 | . 9808 | . 9796 | . 9784 | . 9772 | . 9760 | . 9748 | . 9736 | . 9724 | . 9712 |
| 16 | . 9700 | . 9688 | . 9676 | . 9664 | . 9652 | . 9640 | . 9628 | . 9616 | . 9604 | . 9592 |
| 17 | . 9580 | . 9568 | . 9556 | . 9544 | . 9532 | . 9520 | . 9508 | . 9496 | . 9484 | . 9472 |
| 18 | . 9460 | . 9448 | . 9436 | . 9424 | . 9412 | . 9400 | . 9388 | . 9376 | . 9364 | . 9352 |
| 19 | . 9340 | . 9328 | . 9316 | . 9304 | . 9292 | . 9280 | . 9268 | . 9256 | . 9244 | . 9232 |
| 20 | . 9220 | . 9208 | . 9196 | . 9184 | . 9172 | . 9160 | . 9148 | . 9136 | . 9124 | . 9112 |
| 21 | . 9100 | . 9088 | . 9076 | . 9064 | . 9052 | . 9040 | . 9028 | . 9016 | . 9004 | . 8992 |
| 22 | . 8980 | . 8968 | . 8956 | . 8944 | . 8932 | . 8920 | . 8908 | . 8896 | . 8884 | . 8872 |
| 23 | . 8860 | . 8848 | . 8836 | . 8824 | . 8812 | . 8800 | . 8788 | . 8776 | . 8764 | . 8752 |
| 24 | . 8740 | . 8728 | . 8716 | . 8704 | . 8692 | . 8680 | . 8668 | . 8656 | . 8644 | . 8632 |
| 25 | . 8620 | . 8608 | . 8596 | . 8584 | . 8572 | . 8560 | . 8548 | . 8536 | . 8524 | . 8512 |
| 26 | . 8500 | . 8488 | . 8476 | . 8464 | . 8452 | . 8440 | . 8428 | . 8416 | . 8404 | . 8392 |
| 27 | . 8380 | . 8368 | . 8356 | . 8344 | . 8332 | . 8320 | . 8308 | . 8296 | . 8284 | . 8272 |
| 28 | . 8260 | . 8248 | . 8236 | . 8224 | . 8212 | . 8200 | . 8188 | . 8176 | . 8164 | . 8152 |
| 29 | . 8140 | . 8128 | . 8116 | . 8104 | . 8092 | . 8080 | . 8068 | . 8056 | . 8044 | . 8032 |
| 30 | . 8020 | . 8008 | . 7996 | . 7984 | . 7972 | . 7960 | . 7948 | . 7936 | . 7924 | . 7912 |
| 31 | . 7900 | . 7888 | . 7876 | . 7864 | . 7852 | . 7840 | . 7828 | . 7816 | . 7804 | . 7792 |
| 32 | . 7780 | . 7768 | . 7756 | . 7744 | . 7732 | . 7720 | . 7708 | . 7696 | . 7684 | . 7672 |
| 33 | . 7660 | . 7648 | . 7636 | . 7624 | . 7612 | . 7600 | . 7588 | . 7576 | . 7564 | . 7552 |
| 34 | . 7540 | . 7528 | . 7516 | . 7504 | . 7492 | . 7480 | . 7468 | . 7456 | . 7444 | . 7432 |
| 35 | . 7420 | . 7408 | . 7396 | . 7384 | . 7372 | . 7360 | . 7348 | . 7336 | . 7324 | . 7312 |
| 36 | . 7300 | . 7288 | . 7276 | . 7264 | . 7252 | . 7240 | . 7228 | . 7216 | . 7204 | . 7192 |
| 37 | . 7180 | . 7168 | . 7156 | . 7144 | . 7132 | . 7120 | . 7108 | . 7096 | . 7084 | . 7072 |
| 38 | . 7060 | . 7048 | . 7036 | . 7024 | . 7012 | . 7000 | . 6988 | . 6976 | . 6964 | . 6952 |
| 39 | . 6940 | . 6928 | . 6916 | . 6904 | . 6892 | . 6880 | . 6868 | . 6856 | . 6844 | . 6832 |
| 40 | . 6820 | . 6808 | . 6796 | . 6784 | . 6772 | . 6760 | . 6748 | . 6736 | . 6724 | . 6712 |

