



Wheat Objective Yield

Field Enumerator Reference Sheet

Project Code 101

Northern Plains Region

OFFICE NUMBER (800)582-6443

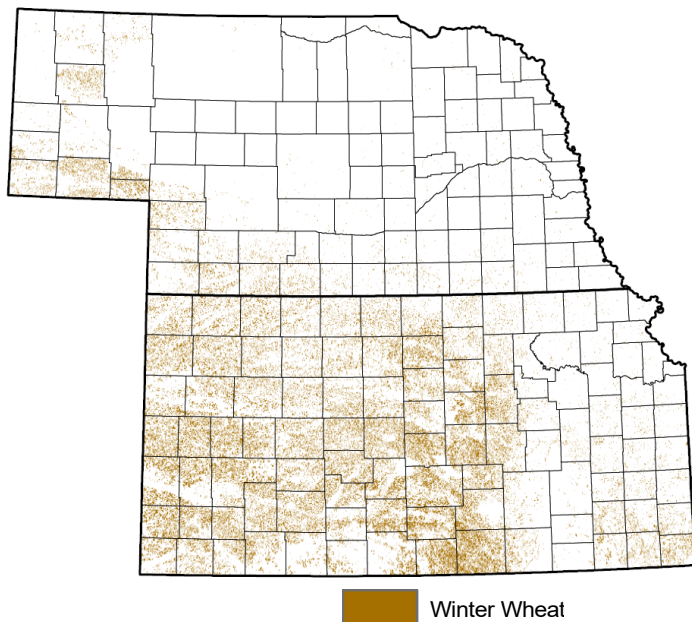
Survey reference dates and days of fieldwork can be found on the website calendar.

- ◆ **Lab samples and Form E's** will be shipped via **UPS** to the National Lab in **St. Louis, MO.**
- ◆ **No Forms will be shipped to Lincoln, NE.**



SURVEY PURPOSE:

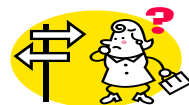
Field observations and lab samples collected during the Wheat Objective Yield Survey are **used in USDA wheat yield forecasts during the crop season.**



FORM A AND GRID MAP

*Interviewer's Manual (IM)
Chapter 3*

WHAT IF.....?



- ☒ **Attempt Form A by phone for all samples before attempting any Face-to-Face contact.**
- ☒ Form A greatly simplified to expedite phone calls
- ☒ Explain survey purpose. Obtain permission to lay out the sample unit, make monthly counts, and clip a few heads.
- ☒ Verify name & address. Verify acres of wheat **intended TO BE HARVESTED FOR GRAIN.** Item 1 (filled in by office) as reported during the March Ag Survey. *If incorrect, do not change but PLEASE WRITE DETAILED NOTES.*
- ☒ The sample field for operations will be determined based on the field closest or furthest away from farmstead and cardinal or intercardinal direction provided in Form A.
- ☒ For operations with multiple samples, **there will be a printed direction. The selected field is the field closest or furthest in the given direction**
- ☒ Complete remainder of Form A.

Q) A respondent has multiple samples?

A) You will have multiple Sample Kit Envelopes and multiple Form A's. Complete the first **four** with the operator. Later, copy the inside of the completed Form A to all of the other Form A's. For example, data for the 5th sample in the field would be copied from the forms for the first sample; the 6th is the same as the 2nd, etc.

Q) The respondent has NO wheat for grain harvest on their ENTIRE farm? (*did not plant wheat OR did plant wheat but was/will be grazed out, cut for hay, abandoned, etc*)

A) Write **detailed** notes in CAPI for Form A.

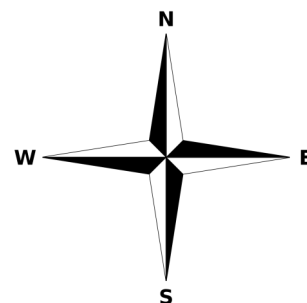
Cardinal Directions:

North (N), East (E), South (S), West (W).

