AGRICULTURAL RESOURCE MANAGEMENT SURVEY

OMB No. 0535-0218
Approval Expires: 7/31/2018
Project Code: 906
SMetaKey: 1312
Phase II

NATIONAL AGRICULTURAL STATISTICS SERVICE

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CORN PRODUCTION PRACTICES AND COSTS REPORT FOR 2020

VERSION	STATE	ID	TRACT	SUBTRACT	C-TYPE
8	__ __	__ __ __ __ __ __ __ __ __ __	01	__ __	105

CONTACT RECORD		
DATE	TIME	NOTES

INTRODUCTION:
[*Introduce yourself, and ask for the operator. Rephrase in your own words*.]
We are collecting information on practices and costs used to produce corn and need your help to make the information as accurate as possible. The information you provide will be used for statistical purposes only. In accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107-347 and other applicable Federal laws, your responses will be kept confidential and will not be disclosed in identifiable form to anyone other than employees or agents. By law, every employee and agent has taken an oath and is subject to a jail term, a fine, or both if he or she willfully discloses ANY identifiable information about you or your operation Response is voluntary.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0535-0218. The time required to complete this information collection is estimated to average 75 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

We encourage you to refer to your farm records during the interview.

BEGINNING TIME [*MILITARY*] H H M M: 0004 __ __ __ __

SCREENING BOX: 0006

☐ [*Name, address and partners verified and updated if necessary*]

POID __ __ __ __ __ __ __ __ __ __	POID __ __ __ __ __ __ __ __ __ __
PARTNER NAME	PARTNER NAME
ADDRESS	ADDRESS
CITY STATE ZIP PHONE NUMBER	CITY STATE ZIP PHONE NUMBER
POID __ __ __ __ __ __ __ __ __ __	**POID __ __ __ __ __ __ __ __ __ __**
PARTNER NAME	PARTNER NAME
ADDRESS	ADDRESS
CITY STATE ZIP PHONE NUMBER	CITY STATE ZIP PHONE NUMBER

A CORN FIELD SELECTION A

Total Planted Acres

1. How many total acres of corn did this operation plant for the 2020 crop year? . . . . . 0050 .___

[*If no acres were planted, review Screening Survey Information Form, make notes, then go to Conclusion on back page*.]

a. Did you produce any acres of CERTIFIED ORGANIC corn?. . . . . YES = 1 1064

b. Of the total (item 1) acres, how many were planted using/as --

	Total Acres		Number Of Fields
(i) Conventional corn?.	583 .___	+	1065
(ii) Certified organic corn?.	730 .___	+	1066

I will follow a simple procedure to make a random selection from the corn fields planted for the 2020 crop.

Total Number Of Fields Planted

2. What is the TOTAL number of corn fields that were planted on this operation? 0020
[*If only one field, enter "1" and go to item 4.*] . . . . . .

3. Please list these fields according to identifying name/number or describe each field, then I will tell you which field has been selected.

[If there are more than 18 fields, make sure item 2 is total fields planted, and list only the 18 fields closest to the operator's permanent residence. If respondent is unable to identify or describe the fields, use the Field Selection Grid Supplement.]

FIELD NAME, NUMBER OR DESCRIPTION	FIELD NAME, NUMBER OR DESCRIPTION
1	10
2	11
3	12
4	13
5	14
6	15
7	16
8	17
9	18

APPLY “RANDOM NUMBER” LABEL HERE

[Enumerator Action: Circle the pair of numbers on the above label associated with the last numbered field in item 3. Select the field according to the number you circled on the label, and record the selected number. If only one field, enter “1”.] . . . . . .

Selected Field Number: 0021

5. The field selected is _____ (*field name/number/description*).

During this interview, the corn questions will be about this selected corn field.
[*Be sure the operator can identify the selected field.*]

6. For the randomly selected field above, please provide the Farm Service Agency (FSA):

[If the physical field in this survey spans multiple FSA administrative fields, please include the farm, tract, and field number for the largest administrative field. These numbers are field identifiers that USDA uses to administer farm programs like crop insurance, commodity programs, and conservation programs. Having this information helps USDA make better use of other data you have provided to USDA and will improve the types of statistical analysis that can be done with the responses from this survey.]

	Number
a. Farm Number (up to 8 digits)	1070
b. Tract Number (up to 7 digits)	1071
c. Field Number (up to 4 digits, exclude subfield letters)	1072

OFFICE USE
OY Field Substituted: 0022

B FIELD CHARACTERISTICS---SELECTED FIELD B

1. How many acres of corn did this operation plant in the selected field for the 2020 crop? . . . . . | Acres | 1301 .__

a. Are the acres in the selected field Certified Organic?. . . . . YES = 1 | Code | 1300

[If item 1a = 1, go to item c.]

b. What was the cost, per acre, for third party organic certification?. . . . . | Dollars & Cents | 1891 .__ __

c. Was the selected field transitioning into organic corn production in 2020? . . . . | Code | 1399

2. Were the acres in the selected field--- . . .

1 owned by this operation?
2 rented for cash with the payment being a fixed cash amount?
3 rented for cash with the payment being a flexible cash amount?
4 rented for a share of the crop?
5 rented for some combination of cash and share of the crop?
6 used rent free?

Code | 1302

3. [If field is cash rented (item 2 = 2, 3, or 5), ask item 3; otherwise go to item 4.]
What was the cash rent paid per acre for this 2020 corn field?. . . . . | Dollars & Cents Per Acre | 1303 .__ __

4. [If field is share rented (item 2 = 4 or 5), ask---]
What was the landlord's share of the crop from the selected field? . . . . . | Percent | 1304

5. [If field is rented (item 2 = 2, 3, 4, 5, or 6), ask---]
What was the total cost for all inputs provided by any landlord for the 2020 crop on the selected field? [INCLUDE the costs for all inputs, such as seed, fertilizer, chemicals, technical services, custom operations, drying, and irrigation. EXCLUDE real estate tax expenses and lime costs paid by the landowner] . . . . . | Dollars & Cents Per Acre OR | 1305 .__ __ | Total Dollars | 1305

6. What was the total cost for all inputs provided by any contractor for the 2020 crop on the selected field? (*Include the costs for all inputs, such as seed, fertilizer, chemicals, technical services, custom operations, drying and irrigation.*) . . | Dollars & Cents Per Acre Or | 1309 .__ __ | Total Dollars | 1310

7. What year did you (the operator listed on the label) start operating the selected field? . . . . | Year | 1312 ___ ___ ___ ___

8. On what date was the selected field planted? . . . . . MM DD: 1308 __ __ __ __ 2020

a. What was your yield goal at planting for the selected field?. . . . . Units Per Acre: 0216 .__ ; Unit Codes (1 Pounds, 2 CWT, 3 Tons, 4 Bushels): 0217

9. Was the corn on the selected field planted with the intention of being harvested as . . . . . (1 Grain, 2 Silage, 4 Seed, 25 Other) . . . . . Code: 3327

10.

For the next question, INCLUDE operator, landlord, and contractor costs, cost of seed treatment, and technology fee. EXCLUDE any Bt seed payment received for participating in the Pink Bollworm Program.

9. What was the source and cost of--	Dollars & Cents per Unit	Unit Code (1 Pounds, 22 Acre, 23 Approx 50 Lb. Bag, 40 250,000 Seed Bag)	Percent of Seed Planted
a. Genetically modified organism/genetically engineered (GMO/GE) purchased seed?	1214 .__ __	1215	1216
b. Non genetically modified organism/genetically engineered (Non-GMO/GE) purchased seed?	1217 .__ __	1218	1219
c. Homegrown seed?			1318
			100%

[If homegrown, ask--]

i. What was the cost for cleaning and treating this seed? Cents per Pound: 3321 .__ __

11. What was the seeding rate per acre the first time the selected field was planted? Units: 1313 .____ AND (Unit Code: 1 = Pounds/Acre, 2 = CWT/Acre, 4 = Bushels/Acre, 25 = Kernels-Seeds/Acre, 38 = Kernels-Seeds/Foot): 1314

a. What method of seeding did you use on the selected field?..... (1 Drilled?, 2 Planted in conventional rows?, 3 Broadcast on the selected field?) . . . . CODE: 1316

12. What was the average corn row width for the selected field? . . . . . Inches: 1322

13. **How many acres in this field had to be replanted to corn?** (*Acres replanted = Number of acres x Number of times replanted*) . . . . . **ACRES**: 1315 .___

Code

14. For the 2020 corn crop, was the corn seed--. . . . . 1 Treated with a pesticide prior to purchase? 2 Treated with a pesticide after purchase? 3 Not treated with a pesticide? 3062

[If item 14 = 1 or 2, ask--]

Seed Treatment Name

a. What was the name of the seed treatment? Write seed treatment name in the box provided. . . . .

Code

b. What was the seed treatment Code? Enter the appropriate seed treatment Code from the Respondent Booklet. Enter 999 if a seed treatment was applied but is not listed. Enter "-1" if the seed treatment is not known. 2325

[If item 21b is YES, ask--] CODE

15. For the 2020 corn crop, did you plant a commercial seed product on the selected field? . . . . . Yes = 1 No = 3 2340

[If item 15 = 1, ask --]

Commercial Seed Product Name

a. What was the name of the seed product? Write the name in the box provided. . . . .

Code

b. What was the seed the product code? Enter the appropriate product code from the Respondent Booklet (page 5). Enter 999 if a seed product was purchased but the product is not listed. Enter "-1" if the product is not known. . . . .

	2020 1 Yes 3 No	2019 1 Yes 3 No 4 N/A no corn in field
15. Did you plant genetically modified organism/genetically engineered (GMO/GE) seeds for the 2020 or 2019 crop years?	2300	2301

[If item 15 = 1 for either year, continue. Otherwise, go to item 16--]

15. Did the CORN planted on the selected field have any of the following genetically modified organism/genetically engineered (GMO/GE) traits in 2019 or 2020?