## TABLE Q - BARLEY MOISTURE ADJUSTMENT FACTORS

| Whole Percent | TENTHS OF PERCENT MOISTURE |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | . 1 | . 2 | . 3 | . 4 | . 5 | . 6 | . 7 | . 8 | . 9 |
| 14 |  |  |  |  |  | 1.000 | . 9988 | . 9976 | . 9964 | . 9952 |
| 15 | . 9940 | . 9928 | . 9916 | . 9904 | . 9892 | . 9880 | . 9868 | . 9856 | . 9844 | . 9832 |
| 16 | . 9820 | . 9808 | . 9796 | . 9784 | . 9772 | . 9760 | . 9748 | . 9736 | . 9724 | . 9712 |
| 17 | . 9700 | . 9688 | . 9676 | . 9664 | . 9652 | . 9640 | . 9628 | . 9616 | . 9604 | . 9592 |
| 18 | . 9580 | . 9568 | . 9556 | . 9544 | . 9532 | . 9520 | . 9508 | . 9496 | . 9484 | . 9472 |
| 19 | . 9460 | . 9448 | . 9436 | . 9424 | . 9412 | . 9400 | . 9388 | . 9376 | . 9364 | . 9352 |
| 20 | . 9340 | . 9328 | . 9316 | . 9304 | . 9292 | . 9280 | . 9268 | . 9256 | . 9244 | . 9232 |
| 21 | . 9220 | . 9208 | . 9196 | . 9184 | . 9172 | . 9160 | . 9148 | . 9136 | . 9124 | . 9112 |
| 22 | . 9100 | . 9088 | . 9076 | . 9064 | . 9052 | . 9040 | . 9028 | . 9016 | . 9004 | . 8992 |
| 23 | . 8980 | . 8968 | . 8956 | . 8944 | . 8932 | . 8920 | . 8908 | . 8896 | . 8884 | . 8872 |
| 24 | . 8860 | . 8848 | . 8836 | . 8824 | . 8812 | . 8800 | . 8788 | . 8776 | . 8764 | . 8752 |
| 25 | . 8740 | . 8728 | . 8716 | . 8704 | . 8692 | . 8680 | . 8668 | . 8656 | . 8644 | . 8632 |
| 26 | . 8620 | . 8608 | . 8596 | . 8584 | . 8572 | . 8560 | . 8548 | . 8536 | . 8524 | . 8512 |
| 27 | . 8500 | . 8488 | . 8476 | . 8464 | . 8452 | . 8440 | . 8428 | . 8416 | . 8404 | . 8392 |
| 28 | . 8380 | . 8368 | . 8356 | . 8344 | . 8332 | . 8320 | . 8308 | . 8296 | . 8284 | . 8272 |
| 29 | . 8260 | . 8248 | . 8236 | . 8224 | . 8212 | . 8200 | . 8188 | . 8176 | . 8164 | . 8152 |
| 30 | . 8140 | . 8128 | . 8116 | . 8104 | . 8092 | . 8080 | . 8068 | . 8056 | . 8044 | . 8032 |
| 31 | . 8020 | . 8008 | . 7996 | . 7984 | . 7972 | . 7960 | . 7948 | . 7936 | . 7924 | . 7912 |
| 32 | . 7900 | . 7888 | . 7876 | . 7864 | . 7852 | . 7840 | . 7828 | . 7816 | . 7804 | . 7792 |
| 33 | . 7780 | . 7768 | . 7756 | . 7744 | . 7732 | . 7720 | . 7708 | . 7696 | . 7684 | . 7672 |
| 34 | . 7660 | . 7648 | . 7636 | . 7624 | . 7612 | . 7600 | . 7588 | . 7576 | . 7564 | . 7552 |
| 35 | . 7540 | . 7528 | . 7516 | . 7504 | . 7492 | . 7480 | . 7468 | . 7456 | . 7444 | . 7432 |
| 36 | . 7420 | . 7408 | . 7396 | . 7384 | . 7372 | . 7360 | . 7348 | . 7336 | . 7324 | . 7312 |
| 37 | . 7300 | . 7288 | . 7276 | . 7264 | . 7252 | . 7240 | . 7228 | . 7216 | . 7204 | . 7192 |
| 38 | . 7180 | . 7168 | . 7156 | . 7144 | . 7132 | . 7120 | . 7108 | . 7096 | . 7084 | . 7072 |
| 39 | . 7060 | . 7048 | . 7036 | . 7024 | . 7012 | . 7000 | . 6988 | . 6976 | . 6964 | . 6952 |
| 40 | . 6940 | . 6928 | . 6916 | . 6904 | . 6892 | . 6880 | . 6868 | . 6856 | . 6844 | . 6832 |

TABLE R - OATS MOISTURE ADJUSTMENT FACTORS

| Whole Percent | TENTHS OF PERCENT MOISTURE |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M | 0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 |
| 14 | 1.000 | . 9988 | . 9976 | . 9964 | . 9952 | . 9940 | . 9928 | . 9916 | . 9904 | . 9892 |
| 15 | . 9880 | . 9868 | . 9856 | . 9844 | . 9832 | . 9820 | . 9808 | . 9796 | . 9784 | . 9772 |
| 16 | . 9760 | . 9748 | . 9736 | . 9724 | . 9712 | . 9700 | . 9688 | . 9676 | . 9664 | . 9652 |
| 17 | . 9640 | . 9628 | . 9616 | . 9604 | . 9592 | . 9580 | . 9568 | . 9556 | . 9544 | . 9532 |
| 18 | . 9520 | . 9508 | . 9496 | . 9484 | . 9472 | . 9460 | . 9448 | . 9436 | . 9424 | . 9412 |
| 19 | . 9400 | . 9388 | . 9376 | . 9364 | . 9352 | . 9340 | . 9328 | . 9316 | . 9304 | . 9292 |
| 20 | . 9280 | . 9268 | . 9256 | . 9244 | . 9232 | . 9220 | . 9208 | . 9196 | . 9184 | . 9172 |
| 21 | . 9160 | . 9148 | . 9136 | . 9124 | . 9112 | . 9100 | . 9088 | . 9076 | . 9064 | . 9052 |
| 22 | . 9040 | . 9028 | . 9016 | . 9004 | . 8992 | . 8980 | . 8968 | . 8956 | . 8944 | . 8932 |
| 23 | . 8920 | . 8908 | . 8896 | . 8884 | . 8872 | . 8860 | 8848 | . 8836 | . 8824 | . 8812 |
| 24 | . 8800 | . 8788 | . 8776 | . 8764 | . 8752 | . 8740 | . 8728 | . 8716 | . 8704 | . 8692 |
| 25 | . 8680 | . 8668 | . 8656 | . 8644 | . 8632 | . 8620 | . 8608 | . 8596 | . 8584 | . 8572 |
| 26 | . 8560 | . 8548 | . 8536 | . 8524 | . 8512 | . 8500 | . 8488 | . 8476 | . 8464 | . 8452 |
| 27 | . 8440 | . 8428 | . 8416 | . 8404 | . 8392 | . 8380 | . 8368 | . 8356 | . 8344 | . 8332 |
| 28 | . 8320 | . 8308 | . 8296 | . 8284 | . 8272 | . 8260 | . 8248 | . 8236 | . 8224 | . 8212 |
| 29 | . 8200 | . 8188 | . 8176 | . 8164 | . 8152 | . 8140 | . 8128 | . 8116 | . 8104 | . 8092 |
| 30 | . 8080 | . 8068 | . 8056 | . 8044 | . 8032 | . 8020 | . 8008 | . 7996 | . 7984 | . 7972 |
| 31 | . 7960 | . 7948 | . 7936 | . 7924 | . 7912 | . 7900 | . 7888 | . 7876 | . 7864 | . 7852 |
| 32 | . 7840 | . 7828 | . 7816 | . 7804 | . 7792 | . 7780 | . 7768 | . 7756 | . 7744 | . 7732 |
| 33 | . 7720 | . 7708 | . 7696 | . 7684 | . 7672 | . 7660 | . 7648 | . 7636 | . 7624 | . 7612 |
| 34 | . 7600 | . 7588 | . 7576 | . 7564 | . 7552 | . 7540 | . 7528 | . 7516 | . 7504 | . 7492 |
| 35 | . 7480 | . 7468 | . 7456 | . 7444 | . 7432 | . 7420 | . 7408 | . 7396 | . 7384 | . 7372 |
| 36 | . 7360 | . 7348 | . 7336 | . 7324 | . 7312 | . 7300 | . 7288 | . 7276 | . 7264 | . 7252 |
| 37 | . 7240 | . 7228 | . 7216 | . 7204 | . 7192 | . 7180 | . 7168 | . 7156 | . 7144 | . 7132 |
| 38 | . 7120 | . 7108 | . 7096 | . 7084 | . 7072 | . 7060 | . 7048 | . 7036 | . 7024 | . 7012 |
| 39 | . 7000 | . 6988 | . 6976 | . 6964 | . 6952 | 6940 | . 6928 | . 6916 | . 6904 | . 6892 |
| 40 | . 6880 | . 6868 | . 6856 | . 6844 | . 6832 | . 6820 | . 6808 | . 6796 | . 6784 | . 6772 |