Field Selection examples:

CNE = Closest NorthEast field

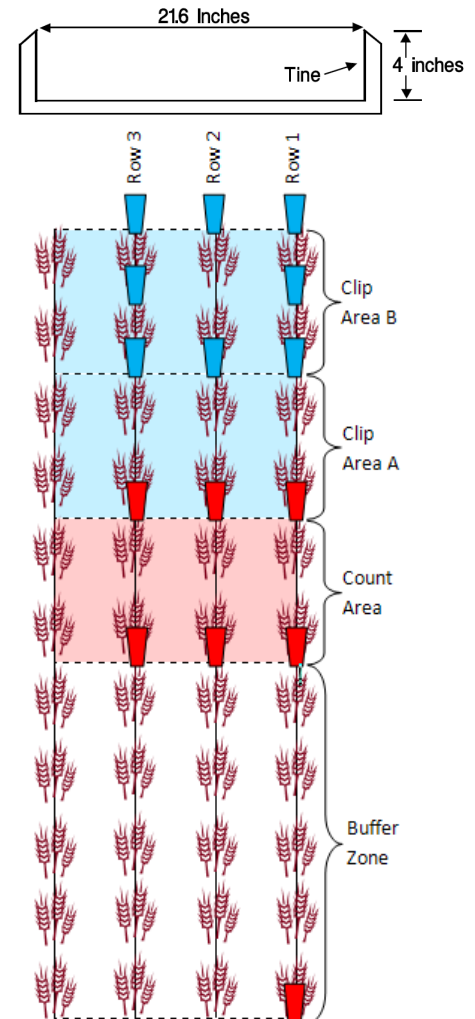
FS = Furthest South field



When completing Form A, you will ask about pesticide applications at the sampled field. If yes, obtain name and latest application date. **Remember, safety first! To protect yourself:** 1) Find out where the pesticide info will be posted. 2) Field re-entry is 3 days or 72 hours. 3) Wear long sleeve shirt and pants and a head covering. 4) Launder clothes promptly. 5) Thoroughly wash all exposed skin areas.

LAYING OUT THE SAMPLE UNITSInterviewer's Manual (IM)
Chapter 4

1. **From the Sample Kit Envelope, make the paces selection.**
2. **Determine your starting corner and walk your paces.** Start your paces 1.5 feet outside the plowed edge of the field. Walk parallel to the longer side of the field the number of paces along edge of field (rows on label). Turn at a right angle and walk into the field the required number of paces. At your last pace, place the yardstick so that it touches the toe of your shoe and crosses three drill rows.
3. **Lay out the 5 foot buffer zone** to the right of the yardstick. Mark the sample number on a red stake and insert into ground. Measure 5 feet and place a red stake (U1-R1) at the base of the plants. Reposition the yardstick within the 5 foot buffer so that it touches the U1-R1 stake and crosses three drill rows to the left.
4. **Lay out the Count Area** (red stakes) - place your wheat frame to the right of the yardstick. Working from outside the unit, carefully slip the wheat frame into Row 1 through the base of the plants with the inside corner of the left tine touching the U1-R1 stake. The tines of the frame may divide a plant with many stalks—do not move stalks in and out of the frame. Place a red stake in the inside corner of the right tine to finish marking Row 1. Lift and move the frame to measure and mark the second and third rows. Label the stakes (U1-R1, U1-R2, etc).
5. **Lay out the Clip Areas** (blue stakes) - move to the right of the count area and re-insert the frame with the left tine just inside the count area, touching the red stake. Place a blue stake inside the right tine to mark Row 1 of Clip Area A. Mark all three rows. Repeat to lay out Clip Area B immediately to right of the first clip area, again using blue stakes. It's also a good idea to go ahead and mark the halfway points for your 1st and 2nd clip.
6. **Unit 2** - Starting from the last pace required for Unit 1, walk 30 more paces parallel with the longer side of the field and in the same direction you were traveling for the first unit. Turn at a right angle and walk 30 more paces into field to lay out and mark Unit 2.