	2020 1 Yes 3 No	2019 1 Yes 3 No 4 N/A no corn in field
a. Insect Resistance (Bt) to Corn Borer	2501	2502
(i) With multiple (pyramided) modes of action	2503	2504
b. Insect Resistance (Bt) to Rootworm	362	363
(i) With multiple (pyramided) modes of action	2507	2508
c. Insect Resistance (Bt) to Earworm	2509	2510
d. Insect Resistance (Bt) to Armyworm	2511	2512
e. Other Insect Resistance (Bt) Trait	2513	2514
f. Herbicide Tolerance (HT) to Glyphosate (e.g. Roundup Ready®)	2306	2307
g. Herbicide Tolerance (HT) to 2, 4-D (e.g. Enlist®)	2308	2309
h. Herbicide Tolerance (HT) to Dicamba (e.g. Extend®)	2310	2311
i. Herbicide Tolerance (HT) to Glufosinate (e.g. Liberty Link®)	2312	2313
j. Other Herbicide Tolerant (HT) Trait	2514	2315
k. Drought Resistance	2515	2516
l. Enzyme technology for ethanol (e.g. Enogen)	XXXX	XXXX

Note: Any genetically modified organism/genetically engineered HT trait other than Glyphosate tolerance, 2,4-D tolerance, Dicamba Tolerance, or Glufosinate Tolerance should be accounted for using the “Other HT train” column.

	2020 1 Yes 3 No	2019 1 Yes 3 No 4 N/A no corn in field
16. Did you plant non-genetically modified/genetically engineered (non-GMO/GE) seeds for the 2020 or 2019 crop years?	2316	2317

[If item 16=1 for either year, continue. Otherwise, go to 19--]

	2020 1 Yes 3 No	2019 1 Yes 3 No 4 N/A no corn in field
17. Did the corn planted on the selected field have non-GMO/GE herbicide tolerant (HT) traits in 2020 or 2019?	2318	2319
18. Was the corn from the selected field sold (or will it be sold) through a market specifically for non-GMO/GE corn?	2518	2519

	Dollars & Cents per Bushel
a. What was the price premium (or the expected premium if not yet sold) received for this non-genetically modified corn?	2384 .__ __

Code _____

19. Was the corn planted on the selected field drought tolerant? . . . . . Yes = 1, No = 3 | Code: xxxx

[If item 19=1, continue. Otherwise, go to 21--]

		Code
a.	Were these GMO/GE drought-tolerant seeds (e.g., Genuity® DroughtGard®)?	Yes = 1, No = 3 | xxxx
b.	Were these non-GMO/GE drought-tolerant seeds (e.g., Optimum® AQUAmax®, Agrisure Artesian®)?	Yes = 1, No = 3 | xxxx
c.	Since the time that drought-tolerant corn became available in your area, have you only planted drought-tolerant corn varieties?	Yes = 1, No = 3 | xxxx

20. Next we will ask about factors that influenced your decision to plant drought tolerant seeds on the selected field.

In the selected field, was the decision to plant drought-tolerant corn based on any of the following? [Enter Yes = 1 for all that apply]	Code: Yes = 1, No = 3
a. Ability to bundle drought tolerant seed traits with one or more GMO/GE traits, such as insect resistance or herbicide tolerance?	xxxx
b. Price of drought tolerant seed compared to seeds without drought tolerance?	xxxx
c. Price of irrigation water and/or irrigation water applications?	xxxx
d. Low soil moisture from frequent droughts?	xxxx
e. Field conditions, other than soil moisture or seasonal forecasts, at planting time?	xxxx
f. Drought in the prior crop year that at least partially damaged the crop?	xxxx
g. Concerns about changing growing conditions?	xxxx

21. Did you use a genetically engineered, insect resistant seed variety for the 2020 crop? . . . . . Yes = 1, No = 3 | Code: 2326

[If item 21 = 1 , ask--]

a. Did you choose the resistant seed variety used on the selected field primarily to--

1 Increase yields through improved pest (weed or insect) control?
2 Decrease pesticide input costs?
3 Save management time or labor or improve ease of management?
4 Reduce refuge requirements
5 For some other reason(s)? [*Specify* _____]

. . . . . Code: 2327

b. Was this a refuge-in-the-bag product? . . . . . Yes = 1, No = 3 | Code: xxxx

c. What percentage of the bag was conventional seed? . . . . . Percent: xxxx

[If item 21 = YES continue. Else go to item 23.]

Code: _____

22. Was a refuge for insect pests planted on the selected field? . . . . . Yes = 1, No = 3 | 2328

[If item 22 is yes, continue, otherwise go to item 26]

	Percent
23. What percent of the selected field was used as refuge for insect pests in order to comply with Bt corn insect resistance management guidelines?	xxxx

	Acres
24. What is the size in acres of the refuge? Refuge may be adjacent to the field or a separate block within ½ mile of the field	xxxx .

Unit Codes: 1 Pounds; 2 CWT; 3 Tons; 4 Bushels

	Units per Acre	
25. What was the difference in yields in the Bt crop with the yields in the non-bt refuge crop?	2670 .	2671

		CODE
26. **Did you use an "air delivery" or "vacuum (pneumatic) planter"?**	**YES = 1**	2323
[*If item 23 is YES, ask--*]		**CODE**
a. Did you use a talc and/or graphite seed flow lubricant?.	**YES = 1**	2324
b. Did you use an alternative seed flow lubricant (e.g. Bayer Fluency Agent) instead of talc and/or graphite?.	**YES = 1**	2394

26. 27. Has harvest of the selected field been completed? . . . . . Yes = 1, No = 3 | Code 1328

28. Please report the following information about the acres harvested (or to be harvested) and the yields from the selected field.

How many acres in this corn field were (*or will be*)---	Acres	1 What yield per acre did you (*or do you expect to*) get for corn--- Units per Acre	2 Unit Code 1 Pounds 2 CWT 3 Tons 4 Bushels Code
a. harvested for grain, first crop?.	1346 .	1347 .	1348
b. harvested for silage or green chop?.	1349 .	1350 .	TONS
c. harvested for seed?.	1431 .	1432 .	1433
d. abandoned?.	1351 .		
e. used for some other purpose?.	1439 .		

29. Were the stalks/stover harvested from the selected field?

Code _____

☐ YES - [*Enter Code 1 and go to item 30*] NO - [*Ask 26a, then go to item 31*]. 1754

a. [*If the corn stalks/stover were not harvested, ask*---]

What was the primary reason for not harvesting the corn stalks/stover?. . . . . .

1 No market/use for corn stalks/stover
2 Harvesting was not profitable
3 The corn stalks/stover were left as organic matter for the soil
4 The stalks/stover were left for livestock grazing
5 The stalks/stover were used for animal bedding
6 Other [*Specify:*]

. . . . Code 1398

30. How many acres of corn stalks/stover were harvested from this corn field? . . . . . Acres 1755 .___

a. How many tons of corn stalks/stover were harvested from these corn acres (*item 30*)?. . . . . Total Tons 1756

_____.__ (Tons per Acre) X _____ (Acres) = _____ (Total Tons) OR _____ (Bales) X _____ (Lbs per Bale) ÷ 2000 (Lbs per Ton) = _____ (Total Tons)

Code 1023

31. Did any livestock graze this corn field after harvest of the 2020 corn crop? . . . . . .

☐ YES - [*Enter Code 1 and continue*] ☐ NO - [*Go to item 35*]

32. What type of livestock grazed this corn field after harvest of the 2020 corn crop? . . . . . .

1 Cattle
2 Sheep
3 Other [*Specify:* _____]

. . . . . Code 1024

a. About how many head of livestock (*item 28*) grazed this corn field?. . . . . Head 1027

b. How many days did this livestock graze on this corn field?. . . . . Days 1028

33. Was any of the residue from the prior crop (corn stover, wheat straw, etc.) removed post-harvest?. . . . . Yes=1 No = 3 Code xxxx

[*If yes, ask* --]

34. How many tons per acre of residue were removed through harvest?. . . . . Tons 1328

a. About how many head of cattle grazed the residue?. . . . . Head 1362

Days

1363
xxxx

b. How many days did cattle graze on the residue?. . . . . .

c. How many days did any other livestock graze the residue?. . . . . .

CROP CODE LIST for item 35 – PREVIOUSLY PLANTED CROPS			
190 Barley	311 Grasses including clover	22 Rye	318 No crop planted
6 Corn for grain	1 Hay, alfalfa	240 Sorghum, all	291 Other field crop
5 Corn for silage	11 Hay, all other	26 Soybeans	292 Other crop
283 Cotton (all)	15 Oats	263 Wheat, spring	312 Cover crop mix
302 CRP	21 Rice	165 Wheat, winter	

35. Please report what crops were previously PLANTED on the majority of the selected field, including cover crops.

1 What crops were planted on the selected field in--- [For perennial crops (1, 11, 34, 292, 302, and 311), report the crop code in all seasons when the crop is growing.]			2 What type of crop was grown on the selected field? 1 GMO/GE Herbicide Tolerant (HT) 2 GMO/GE Insect Resistant (Bt) 3 Stacked (HT and Bt) 4 Not GMO/GE	3 Was this a cover crop?	4 If a cover crop was planted, how did you terminate this cover crop? 1 Tilled-in 2 Herbicide 3 Rolled 4 Grazed 5 Harvested for Forage 6 Harvested for Grain	5 Was the selected field irrigated?	6 Was this field no-tilled or strip-tilled? 1/
Season And Year	Crop Name	Crop Code		Yes = 1 No = 3	Code	Yes = 1 No =3	Yes = 1 No = 3
A. Spring/Summer Of 2020?	Corn		xxxx			xxxx	xxxx
B. Fall Of 2019?		1343		1470	1471	2344	1345
C. Spring/Summer Of 2019?.		1369		1472	1473	2370	1371
D. Fall Of 2018?		1372		1474	1475	2373	1374
E. Spring/Summer Of 2018?		1375		1476	1477	2376	1377
F. Fall Of 2017?		1378		1478	1479	2379	1380
G. Spring/Summer Of 2017?		1381		1480	1481	2382	1383
H. Fall Of 2016?		1366		1482	1483	2367	1368
I. Spring/Summer Of 2016?		1340		1484	1485	2341	1342

1/ No-till means leaving soil and previous crop residue undisturbed from harvest to planting. Strip-till means tilling a narrow strip over the row, leaving soil and previous crop residue between the rows undisturbed.