TABLE S - RYE AND BUCKWHEAT MOISTURE ADJUSTMENT FACTORS

| Whole Percent | TENTHS OF PERCENT MOISTURE |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 |
| 16 | 1.000 | . 9988 | . 9976 | . 9964 | . 9952 | . 9940 | . 9928 | . 9916 | . 9904 | . 9892 |
| 17 | . 9880 | . 9868 | . 9856 | . 9844 | . 9832 | . 9820 | . 9808 | . 9796 | . 9784 | . 9772 |
| 18 | . 9760 | . 9748 | . 9736 | . 9724 | . 9712 | . 9700 | . 9688 | . 9676 | . 9664 | . 9652 |
| 19 | . 9640 | . 9628 | . 9616 | . 9604 | . 9592 | . 9580 | . 9568 | . 9556 | . 9544 | . 9532 |
| 20 | . 9520 | . 9508 | . 9496 | . 9484 | . 9472 | . 9460 | . 9448 | . 9436 | . 9424 | . 9412 |
| 21 | . 9400 | . 9388 | . 9376 | . 9364 | . 9352 | . 9340 | . 9328 | . 9316 | . 9304 | . 9292 |
| 22 | . 9280 | . 9268 | . 9256 | . 9244 | . 9232 | . 9220 | . 9208 | . 9196 | . 9184 | . 9172 |
| 23 | . 9160 | . 9148 | . 9136 | . 9124 | . 9112 | . 9100 | . 9088 | . 9076 | . 9064 | . 9052 |
| 24 | . 9040 | . 9028 | . 9016 | . 9004 | . 8992 | . 8980 | . 8968 | . 8956 | . 8944 | . 8932 |
| 25 | . 8920 | . 8908 | . 8896 | . 8884 | . 8872 | . 8860 | . 8848 | . 8836 | . 8824 | . 8812 |
| 26 | . 8800 | . 8788 | . 8776 | . 8764 | . 8752 | . 8740 | . 8728 | . 8716 | . 8704 | . 8692 |
| 27 | . 8680 | . 8668 | . 8656 | . 8644 | . 8632 | . 8620 | . 8608 | . 8596 | . 8584 | . 8572 |
| 28 | . 8560 | . 8548 | . 8536 | . 8524 | . 8512 | . 8500 | . 8488 | . 8476 | . 8464 | . 8452 |
| 29 | . 8440 | . 8428 | . 8416 | . 8404 | . 8392 | . 8380 | . 8368 | . 8356 | . 8344 | . 8332 |
| 30 | . 8320 | . 8308 | . 8296 | . 8284 | . 8272 | . 8260 | . 8248 | . 8236 | . 8224 | . 8212 |
| 31 | . 8200 | . 8188 | . 8176 | . 8164 | . 8152 | . 8140 | . 8128 | . 8116 | . 8104 | . 8092 |
| 32 | . 8080 | . 8068 | . 8056 | . 8044 | . 8032 | . 8020 | . 8008 | . 7996 | . 7984 | . 7972 |
| 33 | . 7960 | . 7948 | . 7936 | . 7924 | . 7912 | . 7900 | . 7888 | . 7876 | . 7864 | . 7852 |
| 34 | . 7840 | . 7828 | . 7816 | . 7804 | . 7792 | . 7780 | . 7768 | . 7756 | . 7744 | . 7732 |
| 35 | . 7720 | . 7708 | . 7696 | . 7684 | . 7672 | . 7660 | . 7648 | . 7636 | . 7624 | . 7612 |
| 36 | . 7600 | . 7588 | . 7576 | . 7564 | . 7552 | . 7540 | . 7528 | . 7516 | . 7504 | . 7492 |
| 37 | . 7480 | . 7468 | . 7456 | . 7444 | . 7432 | . 7420 | . 7408 | . 7396 | . 7384 | . 7372 |
| 38 | . 7360 | . 7348 | . 7336 | . 7324 | . 7312 | . 7300 | . 7288 | . 7276 | . 7264 | . 7252 |
| 39 | . 7240 | . 7228 | . 7216 | . 7204 | . 7192 | . 7180 | . 7168 | . 7156 | . 7144 | . 7132 |
| 40 | . 7120 | . 7108 | . 7096 | . 7084 | . 7072 | . 7060 | . 7048 | . 7036 | . 7024 | . 7012 |