WHEAT FRAME:**Row Space Conversions**

7.5 inches = 2.5 feet
 10 inches = 3.3 feet
 12 inches = 4 feet

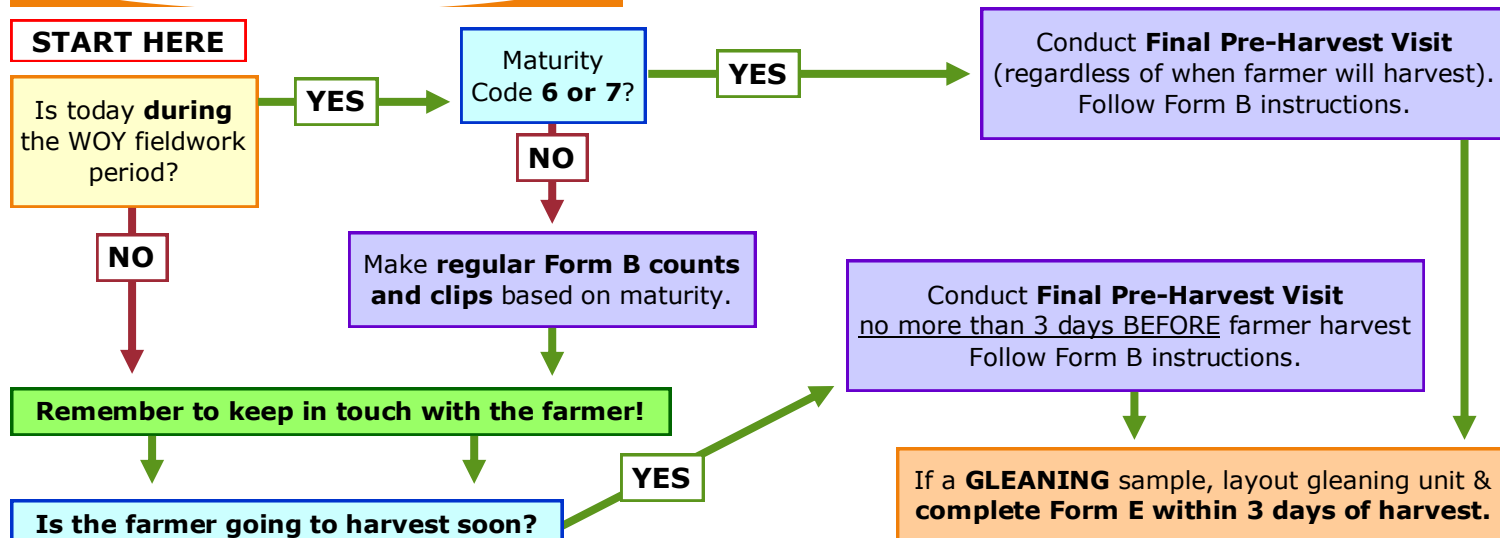
WHAT IF.....?

Review **Chapter 4** of the Interviewer's Manual for clarification on:



- Q) You have trouble determining the starting corner** (odd-shaped fields)?
- Q) You encounter a blank area while walking your paces?**
- Q) You reach end of field with paces still left to take?**
- Q) Field is broadcast?**

HARVEST FLOW CHART

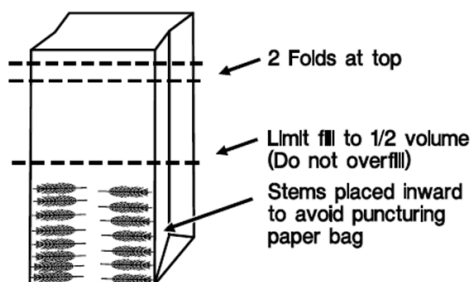


SHIPPING LAB SAMPLES

Interviewer's Manual (IM)
Chapter 5

ID TAGS

- ✓ Complete ALL lines of identification—this is extremely important!
- ✓ **Date on the ID Tag MUST MATCH the date on the Form B (or E).**
- ✓ **Code 3/4/5**—use **YELLOW ID Tag**. Per visit, you will use **ONE** tag per sample (both units).
- ✓ **Code 6/7**—**Final Pre-Harvest Visit**—use **PINK ID Tag**. Per sample, you will use **TWO** tags; one for each unit.
- ✓ **Gleaning**—use **PINK ID Tag**. Per sample, you will use **ONE** tag (both units).



Read the "Shipping Do's and Don'ts" in Chapter 5 of the Interviewer's Manual.

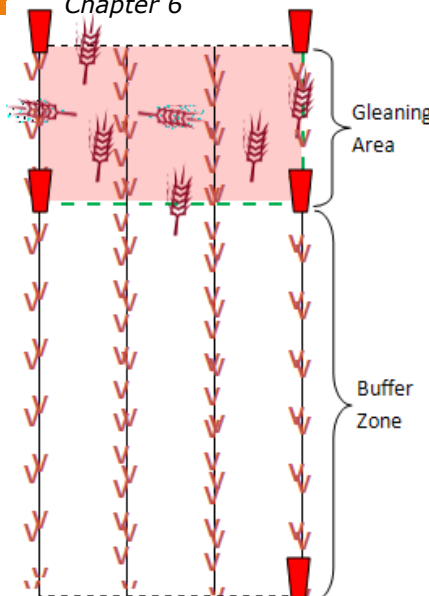
Tyvek Envelope

- ♦ Make sure you have properly secured the completed ID Tag(s) on the outside of the paper bags with a rubber band.
- ♦ Place paper bags inside the white Tyvek envelope.
- ♦ Close the envelope and seal.
- ♦ Add the **UPS label (to St. Louis)** Write down the tracking number on the Form B and on the back of the Sample Kit Envelope.
- ♦ Take sample to UPS drop-off or schedule a pickup.