[If a cover crop was planted in Spring/Summer/Fall 2020, ask--]

DOLLARS & CENTS PER ACRE

i. What was the seed cost per acre for the cover crop?. . . . . 1468 .__ __

k. What was the per-acre cost-share or financial assistance payments received for the cover crop? … 1495 .__ __

[Enter zero if no program payment was received]

36. Has any part of the selected field been classified as “Highly Erodible Land”? Cropland identified as highly erodible is subject to highly erodible land conservation (HELC) requirement. Producers who receive farm program payments are required to have and apply a written soil conservation plan. A “written plan” is a plan prepared in accordance with Federal, State, or district standards…… Yes = 1 No = 3 — Code 1404

37. Do you have a written conservation plan that specifies practices to control soil erosion?..... Yes = 1 — xxxx

38. Does the selected field contain a wetland? Wetlands are subject to Wetland Conservation (WC) or "swampbuster" requirements. Producers who receive farm program payments must refrain from draining wetlands to make them ready for crop production……

No = 3 | 1405
Yes = 1
No = 3

39. What is the slope of the selected field?.

Nearly level (0 - 2%)
Even, moderate grade (3 – 9%)
Variable, moderate grade
Even, steep grade (over 10%)
Variable, steep grade

. . . . . .

Code 2400

40. What is the primary soil type of the selected field?. . . . . .

Loam
Clay
Sandy
Mixed

. . . . . .

Code 2401

41. Next we will ask about soil and water concerns that you have on the selected field.

In the selected field, are you concerned about any of the following?	Code Yes = 1 No = 3	Have you received technical assistance from any of the following sources to evaluate this resource concern? (Report up to 2 sources that you received assistance from.) 1 USDA – NRCS 2 Cooperative Extension Service 3 Other USDA staff, including Forest Service 4 Other (e.g. Soil and Water Conservation District, state agency)	
		Source 1	Source 2
a. Water-driven erosion.	2407	2417	2427
b. Wind-driven erosion.	2408	2418	2428
c. Soil compaction.	2409	2419	2429
d. Poor drainage.	2410	2420	2430
e. Low organic matter.	2411	2421	2431
f. Water quality.	2412	2422	2432
g. Other concerns.	2413	2423	2433
h. *No significant concerns.	2414	2424	2434

[Enumerator Note: Enter Yes = 1 for item h, no significant concerns, only if the respondent replies No = 3 to all other concerns (items a-g)].

46. Did the land use practices for the selected field include subsurface drainage?

Code 2402
YES = 1

[If YES, ask--]

a. In what year was the subsurface drainage installed?. . . . . .

Year 2403 ___ ___ ___ ___

b. What is the average depth of your drainage system?. . . . . .

Inches 2604

c. What is the diameter of your tiles?. . . . . .

2605

d. On average, how many hours does it take your field to return to normal soil moisture levels following a heavy storm?. . . . . .

Hours 2606

Code

e.	Does this system include a mechanism for controlled drainage (e.g. stop logs, risers, or float mechanisms)?.	Yes = 1 No = 3	2406

47. Has the selected field been in any conservation program contracts for which you or your landlord received (or expected to receive) cost-sharing payments, stewardship payments, or incentive payments?

		Unit Code 1 = Current 2 = Past 3 = Never
a.	Environmental Quality Incentive Program (EQIP)	2611
b.	Conservation Security or Conservation Stewardship Programs (CSP)	2612
c.	Conservation Reserve Program (CRP)	2613
d.	Other Federal, State, Local or non-government source	2614

48. Now I need information on soil, crop, and land management practices or activities used on the selected field and any financial or technical assistance you may have received in conjunction with those practices.

a. From this list, please check any practices or activities that you used on the selected field this year or at any time in the past.

On-field Soil and Crop Management

No-Till/Strip-Till	Grass Waterway	☐ 30 Implement an integrated pest management plan - written plan
Conservation Tillage except no-till/strip-till	☐ 20 Implement a nutrient management plan (written plan)	Drift reducing spray nozzles
Cover crop - single species	☐ 26 Split nitrogen application with at least 50% applied after planting	☐ 32 Targeted sprayer - electrical control
Cover crop mix	Precision nutrient application	**Adjacent to Field**
Contour Farming	No fertilizer application more than 30 days before planting	☐ 33 Filter strip
Conservation crop rotation	Controlled release fertilizer	☐ 34 Field border
Terraces	Subsurface phosphorous application	Riparian Buffer - grass or forest

b. For each practice or activity checked in 48a, please complete one line of this table.

1	2	3 Have you ever received at any time--		4 Does this practice or activity help satisfy--	5
		Technical or planning assistance?	Financial assistance?		
Practice or Activity on the selected field	Practice Code (see item 48a)	1 USDA NRCS field staff, cooperative extension, or technical service providers 2 Other sources of assistance 3 No Assistance Needed	1 Environmental Qualify Incentives Program (EQIP) 2 Conservation Stewardship Program (CSP) 3 Conservation Reserve Program (CRP) 4 Other Federal, State, and Local Programs 5 No Assistance Needed	1 A Federal regulatory requirement 2 Highly erodible land conservation compliance 3 Does not relate to any regulation or compliance requirement	Was this practice or plan used on this selected field in 2020? Yes = 1 No = 3
	1610	1611	1612	1613	1614
	1615	1616	1617	1618	1619

	1620	1621	1622	1623	1624
	1625	1626	1627	1628	1629
	1630	1631	1632	1633	1634
	1635	1636	1637	1638	1639
	1640	1641	1642	1643	1644
	1645	1646	1647	1648	1649

49. In 2020, was the corn in the selected field covered by a single or named peril crop insurance (e.g hail, replant, wind, freeze, etc.)?

CODE

☐ YES – [*Enter code 1 and continue*] ☐ NO – [*Go to (multi peril crop insurance)*]. 1393

CODE

a. In 2020, was the rice in the selected field covered by more than one single or named peril crop insurance policies (e.g. hail, replant, wind freeze)?..... YES = 1 NO = 3

Yes = 1 No = 3

b. Did you purchase a policy for Hurricane Insurance Protection – Wind Index in 2020?

DOLLARS & CENTS PER ACRE

c. What was the dollar amount of coverage per acre for the single peril policy covering the selected field? ?. . . . . 1395 .__ __

DOLLARS & CENTS PER ACRE

d. What was the premium cost per acre for the single peril policy coveringthe selected field in 2020? (***Exclude*** *any sign-up fee.*). . . . . .

PERCENT

e. What was the percent deductible for the single peril policy covering the selected field? (Record no deductible as 0%) . . . . . .

CODE

f. Did you (*or will you*) collect an indemnity payment for the selected field from the single peril policy during 2020?. . . . . YES = 1

50. In 2020, was the rice in the selected field covered by a multi-peril crop insurance policy?

CODE

☐ **YES** – [*Enter code 1 and continue.*] ☐ **NO** – [*Go to Section C.*]. 1385

a. Which coverage did you obtain?. . . . . 1 Federal CAT (basic catastrophic insurance) 2 Yield protection (individual) 3 Yield plus SCO (Supplemental Coverage Option) 4 Revenue protection (individual) 5 Revenue plus SCO (Supplemental Coverage Option) 6 Other multi-peril Crop insurance . . . . **CODE** 1386

[*If item a = 2 or 3, ask--*]

PERCENT

i. What percent of yield coverage did you selectfor the selected field?. 1387

ii. What percent of price coverage did you select for the selected field?. 1388

[*If item a = 4 or 5, ask--*]

PERCENT

iii. What percent of revenue coverage did you select for the selected field?. 1389

b. What type of unit coverage did you purchase for the selected field? (Basic = 1, Optional = 2, Enterprise = 3). . . . . CODE

b. In what year did you (*the operator listed on the label*) first purchase multi-peril crop insurance on the selected field? ?. . . . . YEAR

c. What is the 2020 Approved APH (*actual production history*) yield for the selected field?. . . . . CWT PER ACRE

d. What was the premium paid for multi-peril crop insurance on the selected field in 2020? (***Exclude*** *any sign-up fee.*). . . . . DOLLARS AND CENTS PER ACRE

e. Did you (*or will you*) collect an indemnity payment for the selected field From multi-peril crop insurance during 2020?. . . . . **YES = 1** CODE

C NUTRIENT or FERTILIZER APPLICATIONS---SELECTED FIELD C

	Code	Office Use Edit Table
1. Were commercial nutrients or fertilizers applied to the selected field for the 2020 corn crop? INCLUDE those from operators, landlords, and contractors.). . . . . Yes = 1 No = 3	0202	0200

[If item 1 = 1 continue, otherwise go to item 6.]

NUMBER

2. How many commercial nutrient or fertilizer applications were made to the selected field for the 2020 crop? INCLUDE applications made by airplanes and custom applicators.. 0203

3. Now I need to record information for each application.

CHECKLIST

INCLUDE

- ☐ Custom applied nutrients and fertilizers
- ☐ Nutrients or fertilizers applied in the fall of 2019 and those applied earlier if the selected field was fallow in 2019.
- ☐ Commercially prepared manure or compost

EXCLUDE

- ☐ Micronutrients
- ☐ Unprocessed manure
- ☐ Nutrients or fertilizers applied to previous crops in the selected field
- ☐ Lime and Gypsum/landplaster

Office Use Lines in Table	TABLE 001	0299

APPLICATION CODES for COLUMN 6

1 Broadcast, ground without incorporation	5 In irrigation water
2 Broadcast, ground with incorporation	6 Chisel/Injected or knifed in
3 Broadcast, by aircraft	7 Banded in or over row
4 In seed furrow	8 Foliar or directed spray

LINE	2 MATERIALS USED [*Enter percentage analysis or actual pounds of plant nutrients applied per acre*.] [*Show Common Nutrients or Fertilizers in Respondent Booklet*.]	3 What quantity was applied per acre? [*Leave this column blank if actual pounds of nutrients*	4 [Enter material Code.] 1 Pounds 12 Gallons 19 Pounds	5 When was this applied? 1 In the fall before seeding 2 In the spring before seeding	6 How was this applied? [*Refer to Code list above.*]	7 How many acres were treated in this application?