TABLE T - WHEAT - COMBINED TEST WEIGHT AND PACK FACTORS

| Test Weight | Less Than 255 Sq. Ft. | 255 Sq. Ft. to 461 Sq. Ft. | $\begin{aligned} & 462 \text { Sq. Ft. to } \\ & 767 \text { Sq. Ft. } \end{aligned}$ | 768 Sq. Ft. to 1384 Sq. Ft. | 1385 Sq. Ft. to 2289 Sq. Ft. | 2290 or Over Sq. Ft. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35.0 | 0.648 | 0.656 | 0.665 | 0.674 | 0.674 | 0.674 |
| 35.5 | 0.656 | 0.665 | 0.674 | 0.682 | 0.682 | 0.682 |
| 36.0 | 0.664 | 0.673 | 0.682 | 0.691 | 0.691 | 0.691 |
| 36.5 | 0.673 | 0.682 | 0.691 | 0.700 | 0.700 | 0.700 |
| 37.0 | 0.681 | 0.690 | 0.699 | 0.709 | 0.709 | 0.709 |
| 37.5 | 0.689 | 0.698 | 0.708 | 0.717 | 0.717 | 0.717 |
| 38.0 | 0.697 | 0.707 | 0.716 | 0.726 | 0.726 | 0.726 |
| 38.5 | 0.706 | 0.715 | 0.725 | 0.734 | 0.734 | 0.734 |
| 39.0 | 0.714 | 0.723 | 0.733 | 0.743 | 0.743 | 0.743 |
| 39.5 | 0.722 | 0.732 | 0.742 | 0.751 | 0.751 | 0.751 |
| 40.0 | 0.730 | 0.740 | 0.750 | 0.773 | 0.790 | 0.812 |
| 40.5 | 0.738 | 0.748 | 0.758 | 0.782 | 0.799 | 0.821 |
| 41.0 | 0.746 | 0.756 | 0.767 | 0.791 | 0.808 | 0.830 |
| 41.5 | 0.754 | 0.765 | 0.775 | 0.800 | 0.817 | 0.839 |
| 42.0 | 0.762 | 0.773 | 0.783 | 0.809 | 0.826 | 0.848 |
| 42.5 | 0.770 | 0.781 | 0.792 | 0.818 | 0.835 | 0.857 |
| 43.0 | 0.778 | 0.789 | 0.800 | 0.826 | 0.843 | 0.865 |
| 43.5 | 0.786 | 0.797 | 0.808 | 0.834 | 0.851 | 0.873 |
| 44.0 | 0.794 | 0.805 | 0.816 | 0.842 | 0.859 | 0.881 |
| 44.5 | 0.802 | 0.813 | 0.824 | 0.850 | 0.867 | 0.889 |
| 45.0 | 0.810 | 0.821 | 0.833 | 0.858 | 0.875 | 0.897 |
| 45.5 | 0.818 | 0.829 | 0.841 | 0.866 | 0.883 | 0.905 |
| 46.0 | 0.826 | 0.837 | 0.849 | 0.874 | 0.891 | 0.913 |
| 46.5 | 0.834 | 0.845 | 0.857 | 0.882 | 0.899 | 0.921 |
| 47.0 | 0.841 | 0.853 | 0.865 | 0.890 | 0.907 | 0.929 |
| 47.5 | 0.849 | 0.861 | 0.873 | 0.898 | 0.915 | 0.937 |
| 48.0 | 0.857 | 0.869 | 0.881 | 0.906 | 0.923 | 0.945 |
| 48.5 | 0.865 | 0.877 | 0.889 | 0.914 | 0.931 | 0.953 |
| 49.0 | 0.872 | 0.884 | 0.897 | 0.922 | 0.939 | 0.961 |
| 49.5 | 0.880 | 0.892 | 0.905 | 0.930 | 0.947 | 0.969 |
| 50.0 | 0.888 | 0.900 | 0.913 | 0.938 | 0.955 | 0.977 |
| 50.5 | 0.895 | 0.908 | 0.920 | 0.947 | 0.963 | 0.985 |
| 51.0 | 0.903 | 0.915 | 0.928 | 0.954 | 0.971 | 0.994 |
| 51.5 | 0.910 | 0.923 | 0.936 | 0.963 | 0.979 | 1.002 |
| 52.0 | 0.918 | 0.931 | 0.944 | 0.970 | 0.987 | 1.010 |
| 52.5 | 0.925 | 0.938 | 0.952 | 0.978 | 0.995 | 1.018 |
| 53.0 | 0.933 | 0.946 | 0.959 | 0.986 | 1.003 | 1.026 |
| 53.5 | 0.940 | 0.954 | 0.967 | 0.994 | 1.011 | 1.034 |
| 54.0 | 0.948 | 0.961 | 0.975 | 1.002 | 1.020 | 1.043 |
| 54.5 | 0.955 | 0.969 | 0.982 | 1.010 | 1.028 | 1.051 |
| 55.0 | 0.963 | 0.976 | 0.990 | 1.018 | 1.036 | 1.060 |
| 55.5 | 0.970 | 0.984 | 0.998 | 1.026 | 1.044 | 1.068 |
| 56.0 | 0.977 | 0.991 | 1.005 | 1.034 | 1.052 | 1.077 |
| 56.5 | 0.985 | 0.999 | 1.013 | 1.042 | 1.060 | 1.085 |
| 57.0 | 0.992 | 1.006 | 1.020 | 1.050 | 1.068 | 1.093 |
| 57.5 | 0.999 | 1.013 | 1.028 | 1.057 | 1.075 | 1.100 |
| 58.0 | 1.006 | 1.021 | 1.035 | 1.065 | 1.083 | 1.108 |
| 58.5 | 1.014 | 1.028 | 1.043 | 1.073 | 1.092 | 1.117 |
| 59.0 | 1.021 | 1.035 | 1.050 | 1.081 | 1.100 | 1.126 |