FORM E - GLEANNING

- ✓ Sample numbers evenly divisible by 4. Gleaning samples are identified with a label on the Sample Kit Envelope and a blue Form E will be in the Sample Kit Envelope.
- ✓ **Gleaning should take place as soon as possible after harvest. No later than three days after harvest is complete.**
- ✓ If sample field has been disked or plowed after harvest, attempt to find an alternate field of the operator's.
- ✓ Starting from same starting corner, locate the gleaning unit by **adding 5 paces to the original number of paces** used for the Form B layout.
- ✓ Unit layout includes a 5 foot buffer zone and the **gleaning area which is one wheat frame wide and 3 rows (and middles—up to fourth row) deep.**

Interviewer's Manual (IM)
Chapter 6



Measure distance from stalks in Row 1 to stalks in Row 5.
Record on the Form E.

Glean within the boundaries:

- ♦ All unthreshed whole heads
- ♦ All partly threshed heads
- ♦ All loose wheat grains
- ♦ If head/grain/stalk is on the two boundaries adjacent to starting corner—**INCLUDE**.
- ♦ If on far two boundaries, **EXCLUDE**.

All gleanings for both units should be placed in one paper bag. **Complete one PINK ID Tag**, secure with rubber band.

Complete Form E. Put Form E in the Tyvek envelope with the paper bag and ID Tag, add the UPS label (to St. Louis).

Write down the tracking number on back of the Sample Kit Envelope. Take sample to UPS drop-off or schedule a pickup.

FORM B - COUNTS & CLIPS

Interviewer's Manual (IM)
Chapter 5

- ✓ Write in date, pesticide information, and paces.
- ✓ Take row space measurement (*initial visit normally, follow skips*)
- ✓ Assign stage of maturity that represents **majority** of the plants.

COUNTS

Q7—# of Stalks in Row - **Maturity 1 or 2, start here.**

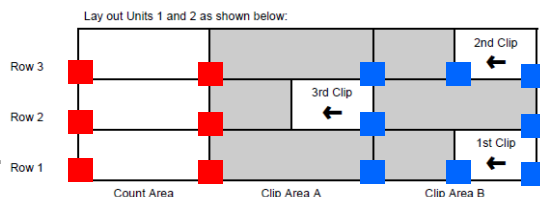
Q8—# of Heads in Late Boot - **Maturity 3—7, start here.**

Q9a—# of Emerged Heads on All Stalks—count when **spikelets are seen through the split** in the sheath leaf or beyond.

Q9b—# of Detached Heads in Unit—**only on Final Pre-Harvest visit.** Record your counts on the back of the Sample Kit Envelope.

CLIPS

- ✓ Code 3, 4, or 5 Clips are made in the **CLIP AREA**.
- ✓ Final Pre-Harvest Clips are made in the **COUNT AREA**.



- ✓ Date on ID Tags **MUST** be SAME as date on corresponding Form B.
- ✓ Use YELLOW ID Tag for Code 3/4/5. Use PINK ID Tag for Code 6/7.

Maturity Code 3, 4, or 5 - Q11 on Form B

- ◆ Determine **which row** in the **CLIP AREA** (above) to make your clips; mark the halfway point with a blue stake (if not already marked).
- ◆ Mow all stalks until **5 emerged heads** are obtained (or until one-half the row is completely mowed). Clip stalk of each emerged head 1/2 inch below the head. Place the 5 emerged heads in a SMALL bag; and **record count on one YELLOW ID Tag**.
- ◆ Mow remaining stalks up to the half-way mark. Clip and count any **heads in late boot** (at base of top foliage leaf); place in a MEDIUM size bag. Clip and count stalks with **emerged heads** (clip 1/2 inch below head). Place remaining emerged heads in a LARGE bag.
- ◆ **Record count of remaining emerged heads and the late boot heads on the same YELLOW ID Tag.**
- ◆ **Repeat for Unit 2** using **same bags and same ID Tag** as Unit 1.
- ◆ Send the lab sample to the National Lab in St. Louis (see back) and **enter the Form B in CAPI**