	N Nitrogen	P_2O_5 Phosphate	K_2O Potash	S Sulfur	*were reported.*]	of actual nutrients	3 At seeding 4 After seeding		ACRES
01	31	32	33	34	36	37	38	39	40 .___
02	31	32	33	34	36	37	38	39	40 .___
03	31	32	33	34	36	37	38	39	40 .___
04	31	32	33	34	36	37	38	39	40 .___
05	31	32	33	34	36	37	38	39	40 .___
06	31	32	33	34	36	37	38	39	40 .___
07	31	32	33	34	36	37	38	39	40 .___
08	31	32	33	34	36	37	38	39	40 .___

4. Were any nutrients or fertilizers applied by custom applicators? (Yes = 1, No = 3) — Code 0214

[If item 4 = 1 continue, otherwise go to item 5.]

a. Are you able to report the cost of nutrient or fertilizer materials and custom application separately? (Yes = 1, No = 3) — Code 0216

[If item 4a = 1 continue, otherwise go to item 5.] — OFFICE USE 0215

b. Excluding the cost of the nutrient or fertilizer materials, how much was spent for custom application of nutrients or fertilizers on the selected field? INCLUDE operator, landlord, and contractor costs. INCLUDE costs for sulfur and micronutrients. EXCLUDE custom application of lime, gypsum, purchased manure and purchased compost.

DOLLARS & CENTS PER ACRE	OR	TOTAL DOLLARS
0219 .___ ___		0220

[If material and application costs can't be separated, exclude them here and record the total in item 5.]

5. What was the total cost of all nutrient or fertilizer products applied to the selected field? INCLUDE operator, landlord, and contractor costs, as well as the costs for sulfur and micronutrients. INCLUDE materials applied to the selected field if it was fallow in 2019. EXCLUDE lime, gypsum, purchased manure and purchased compost. . . . . .

DOLLARS & CENTS PER ACRE	OR	TOTAL DOLLARS
0221 .___ ___		0222

[If custom applied and the cost of material can be separated from application costs, include the cost of materials ONLY; otherwise, include both the material and application costs.]

6. Was gypsum applied to the selected field for the 2020 corn crop? . . . . . (Yes = 1, No = 3) — Code 0218

7. Was a soil test for soil organic matter performed on this corn field at some point in the last 10 years? . . . . . (Yes = 1, No = 3) — 3225

[if item 7 = 1, ask --]

a. What was the percentage of soil organic matter on the selected field for the most recent test? — Percent 3226

b. How many times have you tested the selected field for soil organic matter in the past 10 years? — Number 3227

[If item 7b is more than 1, ask --]

d. Based on these tests, is your soil organic matter content……. (Increasing? / Decreasing? / Staying roughly the same?) …… — Code 3228

8. Was a soil or plant tissue test performed on the selected corn field in 2019 or 2020 for the 2020 crop?..... (Yes = 1, No = 3) — Code 0224

[If item 8 = 1, continue, otherwise go to item 13.]

9. Was a soil test for phosphorus performed on the selected corn field in 2019 or 2020 for the 2020 crop?..... (Yes = 1, No = 3) — Code 0225

[If item 9 = 1 ask --]

a. How many pounds of phosphorus per acre were recommended by the phosphorus test?..... — Pounds per Acre 0226

10. Was a soil test for nitrogen performed on this corn field in 2019 or 2020 for the 2020 crop?..... (Yes = 1, No = 3) — Code 0227

a. How many pounds of nitrogen per acre were recommended by the nitrogen test?..... — Pounds per Acre 0228

11. Was a plant tissue test or leaf analysis for nutrient deficiency performed on the selected field in 2019 or 2020 for the 2020 crop?..... (Yes = 1, No = 3) — Code 0229

	Dollars & Cents per Acre	OR	Total Dollars
12. How much was spent for these soil and plant tissue tests on the selected field? INCLUDE operator, landlord, and contractor costs……	0230 .__ __		0231

[If tests were done at no cost, continue, otherwise go to item 12b.]

a. What is the reason why tests were done at no cost?

1 Soil/plant tissue test provided free of charge by dealer, crop consultant, or extension service
2 Soil/plant tissue test costs were included in the total fertilizer costs reported in item 5
3 Some other reason

Code: 0232 (Yes = 1, No = 3)

b. Did you receive a payment from the Conservation Stewardship Program for performing a stalk or leaf tissue test for nitrogen application?..... Code: 3231 (Yes = 1, No = 3)

[Enumerator Action: Refer to Fertilizer Table, column 2. If nitrogen (N) was applied, complete item 13. If no nitrogen applied, go to item 14.]

13. Was the amount of nitrogen you decided to apply to the selected field based on --

		Code (Yes = 1, No = 3)
i.	Results of a soil or plant tissue test?.....	0233
ii.	Crop consultant recommendation?.....	0234
iii.	Fertilizer dealer recommendation?.....	0235
iv.	Extension service recommendation?.....	0236
v.	Cost of nitrogen and/or expected commodity price?.....	0237
vi.	Contractor recommendation?.....	0238
vii.	Routine practice – operator's own determination based on past experience, yield goal, etc.	0239

[If nitrogen inhibitors were used, continue, otherwise go to item 14.]

	None	Pounds Per Acre	OR	Gallons per Acre
viii. How much nitrogen inhibitor did you mix with the nitrogen applied to the selected field?.....	☐	2561 .__ __		2562 .__ __

14. Is lime ever applied to the selected field?..... Code: 0242 (Yes = 1, No = 3)

[If item 14 = 1 continue, otherwise go to item 15.]

a. On average, how many years are there between applications of lime to the selected field?..... Years: 0243

b. How many tons of lime were applied per acre the last time it was applied to the selected field?..... Tons per Acre: 0244 .____

c. Was lime applied to the selected field in 2019 or 2020 for the 2020 crop?..... Code: 0240 (Yes = 1, No = 3)

15. Was non-commercial (unprocessed) manure from own farm, from a neighbor's farm, etc., or other organic material, including compost, applied to the selected field for the 2020 corn crop? EXCLUDE commercially prepared manure

Code
Yes = 1 / No = 3: 0246

[If item 15 = 1 continue, otherwise go to Section D.]

a. To how many acres in the selected field was manure or compost applied?. . . . . .

Acres: 0247 .___

b. What was the amount of manure applied to the selected field?. . . . . .

1 Tons
2 Gallons
3 Bushels
4 Cubic Yards

. .

Code: 0248 AND Units Per Acre: 0249 .___ ___ OR Total Units: 0250 .___

c. Of the total manure or compost applied to the selected field for the 2020 crop, what was the percent of manure applied---

Percent

(i) in the fall before planting?. . . . . + 0254

(ii) in the spring before planting?. . . . . + 0255

(iii) after planting?. . . . . + 0256

100%

d. Was the manure or compost---. . . . . .

1 Lagoon liquid?
2 Slurry liquid?
3 Semi-dry or dry?. . . . . .

Code: 0257

e. Was the manure or compost---. . . . . .

1 Broadcast or sprayed *without* incorporation?
2 Broadcast or sprayed *with* incorporation?
3 Injected/knifed in?
4 Sprayed using irrigation systems?

. . . . . .

Code: 0258

f. Was the major source of the manure or compost from---. ……..

1 Beef cattle?
2 Dairy cattle?
3 Hogs?
4 Sheep?
5 Poultry?
6 Equine?
7 Biosolids (*municipal sludge*)?
8 Food waste?
9 Other? [*Specify:* _____]

. . . . . .

Code: 0259

g. Was the manure or compost---. . . . . .

1 Produced on this operation?
5 Purchased?
6 Obtained at no cost off this operation?
7 Obtained with compensation? - operator received payment for accepting the manure.

. . . . . .

Code: 0260

[If item 15g = 2, continue, otherwise go to item 15h.]

(i) What was the total cost of the purchased manure or compost applied to the selected field? INCLUDE operator, landlord, and contractor costs. INCLUDE any payment made for transportation costs……

Dollars & Cents Per Acre: 0284 .___ ___ OR Total Dollars: 0285

(ii) Did you hire someone to custom apply the manure or compost? . . . . . .

Code
Yes = 1 / No = 3: 0286

[If item 15gii = 1, ask--]

(a) What was the total cost paid to have manure or compost custom applied to the selected field? INCLUDE operator, landlord, and contractor costs……

Dollars & Cents Per Acre: 0287 .___ ___ OR Total Dollars: 0288

[Do not report custom application cost if it was included with the purchased manure or compost cost.]

Miles

h. What is the distance in miles between the manure or compost storage/production location and the selected field? 0291

Code

i. Of the manure or compost applied to the selected field, was any tested for nutrient content prior to application? . . . . . Yes = 1 No = 3 0261

j. Was the application rate of commercial nitrogen fertilizer on the selected field reduced due to manure or compost application? Yes = 1 No = 3 0262

[If 15j = 1, ask --]

Percent

(i) By when percent did you reduce the commercial nitrogen fertilizer application rate on the selected field? 0263

Code

ix. Did you adjust the corn harvest date for the selected field due to the application of manure or compost? . . . . . Yes = 1 No = 3 0280

Code

16. Were the manure or compost application rates to the selected field influenced by Federal, State, or local restrictions?. . . . . Yes = 1 No = 3 0264

[*If item 16 is YES, ask*---]

a. What basis was used to determine these manure application rate restrictions--

Code

(i) Nitrogen requirement of the crop?. . . . . Yes = 1 No = 3 0265

(ii) Phosphorus requirement of the crop?. . . . . Yes = 1 No = 3 0266

17. Compared to the last time you planted corn, did you make any of the following changes to your cropping practices with the intent of reducing commercial fertilizer use?

Code

a. Change the type of commercial fertilizer products applied on the selected field, such as less anhydrous ammonia and more urea. . . . . Yes = 1 No = 3 1226

b. Manage fertilizer use more closely, with such practices as soil testing, split applications, variable rate applications, or soil incorporation on the selected field?. . . . . Yes = 1 No = 3 1228

c. Change your crop rotation, such as plant corn on the selected field rather than usual crop rotation?. . . . . Yes = 1 No = 3 1227

d. Reduce the application of commercial nitrogen fertilizer?. . . . . Yes = 1 No = 3 1224

[If 17d = 1, ask--]

PERCENT

(i) By what percent did you reduce the amount of commercial nitrogen fertilizer applied for 2020?. 1225

NOTES

D BIOCONTROL or PESTICIDE APPLICATIONS---SELECTED FIELD D

Now I have some questions about all the biocontrols or pesticides used on the selected field for the 2020 corn crop, including both custom applications and applications made by this operation.

	CODE	EDIT TABLE
1. Were any herbicides, insecticides, fungicides or other biocontrols or pesticides used on this corn field for the 2020 crop? YES = 1	0302	0300

[Probe for applications in the fall of 2019 and those made earlier if the selected field was fallow.]

If no biocontrols or pesticides applied, go to Section E.

INCLUDE defoliants, fungicides, herbicides, insecticides, and other pesticides.