TABLE T - WHEAT - COMBINED TEST WEIGHT AND PACK FACTORS (CONTINUED)

| Test <br> Weight | Less Than <br> 255 Sq. Ft. | 255 Sq. Ft. to <br> 461 Sq. Ft. | 462 Sq. Ft. to <br> 767 Sq. Ft. | 768 Sq. Ft. to <br> $\mathbf{1 3 8 4}$ Sq. Ft. | 1385 Sq. Ft. to <br> 2289 Sq. Ft. | $\mathbf{2 2 9 0}$ or Over <br> Sq. Ft. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 59.5 | 1.028 | 1.043 | 1.058 | 1.088 | 1.107 | 1.132 |
| 60.0 | 1.035 | 1.050 | 1.065 | 1.096 | 1.115 | 1.141 |
| 60.5 | 1.042 | 1.057 | 1.072 | 1.104 | 1.123 | 1.150 |
| 61.0 | 1.049 | 1.064 | 1.080 | 1.111 | 1.130 | 1.157 |
| 61.5 | 1.056 | 1.072 | 1.087 | 1.119 | 1.138 | 1.165 |
| 62.0 | 1.063 | 1.079 | 1.094 | 1.126 | 1.145 | 1.172 |
| 62.5 | 1.070 | 1.086 | 1.101 | 1.134 | 1.153 | 1.180 |
| 63.0 | 1.077 | 1.093 | 1.108 | 1.141 | 1.162 | 1.189 |
| 63.5 | 1.084 | 1.100 | 1.115 | 1.148 | 1.169 | 1.196 |
| 64.0 | 1.091 | 1.107 | 1.122 | 1.156 | 1.177 | 1.205 |

TABLE U - BARLEY - COMBINED TEST WEIGHT AND PACK FACTORS

| Test Weight | Less Than 255 Sq. Ft. | $\begin{aligned} & 255 \text { Sq. Ft. to } \\ & 461 \text { Sq. Ft. } \end{aligned}$ | $\begin{aligned} & 462 \text { Sq. Ft. to } \\ & 767 \text { Sq. Ft. } \end{aligned}$ | 768 Sq. Ft. to 1384 Sq. Ft. | $\begin{aligned} & 1385 \text { Sq. Ft. to } \\ & 2289 \text { Sq. Ft. } \end{aligned}$ | 2290 or Over Sq. Ft. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 25.0 | 0.594 | 0.615 | 0.625 | 0.646 | 0.646 | 0.646 |
| 25.5 | 0.604 | 0.626 | 0.636 | 0.657 | 0.657 | 0.657 |
| 26.0 | 0.615 | 0.636 | 0.647 | 0.669 | 0.669 | 0.669 |
| 26.5 | 0.625 | 0.647 | 0.658 | 0.680 | 0.680 | 0.680 |
| 27.0 | 0.636 | 0.658 | 0.669 | 0.692 | 0.692 | 0.692 |
| 27.5 | 0.646 | 0.669 | 0.680 | 0.703 | 0.703 | 0.703 |
| 28.0 | 0.656 | 0.680 | 0.691 | 0.715 | 0.715 | 0.715 |
| 28.5 | 0.666 | 0.690 | 0.702 | 0.726 | 0.726 | 0.726 |
| 29.0 | 0.677 | 0.701 | 0.713 | 0.737 | 0.737 | 0.737 |
| 29.5 | 0.687 | 0.711 | 0.724 | 0.748 | 0.748 | 0.748 |
| 30.0 | 0.697 | 0.722 | 0.734 | 0.797 | 0.825 | 0.842 |
| 30.5 | 0.707 | 0.732 | 0.745 | 0.807 | 0.835 | 0.853 |
| 31.0 | 0.717 | 0.743 | 0.756 | 0.817 | 0.845 | 0.864 |
| 31.5 | 0.727 | 0.753 | 0.766 | 0.827 | 0.855 | 0.875 |
| 32.0 | 0.737 | 0.763 | 0.777 | 0.837 | 0.865 | 0.886 |
| 32.5 | 0.746 | 0.774 | 0.787 | 0.847 | 0.875 | 0.897 |
| 33.0 | 0.756 | 0.784 | 0.798 | 0.857 | 0.885 | 0.908 |
| 33.5 | 0.766 | 0.794 | 0.804 | 0.867 | 0.895 | 0.919 |
| 34.0 | 0.776 | 0.804 | 0.818 | 0.877 | 0.905 | 0.930 |
| 34.5 | 0.785 | 0.814 | 0.828 | 0.887 | 0.915 | 0.941 |
| 35.0 | 0.795 | 0.824 | 0.839 | 0.897 | 0.925 | 0.952 |
| 35.5 | 0.804 | 0.834 | 0.849 | 0.907 | 0.935 | 0.963 |
| 36.0 | 0.814 | 0.844 | 0.859 | 0.917 | 0.945 | 0.974 |
| 36.5 | 0.823 | 0.854 | 0.869 | 0.927 | 0.955 | 0.985 |
| 37.0 | 0.833 | 0.863 | 0.879 | 0.937 | 0.965 | 0.996 |
| 37.5 | 0.842 | 0.873 | 0.889 | 0.947 | 0.975 | 1.007 |
| 38.0 | 0.851 | 0.883 | 0.899 | 0.957 | 0.985 | 1.018 |
| 38.5 | 0.860 | 0.892 | 0.908 | 0.967 | 0.995 | 1.029 |
| 39.0 | 0.869 | 0.902 | 0.918 | 0.977 | 1.005 | 1.040 |
| 39.5 | 0.878 | 0.911 | 0.928 | 0.987 | 1.015 | 1.051 |
| 40.0 | 0.888 | 0.921 | 0.938 | 0.997 | 1.025 | 1.062 |
| 40.5 | 0.896 | 0.930 | 0.947 | 1.008 | 1.037 | 1.075 |
| 41.0 | 0.905 | 0.940 | 0.957 | 1.018 | 1.047 | 1.085 |
| 41.5 | 0.914 | 0.949 | 0.966 | 1.029 | 1.057 | 1.096 |
| 42.0 | 0.923 | 0.958 | 0.976 | 1.039 | 1.069 | 1.108 |
| 42.5 | 0.932 | 0.967 | 0.985 | 1.049 | 1.079 | 1.118 |
| 43.0 | 0.941 | 0.976 | 0.994 | 1.059 | 1.089 | 1.129 |
| 43.5 | 0.949 | 0.986 | 1.004 | 1.069 | 1.099 | 1.140 |
| 44.0 | 0.958 | 0.995 | 1.013 | 1.079 | 1.109 | 1.150 |
| 44.5 | 0.966 | 1.004 | 1.022 | 1.089 | 1.119 | 1.160 |
| 45.0 | 0.975 | 1.013 | 1.031 | 1.098 | 1.131 | 1.173 |
| 45.5 | 0.983 | 1.021 | 1.040 | 1.109 | 1.141 | 1.184 |
| 46.0 | 0.992 | 1.030 | 1.049 | 1.119 | 1.151 | 1.194 |
| 46.5 | 1.000 | 1.039 | 1.058 | 1.128 | 1.162 | 1.205 |
| 47.0 | 1.009 | 1.048 | 1.067 | 1.138 | 1.172 | 1.217 |
| 47.5 | 1.017 | 1.056 | 1.076 | 1.148 | 1.181 | 1.226 |
| 48.0 | 1.025 | 1.065 | 1.085 | 1.157 | 1.191 | 1.236 |
| 48.5 | 1.033 | 1.074 | 1.094 | 1.166 | 1.202 | 1.247 |