Maturity Code 6 or 7 - Final Pre-Harvest - Q12 on Form B

- ◆ Use a **separate** LARGE bag for each unit.
- ◆ Clip **all heads in late boot** (at base of top foliage leaf) in the unit **COUNT AREA** in Row 1. Compare counts to the Form B.
- ◆ Clip **all emerged heads** (1/2 inch below head) in Row 1. Compare counts to the Form B. Place emerged heads in same bag with late boot heads.
- ◆ **Repeat** for Rows 2 and 3.
- ◆ Pick up **all detached heads** on ground in unit. Compare with count recorded on Form B.
- ◆ **Repeat for Unit 2** using a separate large bag.
- ◆ **Copy counts from Form B to PINK ID Tags (one for EACH Unit).**
- ◆ Send the lab sample to the National Lab in St. Louis (see back) and **enter the Form B IN CAPI**

STAGES OF MATURITY

When in doubt, **ALWAYS** classify in the **LOWER** stage of maturity. See next page for pictures.

Code 1 - Pre-Flag

Tillers are only an inch or two high. There is no swelling in the stalks and no flag leaf present.

COUNTS ONLY Code 2 - Flag or Early Boot

Stalks are starting to joint and joints can be seen easily. A flag leaf is present and the collar of the flag leaf has emerged above the top foliage leaf. The enclosed head is located below the collar of the top foliage leaf.

Code 3 - Late Boot

Swelling has occurred above the top foliage leaf. The sheath is split and the head is partially or wholly emerged. The emerged head will show a watery clear liquid turning milky white.

Code 4 - Milk

Kernels are soft, moist, and filled with a milky liquid. Plant is still generally green.

COUNTS & CLIPS

Code 5 - Soft Dough

Grains can be crushed and the contents are soft and can be kneaded like dough. The plant has changed to a golden tint; the stalk is smooth and shiny. Only the upper-most leaves are swollen and green, the lower leaves being shrunken and brownish.

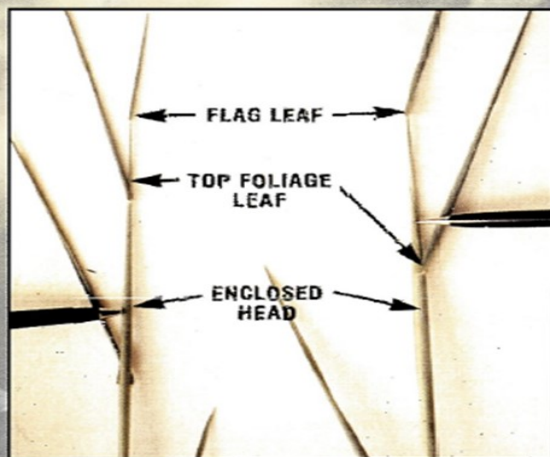
COUNTS & FINAL PRE-HARVEST CLIPS

Code 6 - Hard Dough

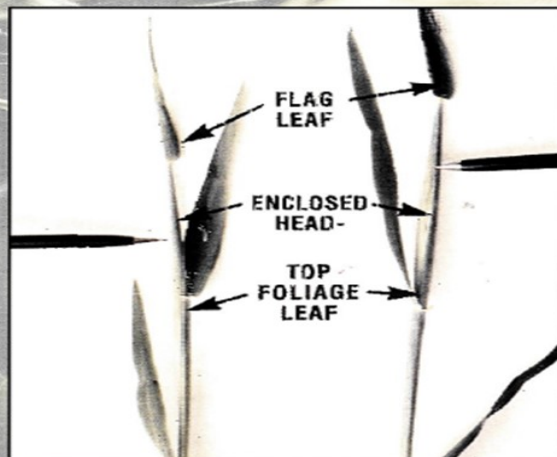
Grain is firm and can be dented with the thumbnail, but not easily crushed. The leaves are dry and shrunken.

Code 7 - Ripe

Straw is full and brittle. The grain is hard and breaks into fragments when crushed. Harvest is expected very soon.



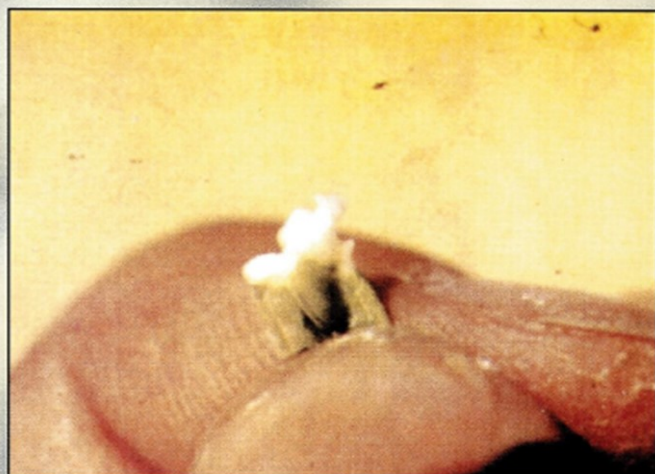
CODE 2: (Flag or Early Boot Stage). A flag leaf is present and the collar of the flag leaf has emerged above the top foliage leaf. The enclosed head is located below the collar of the top foliage leaf.