INCLUDE biological and botanical pesticides.

EXCLUDE adjuvants, nutrients or fertilizers reported earlier and seed treatments.

OFFICE USE TABLE 0399
LINES IN TABLE 001

CHEMICAL PRODUCT NAME	LINE	2 What products were applied to the selected field? [Show product Codes from Respondent Booklet.]	3 Was this product bought in liquid or dry form? [Enter L or D]	4 If this was part of a tank mix, enter line number of first product in mix	5 When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	6 How much was applied per acre per application?	OR 7 What was the total amount applied per application in the selected field?	8 [Enter unit Code.] 1 Pounds 12 Gallons 13 Quarts 14 Pints 15 Liquid Ounces 28 Dry Ounces 30 Grams
	01	61		63	64	65 .___ ___	73 .___ ___	74
	02	61		63	64	65 .___ ___	73 .___ ___	74
	03	61		63	64	65 .___ ___	73 .___ ___	74
	04	61		63	64	65 .___ ___	73 .___ ___	74
	05	61		63	64	65 .___ ___	73 .___ ___	74
	06	61		63	64	65 .___ ___	73 .___ ___	74
	07	61		63	64	65 .___ ___	73 .___ ___	74
	08	61		63	64	65 .___ ___	73 .___ ___	74
	09	61		63	64	65 .___ ___	73 .___ ___	74
	10	61		63	64	65 .___ ___	73 .___ ___	74
	11	61		63	64	65 .___ ___	73 .___ ___	74
	12	61		63	64	65 .___ ___	73 .___ ___	74
	13	61		63	64	65 .___ ___	73 .___ ___	74
	14	61		63	64	65 .___ ___	73 .___ ___	74

2. For biocontrols or pesticides not listed in Respondent Booklet, specify---

LINE	Pesticide Type (Herbicide, Insecticide Fungicide, etc.)	EPA No. or Trade name and Formulation	Form Purchased (Liquid or Dry)	Where Purchased (Ask ONLY if EPA No. cannot be reported.)

APPLICATIONS CODES for column 9	
1 Broadcast, ground without incorporation	6 Chisel/injected or knifed in
2 Broadcast, ground with incorporation	7 Banded in or over row
3 Broadcast, by aircraft	8 Foliar or directed spray
4 In seed furrow	9 Spot treatments
5 In irrigation water	

LINE	9 How was this product applied? [Enter Code from above.]	10 How many acres in the selected field were treated with this product? ACRES	11 How many times was it applied? NUMBER	12 Were these applications made by--- 1 Operator, partner or family member? 2 Custom applicator? 3 Employee/Other?	13 What was the cost per unit of the product? DOLLARS & CENTS PER UNIT	UNIT CODE 1 Pounds 15 Liquid Ounces 12 Gallons 28 Dry Ounces 13 Quarts 30 Grams 14 Pints
01	76	77 .___	79	80	81 .___ ___	82
02	76	77 .___	79	80	81 .___ ___	82
03	76	77 .___	79	80	81 .___ ___	82
04	76	77 .___	79	80	81 .___ ___	82
05	76	77 .___	79	80	81 .___ ___	82
06	76	77 .___	79	80	81 .___ ___	82
07	76	77 .___	79	80	81 .___ ___	82
08	76	77 .___	79	80	81 .___ ___	82
09	76	77 .___	79	80	81 .___ ___	82
10	76	77 .___	79	80	81 .___ ___	82
11	76	77 .___	79	80	81 .___ ___	82
12	76	77 .___	79	80	81 .___ ___	82
13	76	77 .___	79	80	81 .___ ___	82
14	76	77 .___	79	80	81 .___ ___	82

Code

3. Were any chemicals, biocontrols, or pesticides applied by custom applicators? (Yes = 1, No = 3) 0323

[If item 3 =1 ask, otherwise go to item 4.]

OFFICE USE

a. Are you able to report the cost of chemical, biocontrol, and pesticide products and custom application separately? 0324

[If item 3a = 1, ask--]

	Dollars & Cents Per Acre	Or	Total Dollars
b. Excluding the cost of the chemical, biocontrol, and pesticide products, how much was spent for custom application of such materials on the selected field? INCLUDE operator, landlord, and contractor costs.	0331 .___ ___		0332
4. What was the TOTAL COST of all chemical, biocontrol, or pesticide products applied to the selected field? INCLUDE operator, landlord, and contractor costs, defoliants, herbicides, insecticides, fungicides, surfactants, wetting agents, growth regulators, and materials applied before planting and during 2019 fallow period. EXCLUDE seed treatments.	0334 .___ ___		0335
a. How much was spent for herbicide products applied to the selected field? INCLUDE operator, landlord, and contractor costs..	3034 .___ ___		3035
b. How much was spent for insecticide products applied to the selected field? INCLUDE operator, landlord, and contractor costs..	3036 .___ ___		3037

NOTE 1: If respondent cannot report TOTAL COST, itemize cost for each product in optional columns in Biocontrol or Pesticide Table.

NOTE 2: If custom applied and the costs for materials can be separated from application costs, include the cost for materials only.

Otherwise, report both the material and application costs in item 4.

E PEST MANAGEMENT PRACTICES---SELECTED FIELD E

Now I have some questions about your pest management decisions and practices used on the selected field for the 2020 corn crop. By pests, we mean weeds, insects, and diseases.

[Enumerator Action: Were pesticide applications reported in Section D?]

☐ YES – [Continue] ☐ NO – [Go to item 6]

		Code
1. Were weather data used to assist in determining either the need or when to make pesticide applications?	Yes = 1 No = 3	0800
2. Were any biological pesticides such as Bt (*Bacillus thuringiensis*), insect growth regulators, neem or other natural/biological based products sprayed or applied to manage pests in the selected field?	Yes = 1 No = 3	0801
3. Were pesticides with different mechanisms of action rotated or tank mixed for the primary purpose of keeping pests from becoming resistant to pesticides?	Yes = 1 No = 3	0802

[Enumerator Action: Were herbicide (pesticide product Codes 40000-49999) applications reported in Section D, item 1, column 2?]

☐ YES – [*Continue*] ☐ NO – [Go to item 6]

		Code
4. Were herbicides applied to this corn field before weeds emerged?.	Yes = 1 No = 3	0803
5. Were herbicides applied to this corn field after weeds emerged?	Yes = 1 No = 3	0805
6. Were records kept for the selected field to track the activity or numbers of weeds, insects, or diseases?	Yes = 1 No = 3	0823
7. Did you use published information on infestation thresholds to determine when to take measures to manage pests in the selected field?	Yes = 1 No = 3	0824

8. In 2020, how was the selected field primarily scouted for insects, weeds, diseases, and/or beneficial organisms? . . . .

1 By deliberately going to the field specifically for scouting activities [Enter Code 1 and go to item 9.]
2 By conducting general observations while performing routine tasks [Enter Code 2 and go to item 10.]
3 The selected field was not scouted. [Enter Code 3 and go to item 14.]

. . . . Code: 0808

		Code
9. Was an established scouting process such as systematic sampling, recording counts, etc. used or were insect traps used in the selected field?.	Yes = 1 No = 3	0809
10. Was scouting for pests done in the selected field due to---		
a. a pest advisory warning?.	Yes = 1 No = 3	0810
b. a pest development model?.	Yes = 1 No = 3	0811
11. Do you believe that rootworms damaged corn grown on the selected field?	Yes = 1 No = 3	1923

[If Item 11 =1, Continue. Else go to Item 12.]

a. If you believe that rootworm damage lead to lodging, approximately how many stalks were lodged?. . . . . . — Count: 1924

b. If you believe that rootworm damage stunted plant growth, approximately how many stalks were affected?.

1 One node eaten back to 1.5 inches of the stalk
2 Two complete nodes eaten
3 Three or more nodes eaten

. . . . . Code: 1925

1		2	3
12. Was this corn field scouted for--	Yes = 1 No = 3	[If Yes, ask---] What was the infestation level for [column 1]?— 1 Higher than normal 2 Normal 3 Lower than normal CODE	[If column 1 = Yes, ask---] Who did the majority of the scouting for [column 1]? 1 Operator, partner or family member 2 An employee 3 Farm supply or chemical dealer 4 Independent crop consultant or commercial scout CODE
a. Weeds?.	0812	0813	0814
b. Insects or mites?.	0815	0816	0817
(i) Corn borer	1731	1732	1733
(ii) Corn rootworm	1734	1735	1736
c. Other insects	1708	1738	1712
d. Diseases?.	0818	0819	0820

[If scouted by crop consultant or commercial scout, ask item 13; else go to item 14.]

13. How much was charged for the scouting services for the selected field? INCLUDE operator, landlord and contractor cost. . . . . Dollars & Cents Per Acre 0821 .___ ___ Or Total Dollars 0822

a. [If scouting performed at no cost, explain:_____] . . . . . OFFICE USE 0333

14. Did you use field mapping of previous weed problems to assist you in making weed management decisions? . . . . . Code Yes = 1 No = 3 0825

15. Did you do any of the following other type(s) of pest management practices for the specific purpose of managing or reducing the spread of pests in the selected field? [*Enter Code "1" for all that apply*.]

		CODE
a. Use the services of a diagnostic laboratory for pest identification or soil plant tissue pest analysis for the selected field?.	Yes = 1 No = 3	0841
b. Plow down crop residue (*using conventional tillage*)?.	Yes = 1 No = 3	0842
c. Remove/burn down crop residue?.	Yes = 1 No = 3	0843

		Code
d.	Rotate crops in the selected field during the past three years? (Yes = 1, No = 3)	0844
e.	Maintain ground covers, mulches, or other physical barriers? (Yes = 1, No = 3)	0845
f.	Choose crop variety because of specific resistance to a certain pest? (Yes = 1, No = 3)	0846
g.	Use no-till or minimum till? (Yes = 1, No = 3)	0847
h.	Plan planting locations to avoid cross infestation of pests? (Yes = 1, No = 3)	0848
i.	Adjust planting or harvesting dates? (Yes = 1, No = 3)	0849
j.	Chop, spray, mow, plow, or burn field edges, lanes, ditches, roadways, or fence lines? (Yes = 1, No = 3)	0850
k.	Clean equipment and field implements after completing field work to reduce the spread of pests? (Yes = 1, No = 3)	0851
l.	Adjust row spacing, plant density or row directions? (Yes = 1, No = 3)	0852
m.	Have the seed treated for insect or disease control after you purchased the seed for the selected field? (Yes = 1, No = 3)	0854
n.	Maintain a beneficial insect or vertebrate habitat? (Yes = 1, No = 3)	0855
o.	Use a flamer to kill weeds? (Yes = 1, No = 3)	0857
p.	Maintain buffer strips or border rows to isolate corn from non-organic crops or land, or did you take a buffer harvest? (Yes = 1, No = 3)	0856
q.	Plant earlier or later to avoid weeds? (Yes = 1, No = 3)	0865

		Code
16.	Were any beneficial organisms, such as insects, nematodes, fungi applied or released in the selected field to manage pests? (Yes = 1, No = 3)	0853
17.	Were floral lures, attractants, repellants, pheromone traps or other biological pest controls used on the selected field? (Yes = 1, No = 3)	0858

[If item 16 or item 17 is YES, ask--]

a. What were the total materials and application costs for all biological pest controls for the selected field? INCLUDE operator, landlord, and contractor costs. INCLUDE cost for beneficial organisms (insects, nematodes, and fungi). EXCLUDE biological pesticides previously reported.