TABLE U - BARLEY - COMBINED TEST WEIGHT AND PACK FACTORS (CONTINUED)

| Test <br> Weight | Less Than <br> 255 Sq. Ft. | 255 Sq. Ft. to <br> 461 Sq. Ft. | 462 Sq. Ft. to <br> 767 Sq. Ft. | 768 Sq. Ft. to <br> $\mathbf{1 3 8 4}$ Sq. Ft. | 1385 Sq. Ft. to <br> 2289 Sq. Ft. | 2290 or Over <br> Sq. Ft. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 49.0 | 1.041 | 1.082 | 1.103 | 1.176 | 1.211 | 1.257 |
| 49.5 | 1.049 | 1.091 | 1.111 | 1.186 | 1.221 | 1.268 |
| 50.0 | 1.057 | 1.099 | 1.120 | 1.195 | 1.230 | 1.277 |
| 50.5 | 1.065 | 1.107 | 1.128 | 1.205 | 1.241 | 1.288 |
| 51.0 | 1.073 | 1.116 | 1.137 | 1.214 | 1.250 | 1.297 |
| 51.5 | 1.081 | 1.124 | 1.145 | 1.223 | 1.259 | 1.307 |
| 52.0 | 1.089 | 1.132 | 1.154 | 1.232 | 1.268 | 1.317 |
| 52.5 | 1.096 | 1.140 | 1.162 | 1.241 | 1.278 | 1.327 |
| 53.0 | 1.104 | 1.148 | 1.170 | 1.250 | 1.288 | 1.337 |
| 53.5 | 1.112 | 1.156 | 1.179 | 1.259 | 1.297 | 1.347 |
| 54.0 | 1.119 | 1.164 | 1.187 | 1.269 | 1.306 | 1.357 |
| 54.5 | 1.127 | 1.172 | 1.195 | 1.277 | 1.315 | 1.366 |
| 55.0 | 1.134 | 1.180 | 1.203 | 1.286 | 1.325 | 1.376 |
| 55.5 | 1.142 | 1.188 | 1.211 | 1.295 | 1.334 | 1.386 |
| 56.0 | 1.149 | 1.196 | 1.219 | 1.303 | 1.344 | 1.397 |