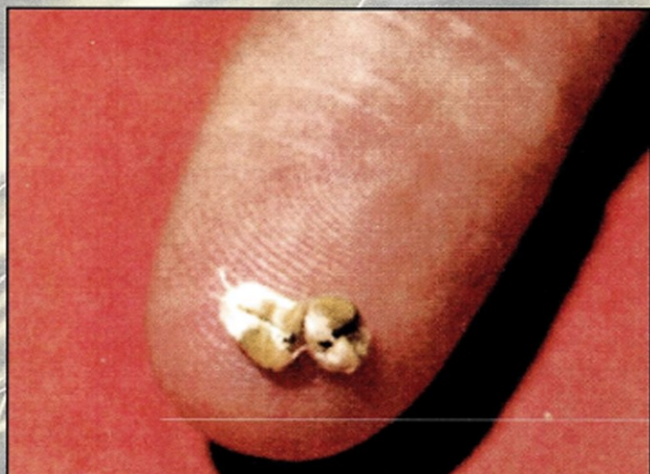
CODE 3: (Late Boot or Flower Stage). The wheat is in the late boot stage from the point the swelling has occurred above the top foliage leaf until the head has emerged and will show a watery clear liquid turning milky white.



CODE 4: (Milk Stage). The kernels are soft, moist, and filled with a milky liquid.



CODE 5: (Soft Dough Stage). The content of the kernels are soft and can be kneaded like dough.



CODE 6: (Hard Dough Stage). The grain is firm and can be dented with the thumbnail, but not easily crushed.



CODE 7: (Ripe Stage). The grain is hard and breaks into fragments when crushed.

COMPLETING FORM B ON CAPI

Interviewer's Manual (IM)
Chapter 7

When completing Form B on CAPI, you will have to determine the status code of the Form B that you are completing. The status code is used to identify the sample's status for the current enumeration period based upon your recorded observations. A status code **MUST** be selected at the end of each Objective Yield form to allow it to be submitted. All Form B's must be entered into CAPI.

FORM B STATUS CODES

1—COMPLETE

First Visit: You visited the field, laid out the sample units, and completed the Form B for both units.

Future Visits: You will return to this field to record measurements for both units and complete another Form B until the sample units are mature enough to perform pre-harvest procedures and send the sample to the National Lab for processing.

2—Farmer Harvested for Grain BEFORE Unit was Laid Out.

First Visit: The farmer harvested the sampled field for grain before sample units were laid out.

There will be no future visits to this sample.

3—Farmer Harvested for Grain AFTER Units were Laid Out

After First Visit: The enumerator was able to complete at least one Form B in a previous survey month, but the field was harvested prior to the following month's visit for enumeration and/or pre-harvest sample collection.

No future visits will be required to this sample.

4—Enumerator Harvested or Both Units are Blank

Pre-Harvest: When the sample field is in MATURITY CODE 6 or 7. Perform pre-harvest procedures for each sample unit, package and send the samples to the National Lab according to specifications outlined in the manual.

No future visits will be required to this sample.

5—Field partially destroyed and both units destroyed

Any Visit: The sampled field and/or both units have been destroyed to the point where the field can no longer be harvested for grain. This commonly occurs in instances where the sampled field was damaged from weather, fire, or vandalism.

No future visits will be required to this sample.

6—Lost Sample—Field **NOT** Harvested for Grain

The sampled field will not be harvested for grain. The field will be used for purposes other than grain (grazing, silage/ other forage, hay, abandoned, etc.).

No future visits will be required to this sample.

7—Refusal

Any visit: The farmer refused to participate in the survey during the Form A interview or decided they no longer wished to participate after samples were laid out in the field.

No future visits will be required to this sample.

8—Inaccessible

Any visit: The sampled field was inaccessible for the current survey period.

13—No Winter Wheat for Harvest as Grain on Entire Farm

No wheat was planted for harvest as grain on the entire farm at the time of the Form A interview.

No future visit will be required to this sample.