Dollars & Cents Per Acre	Or	Total Dollars
0859 .___ ___		0860

		Code
18.	Was a trap crop (*excluding fallow*) grown to help manage insects in the selected field? (Yes = 1, No = 3)	0863
19.	Was the selected field left in fallow in 2015 to help manage insects on the selected field? (Yes = 1, No = 3)	0864
20.	Were water management practices such as irrigation scheduling, controlled drainage, or treatment of retention water used on the selected field to manage pests or toxin-producing fungi and bacteria? (Yes = 1, No = 3)	0861
21.	Was protection of beneficial organisms a factor in your pest control decisions for the selected field? (Yes = 1, No = 3)	1765

[*If Item 21 is YES, continue. Else go to Item 22.*]

		Code
a.	Did you change timing of, reduce application rate of, or eliminate a pesticide application? (Yes = 1, No = 3)	1766
b.	Did you change to an alternative pesticide, biocontrol, or non-pesticide practice? (Yes = 1, No = 3)	1767

22. Did you cultivate the selected field for weed control? . . . . . Yes = 1 No = 3 | 2453

[*If YES, ask*--]

a. How many times?. . . . . Number | 2454

24. Did you use a soil-insecticide or insecticidal seed treatment in the refuge in 2020? . . . . Yes = 1 No = 3 | Code 1812

Unit Codes
1 Pounds
2 Cwt
3 Tons
4 Bushels

	Units Per Acre	
25. If untreated (either with insecticide or Bt seed), how much yield loss (e.g. bushels per acre) do you think corn borers would most likely cause on the selected field? . .	2670 .___	2671
26. If untreated (either with insecticides or Bt seed), how much yield loss (e.g. bushels per acre) do you think corn rootworms would most likely cause on the selected field?	2672 .___	2673
27. If untreated (either with herbicides, tillage, or cultivation), how much yield loss (e.g. bushels per acre) do you think weeds would most likely cause on the selected field?.	xxxx .___	xxxxx

28. Did pests (weeds, insects, pathogens, animals) cause any yield loss on the selected field in spite of your pest control efforts? . . . . . YES = 1 | Code 0827

[*If YES, ask*--]

a. How much yield loss do you think was caused by all pests on the selected field in spite of the management practices you used to reduce those losses?

BUSHELS / TONS . . . . Code 828 AND Units Per Acre 829 OR Total Units 830

29. If you used genetically engineered, glyphosate resistant seeds on the selected field in 2020, indicate the number of consecutive years you have planted genetically engineered, glyphosate-resistant seeds. [Note: A producer who used HT corn in 2020 and 2019, but conventional corn in 2018, has used genetically engineered, glyphosate resistant seeds for "2" consecutive years.] | Number Of Years 1970

a. What year did you first plant any glyphosate resistant seeds on the selected field?. . . . . YEAR | 1971 ___ ___ ___ ___

30. Have you noticed a decline in the effectiveness of glyphosate (e.g. Roundup) in controlling weeds in the selected field? . . . . . YES = 1 | CODE 0834

[*If item 27= YES, continue. If item 27 = NO, go to item 30*.]

a. What was the first year you noticed a decline in effectiveness of glyphosate in controlling weeds on the selected field?. . . . . | YEAR 0835 ___ ___ ___ ___

31. After noticing the decline in the effectiveness of glyphosate in controlling weeds on the selected field, did you--

a. stop planting glyphosate resistant crops?. . . . . YES = 1 | CODE 0837

b. change tillage practices?. . . . . YES = 1 | 0839

32. Have any of the following herbicides been used on the selected field in the specified years since:

1 Active Ingredients	1 2020 Yes = 1 No = 3	3 2019 Yes = 1 No = 3	4 2018 Yes = 1 No = 3	5 2017 Yes = 1 No = 3	6 2016 Yes = 1 No = 3
a. Glyphosate (e.g. Roundup®)	2001	2002	2003	2004	2005
b. Glufosinate (e.g. Liberty®)	2006	2007	2008	2009	2010
c. Dicamba (e.g. Xtend®, Xtendimax®, Engenia®)	2011	2012	2013	2014	2015
d. 2, 4-D (e.g. Enlist®)	xxxx	xxxx	xxxx	xxxx	xxxx

CODE

28. Have herbicide-tolerant seeds been planted on the selected field any time since 2016?. . **YES = 1** 2021

[*If item 28 is YES, continue, else skip.*]

If column 2 = 1, ask questions in columns 3 - 6

1 For herbicide tolerant seeds that are tolerant of--	2 Have you noticed a decline in the effectiveness of herbicides in controlling weeds in the selected field?	3 What was the first year you noticed a decline in the effectiveness of herbicides in controlling weeds in the selected field?	After noticing the decline in the effectiveness of this herbicide in controlling weeds on the selected field, did you--		
			4 Stop planting herbicide resistant crops with this trait?	5 Change tillage practices?	6 Switch to an alternative herbicide?
	YES = 1 NO = 3	**YEAR**	**YES = 1 NO = 3**	**YES = 1 NO = 3**	**YES = 1 NO = 3**
a. Glyphosate (e.g. Roundup®)	2022	2023	2034	2025	2026
b. Glufosinate (e.g. Liberty®)	2027	2028	2029	2030	2031
c. Dicamba (e.g. Xtend®, Xtendimax®, Engenia®)	2032	2033	2034	2035	2036
d. Active Ingredients in the Sulfonylurea family (e.g. chlorimuron, foramsulfuron, Synchrony® XP, Leadoff®, Basis®) (Soybeans)	2037	2038	2039	2040	2041
e f. 2, 4-D (e.g. Enlist®)	xxxx	xxxx	xxxx	xxxx	xxxx

34. Considering each year you planted a glyphosate resistant crop on the selected field, have you ever used the following practices in order to reduce the rate that glyphosate resistance develops in weeds on the selected field?

1 RESISTANCE MANAGEMENT PRACTICE	2 Yes = 1 No =3	3 How often did you use this practice on the selected field? 1 Every Year 2 Every Other Year 3 Multiple Years 4 One Year CODE	4 Did the cost of managing weeds on the selected field increase as a result of your use of the practice? 1 Yes 3 No 4 Don't Know CODE
a. Control weeds early	0886	2871	0878
b. Control weed escapes	0887	2872	0879
c. Clean equipment between moving from one field to the next	0888	2873	0880
d. Use herbicides other than glyphosate	0889	2874	0881
e. Use tillage	0890	2875	0882
f. Use the herbicide label recommended application rate	0891	2876	0883
g. Rotate crops	0892	2877	0884

[If item 34 column 2 contains at least one "1", ask: otherwise go to item 32.]

35. Considering the above practices (i.e. a-g) do you believe resistance management practices are or would be more effective in reducing the rate that herbicide resistance develops in weeds on the selected field if operators of nearby farms also use them? . . . . . .

1 – Yes
2 – No
3 – Don't Know
4 – The nearest farm is too far away to affect the selected field

. . . . .

CODE 0088

36. Did you plant genetically-engineered rootworm-resistant seed on the selected field in 2020? .

Yes = 1
No = 3

Code 2926

a. How many consecutive years have you used rootworm resistant seeds on the selected field?. . . .

Years 2927

[*If Item 32a is greater than 1, continue. Otherwise go to Section F.*]

b. Have you ever switched from a rootworm resistant seed with one mode of action (MOA) to a pyramided rootworm resistant seed? *Note: Pyramided seeds have multiple MOAs*.

Yes = 1
No = 3

Code 2928

[*If Item 32b is YES, ask*--]

c. What year did you switch from a rootworm resistant seed with one MOA to a pyramided rootworm resistant seed?. . . . . .

Year 2929

Completion Code for Pest Management Data	
1 Incomplete/Refusal	0500

1. Including custom operations, I need to list field work performed by machines on the selected field for the 2020 corn crop. Please…

- ► begin with the first field operation after harvest of previous crop, including operations for a cover crop established since the previous crop harvested [*if fallow during* 2019*, list operations starting with fall 2018*];
- ► list the operations in order through harvest and hauling of this crop to storage or first point of sale; and
- ► maintain the order of tandem hook-ups.