TABLE V - OATS - COMBINED TEST WEIGHT AND PACK FACTORS

| Test Weight | Less Than 255 Sq. Ft | $\begin{aligned} & 255 \text { Sq. Ft. to } \\ & 461 \text { Sq. Ft. } \end{aligned}$ | $\begin{aligned} & 462 \text { Sq. Ft. to } \\ & 767 \text { Sq. Ft. } \end{aligned}$ | $\begin{aligned} & 768 \text { Sq. Ft. to } \\ & 1384 \text { Sq. Ft. } \end{aligned}$ | $\begin{aligned} & 1385 \text { Sq Ft. to } \\ & 2289 \text { Sq. Ft. } \end{aligned}$ | 2290 or Over Sq. Ft. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20.0 | 0.763 | 0.781 | 0.794 | 0.813 | 0.813 | 0.813 |
| 20.5 | 0.778 | 0.798 | 0.810 | 0.830 | 0.830 | 0.830 |
| 21.0 | 0.794 | 0.814 | 0.827 | 0.847 | 0.847 | 0.847 |
| 21.5 | 0.810 | 0.830 | 0.843 | 0.863 | 0.863 | 0.863 |
| 22.0 | 0.825 | 0.846 | 0.859 | 0.880 | 0.880 | 0.880 |
| 22.5 | 0.840 | 0.861 | 0.875 | 0.896 | 0.896 | 0.896 |
| 23.0 | 0.855 | 0.877 | 0.891 | 0.913 | 0.913 | 0.913 |
| 23.5 | 0.870 | 0.892 | 0.907 | 0.929 | 0.929 | 0.929 |
| 24.0 | 0.885 | 0.908 | 0.923 | 0.945 | 0.945 | 0.945 |
| 24.5 | 0.900 | 0.923 | 0.938 | 0.961 | 0.961 | 0.961 |
| 25.0 | 0.914 | 0.938 | 0.953 | 1.108 | 1.158 | 1.231 |
| 25.5 | 0.928 | 0.952 | 0.968 | 1.127 | 1.179 | 1.254 |
| 26.0 | 0.943 | 0.967 | 0.983 | 1.144 | 1.198 | 1.274 |
| 26.5 | 0.956 | 0.981 | 0.998 | 1.162 | 1.217 | 1.294 |
| 27.0 | 0.970 | 0.996 | 1.013 | 1.180 | 1.235 | 1.314 |
| 27.5 | 0.984 | 1.010 | 1.027 | 1.197 | 1.253 | 1.333 |
| 28.0 | 0.998 | 1.024 | 1.041 | 1.214 | 1.272 | 1.354 |
| 28.5 | 1.011 | 1.038 | 1.055 | 1.232 | 1.289 | 1.372 |
| 29.0 | 1.024 | 1.051 | 1.069 | 1.249 | 1.308 | 1.393 |
| 29.5 | 1.037 | 1.065 | 1.083 | 1.266 | 1.327 | 1.414 |
| 30.0 | 1.050 | 1.078 | 1.097 | 1.283 | 1.345 | 1.433 |
| 30.5 | 1.063 | 1.091 | 1.110 | 1.299 | 1.363 | 1.452 |
| 31.0 | 1.075 | 1.104 | 1.124 | 1.316 | 1.379 | 1.470 |
| 31.5 | 1.088 | 1.117 | 1.137 | 1.332 | 1.397 | 1.490 |
| 32.0 | 1.100 | 1.130 | 1.150 | 1.348 | 1.414 | 1.507 |
| 32.5 | 1.112 | 1.143 | 1.163 | 1.365 | 1.430 | 1.525 |
| 33.0 | 1.124 | 1.155 | 1.176 | 1.380 | 1.447 | 1.543 |
| 33.5 | 1.136 | 1.167 | 1.188 | 1.395 | 1.464 | 1.561 |
| 34.0 | 1.148 | 1.179 | 1.201 | 1.412 | 1.480 | 1.579 |
| 34.5 | 1.159 | 1.191 | 1.213 | 1.427 | 1.496 | 1.597 |
| 35.0 | 1.170 | 1.203 | 1.225 | 1.442 | 1.514 | 1.617 |
| 35.5 | 1.181 | 1.215 | 1.237 | 1.457 | 1.530 | 1.634 |
| 36.0 | 1.193 | 1.226 | 1.249 | 1.472 | 1.545 | 1.650 |
| 36.5 | 1.203 | 1.238 | 1.260 | 1.487 | 1.561 | 1.668 |
| 37.0 | 1.214 | 1.249 | 1.272 | 1.501 | 1.577 | 1.685 |
| 37.5 | 1.225 | 1.260 | 1.283 | 1.515 | 1.592 | 1.701 |
| 38.0 | 1.235 | 1.271 | 1.294 | 1.530 | 1.606 | 1.717 |
| 38.5 | 1.245 | 1.281 | 1.305 | 1.544 | 1.622 | 1.735 |
| 39.0 | 1.255 | 1.292 | 1.316 | 1.558 | 1.637 | 1.751 |
| 39.5 | 1.265 | 1.302 | 1.327 | 1.572 | 1.653 | 1.768 |
| 40.0 | 1.275 | 1.313 | 1.338 | 1.585 | 1.667 | 1.784 |
| 40.5 | 1.285 | 1.323 | 1.348 | 1.599 | 1.682 | 1.801 |
| 41.0 | 1.294 | 1.333 | 1.358 | 1.612 | 1.696 | 1.815 |
| 41.5 | 1.303 | 1.342 | 1.368 | 1.626 | 1.711 | 1.832 |
| 42.0 | 1.313 | 1.352 | 1.378 | 1.639 | 1.724 | 1.847 |
| 42.5 | 1.321 | 1.361 | 1.388 | 1.651 | 1.738 | 1.862 |
| 43.0 | 1.330 | 1.371 | 1.398 | 1.664 | 1.752 | 1.877 |
| 43.5 | 1.339 | 1.380 | 1.407 | 1.677 | 1.764 | 1.891 |
| 44.0 | 1.348 | 1.389 | 1.416 | 1.689 | 1.779 | 1.908 |

TABLE V - OATS - COMBINED TEST WEIGHT AND PACK FACTORS (CONTINUED)

| Test <br> Weight | Less Than <br> 255 Sq. Ft | 255 Sq. Ft. to <br> 461 Sq. Ft. | 462 Sq. Ft. to <br> 767 Sq. Ft. | 768 Sq. Ft. to <br> $\mathbf{1 3 8 4}$ Sq. Ft. | 1385 Sq Ft. to <br> 2289 Sq. Ft. | 2290 or Over <br> Sq. Ft. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| 44.5 | 1.356 | 1.398 | 1.425 | 1.702 | 1.793 | 1.923 |
| 45.0 | 1.364 | 1.406 | 1.434 | 1.715 | 1.807 | 1.938 |
| 45.5 | 1.372 | 1.415 | 1.443 | 1.728 | 1.821 | 1.953 |
| 46.0 | 1.380 | 1.423 | 1.452 | 1.741 | 1.835 | 1.968 |
| 46.5 | 1.388 | 1.431 | 1.460 | 1.754 | 1.849 | 1.983 |
| 47.0 | 1.395 | 1.439 | 1.469 | 1.767 | 1.863 | 1.998 |
| 47.5 | 1.403 | 1.447 | 1.477 | 1.780 | 1.877 | 2.013 |
| 48.0 | 1.410 | 1.455 | 1.485 | 1.793 | 1.891 | 2.028 |
| 48.5 | 1.417 | 1.463 | 1.493 | 1.806 | 1.905 | 2.043 |
| 49.0 | 1.424 | 1.470 | 1.501 | 1.819 | 1.919 | 2.058 |
| 49.5 | 1.431 | 1.477 | 1.508 | 1.832 | 1.933 | 2.073 |
| 50.0 | 1.438 | 1.484 | 1.516 | 1.845 | 1.947 | 2.088 |

## EXHIBIT 1

## STRUCTURE OF FLORET AND SPIKELET (WHEAT, BARLEY, AND RYE)



## EXHIBIT 2

## PICTURE OF A FLAX BOLL AND FLAX FLOWER



## PICTURE OF A BUCKWHEAT PLANT



## EXHIBIT 3

## VARIETIES OF BUCKWHEAT

| BM 94362.3 | Large-seeded variety has higher yields, increased seed density, 1000 seed weight ( 36.9 g compared to 34.2 g ) and earlier maturity than AC Manisoba. Seed density is high at $621 \mathrm{~kg} / \mathrm{m} 3$ compared to $557 \mathrm{~kg} / \mathrm{m} 3$ for Mancan and $570 \mathrm{~kg} / \mathrm{m} 3$ for Manor. Its protein content is slightly lower than AC Manisoba. The seed is very dark brown to black. |
| :---: | :---: |
| BM 94199.1 | Large-seeded variety has higher yields, increased seed density, 1000 seed weight ( 37.3 g compared 34.2 g ) and earlier maturity than AC Manisoba. The seed is very dark brown to black. |
| Common | Small to medium in size, medium to high test weight, used by mills in making flour and pancake mix, also grown for cover crop seed. |
| KeuKett | Large-seeded variety, good early growth, lodging resistant, seed shape provides higher test weight, easier cleaning and dehulling, developed under a research contract between Kade Research Ltd. and the Birkett Mills, licensed to Birkett Mills in New York, sister line to Koto. |
| Koban | Large-seeded variety, higher test weight than Manor or Mancan, performs well in Central Plains but poorly in New York. |
| Koto | Large-seeded variety, higher test weight than Manor or Mancan, out yielded Manisoba by $13 \%$ and is more stress tolerant, available for the first time to northeast growers in 2002, released by Kade Research Ltd. in Morden, Manitoba. |
| Mancan | Large-seeded diploid variety, low test weight, good market acceptability, developed by Dr. Clayton Campbell, released by Agriculture Canada, licensed in 1974, was the dominant variety in the US until recently, currently produced in China. |
| Manisoba | Large-seeded variety, developed by Dr. Clayton Campbell, outperformed Manor by $10 \%$ in New York trials since 1995, contracted since 2000, mainstay in northeast production. |
| Manor | Large-seeded diploid variety, low test weight, good market acceptability, developed by Dr. Clayton Campbell, released by Agriculture Canada, licensed in 1980, production of certified seed is limited to Canada, one of the more dominant varieties, meets international market needs. |
| Pennquad | Very large-seeded tetraploid variety, good lodging resistance, grain especially well suited for milling due to its large, uniform size, released by Pennsylvania Agricultural Experiment Station in 1966. |
| Springfield | Large-seeded variety developed by Dr. Campbell while at Ag Canada, released as a numbered line to a Canadian company, not extensively produced in the US, limited production in Canada, performs well in Central Plains, but poorly in New York. |

EXHIBIT 3

## VARIETIES OF BUCKWHEAT (Continued)

| Tartary Buckwheat | F. tataricum Gaertner, closely related to buckwheat, but a separate <br> species; also called Indiawheat and Duckwheat; small, slender seeds; about <br> 40\% smaller than buckwheat; poor honey producer. |
| :---: | :--- |
| Tempest | Small-seeded diploid variety, high test weight, selected by Agriculture <br> Canada from a Russian seedlot, licensed in 1971. |
| Tokyo | Small-seeded diploid type, high test weight, selected by Agriculture <br> Canada from a Japanese introduction. |
| Winsor Royal | Large-seeded diploid type, low test weight, good market acceptability, <br> released by Winsor Grain Company in Minneapolis, MN in 1982, sale of <br> seed regulated by the US Variety Protection Act. |

## EXHIBIT 4

## EXAMPLES OF STAGE DEVELOPMENT FOR BUCKWHEAT

The cotyledonary node has 2 cotyledons (seed leaves) located diredly opposite each other at the bottom of the main stern

As additional nodes
develop above the cotyledon along the main stern, a heart shaped leaf is produced from each node set


Figure 1

Figure 2


To stage the plant, court all nodes above the cotyledonary node which have a fully unfurled leaf.


Figure 4
Figure 5
Figure 6


[^0]:    NARRATIVE (If more space is needed, attach a Special Report) Example above show allowance when $20 \%$ of production guarantee is greater than the maximum allowance when share is considered
     potential $=10.0$ bu./acre) Total acreage from FSA permanent field measurement. Field A wheel measured. See attached Special Report for measurements and calculations.