CODES FOR COLUMN 5
1 You (*the Operator*)
2 Partner
3 Unpaid Worker
4 Paid Part-time or Seasonal Worker
5 Paid Full-time Worker
6 Custom Applicator

OFFICE USE LINES IN TABLE
0499

CHECK LIST

Include all field work using machines for---
- ☐ Land Forming/Levee Building
- ☐ Tillage
- ☐ Preparing for Irrigation
- ☐ Planting
- ☐ Fertilizer & Pesticide applications
- ☐ Harvesting & Hauling to storage or first point of sale

Exclude
- ☐ Lime & Gypsum/landplaster applications
- ☐ Compost & Non-Commercial Manure applications

LINE No.	2 SEQUENCE No.	3 What operation or equipment was used?	4 [*Record machine Code from Respondent Booklet.*] CODE	5 Who was the machine operator- [*Enter Code from above*.] CODE	[IF CUSTOM (*column 5 = Code 6*), *skip columns 6-11*] 6 What was the size or swath of the [*machine*] used?	7 [*Record size unit Code*.] 1 Feet 2 Row 3 Moldboard (*bottoms*) Hauling 4 Pounds 5 Bushels 6 Tons CODE	8 How many acres were covered? [*Exclude land forming and hauling operations*] ACRES	OR 9 How many TOTAL HOURS were spent on land forming, or hauling? [*Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklifts, etc.*] HOURS	10 Which Power Source was used? 1/ Tractors: 1= (<40 HP) 2= (40-99 HP) 3= (100-149 HP) 4= (150-199 HP) 5= (>=200 HP) Other: 66=Animal Drawn 77=Pick-up 99=Self Propelled 1/ CODE	11 What was the fuel type of the tractor? [*Record fuel type only if Power Code equals 1-5*] 1=diesel 2=gasoline 3=LP gas 4=other CODE
01	87		88	89	90	91	92 .___	93	94	95
02	87		88	89	90	91	92 .___	93	94	95
03	87		88	89	90	91	92 .___	93	94	95
04	87		88	89	90	91	92 .___	93	94	95
05	87		88	89	90	91	92 .___	93	94	95
06	87		88	89	90	91	92 .___	93	94	95
07	87		88	89	90	91	92 .___	93	94	95
08	87		88	89	90	91	92 .___	93	94	95
09	87		88	89	90	91	92 .___	93	94	95
10	87		88	89	90	91	92 .___	93	94	95
11	87		88	89	90	91	92 .___	93	94	95
12	87		88	89	90	91	92 .___	93	94	95
13	87		88	89	90	91	92 .___	93	94	95
14	87		88	89	90	91	92 .___	93	94	95
15	87		88	89	90	91	92 .___	93	94	95
16	87		88	89	90	91	92 .___	93	94	95
17	87		88	89	90	91	92 .___	93	94	95
18	87		88	89	90	91	92 .___	93	94	95

1/ *If trucks other than pick-ups are used as the power source, use truck Codes in Respondent Booklet.*

OFFICE USE
0400

2. Now I need some additional information about your labor.

   Please report the paid and unpaid labor that worked on the selected field to produce the 2020 corn crop. (*Exclude labor that was reported for field work performed by machines.*)

	How many hours did (*type of worker*) spend on the selected field---		
TYPE OF WORKERS	1 scouting for weeds, insects and diseases? HOURS	2 irrigating? HOURS	3 performing other work by hand? HOURS
You (*the operator*)	1101	1102	1103
Partner(s)	1104	1105	1106
Unpaid workers	1107	1108	1109
Paid part-time or seasonal workers (*Exclude custom and contract labor*)	1110	1111	1112
Paid full-time workers (*Exclude custom and contract labor*)	1113	1114	1115

3. What was the average hourly wage rate paid to part-time or seasonal hired workers on the selected field? Part-time workers are defined as those who worked for ages or salaries for less than 30 hours a week on average. EXCLUDE custom and contract workers, payroll taxes and benefits. . . . . .

Dollars & Cents Per Hour	OR	Total Dollars per Week	AND	Number of Hours Worked Each Week
1119 .___ ___		2119		3119

3. What was the average hourly wage rate paid to full-time hired workers on the selected field? EXCLUDE custom and contract workers, payroll taxes and benefits. . . . . .

Dollars & Cents Per Hour	OR	Total Dollars per Week	AND	Number of Hours Worked Each Week
1119 .___ ___		2119		3119

5. Was any contract labor used on the selected field? . . . . . Yes = 1 No = 3 — Code: 1116

[If YES, ask ---

   a. What was the average cost per acre for this contract labor? (*Include operator, landlord, and contractor costs*.). . . . . — Dollars & Cents Per Acre: 1117 .___ ___

6. What percent of the total number of unpaid hours worked on the selected field was performed by workers under 16 years of age? (*Estimates of labor costs for unpaid workers are based on off-farm wage rates, which are different for workers under 16 relative to those 16 and older.*) . . . . . — Percent: 1120

7. Now I need some information on how much was spent (or will be spent) for custom services used on this field for the 2020 corn crop.

✓	1 CUSTOM SERVICE Which of the following services were performed for the 2020 corn crop on the selected field? ← [*Check box for each service performed; refer to item 1 if necessary*.]	2 Including operator, landlord, and contractor costs, how much was spent for [*column 1*] on the selected field for the 2020 corn crop? Dollars & Cents Per Acre
☐	a. Custom land preparation, shaping and/or leveling?	1121 .___ ___
☐	b. Custom cultivating?.	1122 .___ ___
☐	c. Custom planting and/or reseeding?.	1123 .___ ___
☐	d. Custom harvesting?.	1124 .___ ___
☐	e. Custom hauling from field to storage or point of first sale? __ __.__ __ x _____ ÷ _____ = __ __.__ __ (Dollars & cents per unit x Total units hauled from field ÷ Acres harvested in field = Dollars & cents per acre) .	1126 .___ ___
	[If custom harvesting, module building, and hauling from field to storage or point of sale cannot be separated, ask --	
☐	f. Custom harvesting and hauling from field to storage or point of first sale? __ __.__ __ x _____ ÷ _____ = __ __.__ __ (Dollars & cents per unit x Total units hauled from field ÷ Acres harvested in field = Dollars & cents per acre) .	1127 .___ ___

		Code
8. Was the corn harvested and hauled from the selected field dried (or will be dried) before it was sold or stored?	Yes = 1 No = 3	xxxx
9. Did you hire any technical or consultant services to make recommendations such as for nutrient, pest control, irrigation, or precision farming for the selected field?	Yes = 1 No = 3	1196

[If item 9 = 1 continue, otherwise go to item 12]

10. Which of the following technical or consultant services did you obtain to make recommendations for the selected field?

		Code
a. Nutrient recommendations/management service?.	Yes = 1 No = 3	1129
b. Soil or tissue sample collection?.	Yes = 1 No = 3	1130
c. Pest control recommendations/management service?.	Yes = 1 No = 3	1131
d. Pest scouting?.	Yes = 1 No = 3	1132
e. Irrigation management service (*i.e. irrigation scheduling*)?.	Yes = 1 No = 3	1133
f. Yield map or remote sensing map development/interpretation?.	Yes = 1 No = 3	1134
g. Other custom or technical service? [*Specify:* _____]	Yes = 1 No = 3	1135

11. If YES to any of these services in item 10a-g, what was the cost for all of these services? INCLUDE operator, landlord, and contractor costs. EXCLUDE cost of soil/tissue tests or scouting cost reported earlier. Do not report costs for any of these services if they were previously reported as part of the costs of materials and/or application.). . . . . .

Dollars & Cents Per Acre	Or	Total Dollars
36 .__ ____		1137

12. **Please report how any data from the selected field in 2020 will be stored and accessed.**
[*Enter code "1" for all that apply.*]

		CODE
a. Did you access data collected from the selected field on a --		
(i) Paper hard copy?	**YES = 1**	2485
(ii) Personal computer?	**YES = 1**	2486
(iii) Mobile device?	**YES = 1**	2487
b. Did you access data collected from the selected field through an agricultural technology provider website?	**YES = 1**	2488

[*If item 12b = 1, ask--*]

c. Did you opt out of allowing your agricultural technology provider website to share data collected from the selected field with any third party?	**YES = 1**	2489
d. Did you share any of the data collected from the selected field with a third party through an agricultural technology provider website?	**YES = 1**	2490

13. Were there (*or will there be*) any data collection tools (yield monitors, GPS mapping, etc.) used during field operations on this corn field?

Yes = 1 No = 3	Code
	2460

[If YES, continue; else go to Item 14]

Please report the data collection technologies you used on the selected field to produce this crop. Also indicate if the data is collected with Global Positioning System (GPS) coordinates and if the data will be used to create a map. (In the fifth column, report how much it would cost you to replace the data collection tool. In the sixth column, report the annual costs of using the data collection tool. Include custom service fees, data subscriptions, and online tool subscriptions. If the replacement cost or annual fee does not apply to a particular data collection tool, leave that row blank.)

1 Data Collection Tool	2 Tool Used Yes = 1 No = 3	3 Collected GPS coordinates Yes = 1 No = 3	4 Data was/will be used to create a map Yes = 1 No = 3	5 Replacement Cost Total dollars	6 Annual Fee Total dollars
a. Yield monitor	2461	2462	2463	2570	2571
b. Soil tests on core sample (performed on-farm or sent out to a laboratory)	2464	2465	2466	2572	2573
c. Soil sensor tests	2467	2468	2469	2574	2575
d. Hard-wired crop condition sensors	2470	2471	2472	2576	2577
e. Wireless crop condition sensors	2473	2474	2475	2578	2579
f. Drones, aircraft or satellites	2476	2477	2478	2580	2581
g. Custom service applications (data from completed work on your field)	2479	2480	2481	2582	2583
h. Public data downloaded from online sources	2482	2483	2484		

[If item 13a column 2 = 1, continue, otherwise go to item 16.]

14. Did you use the yield monitor information to---

		Code
a. add/improve tile drainage?	Yes = 1 No = 3	1141
b. negotiate new crop leases?	Yes = 1 No = 3	1144
c. Help determine input use for management zones?	Yes = 1 No = 3	xxxx

[If any of item 13 column 2 = 1, continue, otherwise go to item 16.]

15. Using data collected from the previous tools table in item 13, did you obtain crop management recommendations, such as data interpretation, in 2020 for the selected field from any of the following--

		Code
a. Input dealers without other fee-for-services?..	Yes = 1 No = 3	2491
b. Input dealers with other fee-for-services?.	Yes = 1 No = 3	2492
c. Custom service providers?.	Yes = 1 No = 3	2493
d. USDA/University extension services?.	Yes = 1 No = 3	2494

[If crop management recommendations were obtained, ask--]	Dollars & Cents Per Acre	Or	Total Dollars
e. What was the cost for all of these services? INCLUDE operator, landlord, and contractor costs. Do not report costs for any of these services if they were previously reported as part of the costs of materials and/or application.	3150 .___ ___		3151

16. Did you use an unmanned aerial vehicle (UAV, known as a drone) to produce corn on the selected field in 2020?

		Code
	Yes = 1 No = 3	xxxx

[If item 16 = Yes, then ask --]

a. For which of the following purposes did you use the UAV on the selected field? Answer all that apply.

		Code
i. Weed analysis?	Yes = 1 No = 3	xxxx
i. Spraying herbicide or fungicide?	Yes = 1 No = 3	xxxx
ii. Insect analysis?	Yes = 1 No = 3	xxxx
iii. Insect control?	Yes = 1 No = 3	xxxx
iv. Yield analysis?	Yes = 1 No = 3	xxxx
v. Moisture analysis?	Yes = 1 No = 3	xxxx
vi. Equipment check?	Yes = 1 No = 3	xxxx

b. Did you purchase the UAV?

		Code
	Yes = 1 No = 3	xxxx

If 16b = Yes, then ask –

	Total Dollars
i. What is the replacement cost of the UAV?	

c. Do you pay an annual fee for use of UAV?

		Code
	Yes = 1 No = 3	xxxx

If 16c = Yes, then ask --

	Total Dollars
i. What is the annual fee for use of the UAV?	xxxx

15. **Was any of the following GPS-enabled** (Global Positioning System) **equipment used to produce crops on the selected field?** [*Enter code "1" for all that apply*.]

		CODE
a. Mounted in-cab heads-up displays?.	**YES = 1**	2149

b. Smartphones or computer tablets?. . . . . .. YES = 1 | 1152

c. Automatic section control, such as auto sprayer boom controls or automatic section shut offs?

18. If any GPS-enabled equipment was used, what was the cost to purchase and install all GPS-enabled equipment, not including guidance auto steering equipment? INCLUDE cost for GPS receiver and annual GPS subscription fee, and operator, landlord, and contractor costs. Do not report costs for any of this equipment if they were previously reported as part of the costs of materials and/or application.)	Dollars & Cents Per Acre .___ ___	OR	Total Dollars
			Code
19. Was guidance auto-steering (excluding Light Bar) used on the selected field?.		Yes = 1 No = 3	xxxx
[If 18=1, ask--]			Code
a Was the guidance auto-steering equipment:	1 New, owned 2 Used, owned 3 Leased	. . . .	xxxx
			Year
b. What year was guidance auto-steering first purchased?.			__ __ __ __

	Dollars & Cents Per Acre	Or	Total Dollars
c. What is the replacement cost for guidance auto-steering equipment?. . . .	2160 .___ ___		2161
d. What is the annual fee for guidance auto-steering?.	.___ ___		

20. Was a variable rate applicator used on the selected field? . . . . . Yes = 1 / No = 3 | Code: 2164

[If YES, continue; else go to Section G]

Please report the variable rate applicator types you used on the selected field to produce this crop. If a particular row's variable rate applicator was not used, leave that row blank.

1 Was a variable rate applicator used on the selected field for--	2 Tool Used Yes = 1 No = 3	3 Was this applicator— 1 Sensor-based 2 GPS-based 3 Both 4 Neither Code	4 Was this applicator— 1 New, owned 2 Used, owned 3 Leased Code	5 What year was the applicator first used? Year	6 Premium paid for the applicator Total Dollars
a. Seeding	1158	2170	2171	2172	2173
b. Fertilizer/lime applications	1152	2174	2175	2176	2177
c. Pesticide applications	1159	2178	2179	2180	2181
d. Irrigation Applications	xxxx	xxxx	xxxx	xxxx	xxxx

G IRRIGATION G

1. How many acres in the selected field were irrigated for the 2020 corn crop? [*If none, go to Conclusion*]. . . . . ACRES 1160 .___

2. Now, I have some questions about irrigation systems and water used on the selected field for the 2020 corn crop.

	Unit	System 1
a. What type(s) of irrigation system(s) was (*or were*) used to irrigate the selected field? [*Show System Type Codes in the Respondent Booklet. Enter System Type Code for system covering the most field acres*.].	System Type Code	1161
b. What was the total quantity of water applied to the selected field during the entire growing season? (*Include ALL water used from both on-farm and off-farm sources*.).	Inches Per Acre	1162
	Or	
	Total Acre-Feet	1163
[*If operator cannot provide item 2b, ask (i) & (ii), else go to 2c*]		
(i) What is the total number of hours this system was used to apply water to the selected field during the corn growing season?.	Total Hours	1164
(ii) How many gallons per minute were applied?.	Gallons Per Minute	1165
c. What percent of the water used to irrigate the selected field through this system came from surface water sources?	Percent	1166
d. What was the number of times the selected field was irrigated during the corn growing season using this system? (*Include any pre-plant irrigation*.).	Number Of Irrigations	1167
e. Was the pump type--- [*If more than one pump in the system, enter type for pump closest to water source.*] 1 TURBINE? 2 SUBMERSIBLE? 3 CENTRIFUGAL? 4 BOOSTER? 5 SIPHON? 99 NO PUMP? [*If Code 99, go to item j.*]	Code	1168
f. What was the average pumping rate?.	Gallons Per Minute	1169
g. [*If item 2a = Code 1-9* (PRESSURE SYSTEM)*, ask*---] What was the system operating pressure?.	Pounds Per Square Inch	1170
h. What was the primary motor type used to pump the water? 1 DIESEL 2 GASOLINE 3 LP GAS 4 NATURAL GAS 5 ELECTRICITY 6 SOLAR POWER	Code	1171
i. What was the average motor size?.	Horsepower	1172
j. [*If NO PUMP was used* (item 2e = 99)*, ask*---] What was the average flow rate?.	Gallons Per Minute	1173
k. How many other acres on this operation were irrigated using the selected field's irrigation system during the 2020 growing season? (*Exclude the selected field*.).	Acres	1174 .____

	DOLLARS & CENTS PER ACRE	OR	TOTAL DOLLARS
3. What was the cost of the fuel or electricity used to irrigate the selected field? (*Include operator, landlord, and contractor costs*.).	1189 .___ ___		1190

4. Was any water purchased to irrigate the selected field? (*Include landlord's share and purchases from all sources*.)

☐ YES – [*Enter Code 1 and continue*.] ☐ NO – [*Go to item 5*.]. . . . . CODE 1191

a. What was the total cost for the water purchased for the selected field during the 2020 growing season? (*Include operator, landlord, and contractor costs and ditch maintenance costs for the selected field*.). . . . . DOLLARS & CENTS PER ACRE 1193 .___ ___ OR TOTAL DOLLARS 1194

[*If SIPHON TUBES were used* (item 2a = 10 or 11)*, ask*---]

5. What would be the total cost to replace all the siphon tubes used on the selected field? . . . . . TOTAL DOLLARS 1201

[*If POLY PIPE system was used* (item 2a = 14) *ask*---]

6. What was the total amount spent for poly pipe used on the selected field during the 2020 growing season? (*Include operator, landlord, and contractor costs*.). . . . . TOTAL DOLLARS 1202

[*If GATED PIPE system was used* (item 2a = 15 or 16), *ask*---]

7. What was the average diameter of gated pipe used to irrigate the selected field? . . . . . INCHES 1203

a. What was the total length of gated pipe used?. . . . . FEET 1204

8. Were wells used to supply irrigation water for the selected field?

☐ YES – [*Enter Code 1 and continue*] ☐ NO – [*Go to item 9*]. . . . . CODE 1205

a. How many wells were used to irrigate the selected field?. . . . . NUMBER 1206

b. What was the average diameter of the outer well casing?. . . . . INCHES 1207

c. What was the average pumping depth of these wells during the irrigation season? [*Pumping depth is the depth to water at the start of the irrigation season, plus an average decline in the water level caused by pumping during the irrigation season*.]. . . . . FEET 1208

d. Were other fields irrigated using water pumped from wells that supplied water to the selected field?

☐ YES – [*Enter Code 1 and continue*] ☐ NO – [*Go to item 9*]. . . . . CODE 1210

e. Excluding the selected field, how many other acres on this operation were irrigated using the same wells during the 2020 growing season?. . . . . ACRES 1211 .___

9. Was any additional mainline or lateral pipe used to carry water from the source to the system in the selected field? (*Include underground pipe. Exclude any system pipe within the selected field.*)

☐ YES – [*Continue*] ☐ NO – [*Go to Conclusion*]

a. What was the average diameter (*in inches*) of the most common type of this additional pipe used?. . . . . INCHES 1212

b. How many feet of this additional pipe were used to bring water to the selected field?. . . . . FEET 1213

CONCLUSION

LOCATION OF SELECTED FIELD

1. I need to locate the selected field of corn on this map.

2. What county is the selected corn field in?. . . . . .

Field description. . . . . .

	COUNTY NAME	OFFICE USE COUNTY FIPS CODE
		0010

FOR STATES WITH GPS UNITS ONLY

Field location. . . . . N

	LATITUDE		LONGITUDE
	0054 ___ ___. ___ ___. ___ ___	W	0055 ___ ___ ___. ___ ___. ___ ___
	d d m m s s		*d d d m m s s*

3. [ENUMERATOR ACTION: *Mark map to indicate where the selected corn field is located*. *Be sure the "X" marked on map is in the county identified above*.]

4. We will need additional information to complete this study. We will contact you in February or March 2017 to collect it. I'll call you then to set up a time that is good for you.

5. To receive the complete results of this survey on the release date, go to www.nass.usda.gov/results/. Would you rather have a brief summary mailed to you at a later date?. . . . . YES = 1

CODE
9990

6. ENDING TIME [*MILITARY*]. . . . . HH MM

HH MM
0005 __ __ __ __

RECORDS USE

7. [*Did respondent use farm/ranch records to report*---]

		CODE
a. [*fertilizer data*?].	YES = 1	0011
b. [*pesticide data?*].	YES = 1	0012
c. [*majority of this expense data*?].	YES = 1	0013

SUPPLEMENTS USED

8. [*Record the total number of each type of supplement used to complete this interview.*]. . . . . .

	NUMBER
FERTILIZER APPLICATIONS	0041
PESTICIDE APPLICATIONS	0042
FIELD OPERATIONS	0043

Reported by:_____	9910 __ __ __ __ 16 (M M D D)	9911 Telephone: ( )

OFFICE USE

R. Unit	Ptr 1 Str	Ptr 2 Str	Ptr 3 Str	Ptr 4 Str	OPS	SSO 1	ADJ	Optional Use	
9921	9922	9923	9927	9928	923	9907	922	9906	9916

Response		Respondent		Mode		Enum.	POID
1-Comp 2-R 3-Inac 4-Office Hold	9901	1-Op/Mgr 2-Sp 3-Acct/Bkpr 4-Partner 9-Other	9902	2-Tel 3-Face-to-Face	9903	9998	9989 __ __ __ __ __ __ __ __ __ __

Eval.	Change
9900	9985