

AGRICULTURAL RESOURCE MANAGEMENT SURVEY

OMB No. 0535-0218
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 Phase II



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RICE PRODUCTION PRACTICES AND COSTS REPORT FOR 2020

VERSION 9	STATE ____	ID _____	TRACT 01	SUBTRACT ____	C-TYPE 115
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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 rice 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 H H M M

[MILITARY]

SCREENING BOX

[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

1. How many acres of rice did this operation plant for the 2020 crop year? [If no acres planted, review Screening Survey Information Form, make notes, then go to item 4 on back page].....

TOTAL PLANTED ACRES

0050

a. Of the total (item 1) acres, how many were planted with the intention of harvesting--

(i) Long grain?

TOTAL ACRES

0051

(ii) Medium grain?

0052

(iii) Short grain?

0053

NUMBER OF FIELDS

+ 0056

+ 0057

+ 0058

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

TOTAL NUMBER OF FIELDS PLANTED

0020

2. What is the TOTAL number of rice fields that were planted on this operation? [If only one field enter "1" and go to item 5.].....

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 _____
2 _____
3 _____
4 _____
5 _____
6 _____
7 _____
8 _____
9 _____

10 _____
11 _____
12 _____
13 _____
14 _____
15 _____
16 _____
17 _____
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 rice questions will be about this selected rice 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.]

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

Number

1070
1071
1072

OFFICE USE
OY Field Substituted

0022

B FIELD CHARACTERISTICS---SELECTED FIELD

B

1. How many acres of rice 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 2.]

Dollars & Cents

b. What was the cost, per acre, for third party organic certification?

1891

c. Was the selected field transitioning into organic rice production in 2020? YES = 1

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, else go to item 4.]

What was the cash rent paid per acre for this 2020 rice 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, or 5), 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 TOTAL DOLLARS

1305

1306

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 TOTAL DOLLARS

1309

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 YY

1308

- 1=POUNDS
- 2=CWT
- 3=TONS
- 4-BUSHEL
- 5-BARRELS

a. What was your yield goal at planting for the selected field? (Include any ratoon crop.)

UNITS PER ACRE

0216

0217

9. What type of rice was planted in the selected field?

- 1 Long?
- 2 Medium?
- 3 Short?

CODE

1324

[If item 9 = 1, ask--]

a. Did you plant an aromatic variety?

Yes = 1
No = 3

Code

[If item 9 = 3, ask--]

b. Did you plant a glutinous or sweet variety?

Yes = 1
No = 3

Code

10. What was the source of the rice seed?

- 1 Purchased?
- 2 Homegrown or traded?
- 3 Both?

CODE

1317

[If item10 = 2 or 3, ask--]

a. What was the cost per pound for cleaning and treating this seed?

[If item 10 = 2 or 3, ask--]

b. How much of the rice seed planted in this field was grown (or received in trade) by this operation?

DOLLARS & CENTS PER POUND

1321 . __ _

PERCENT

1318

11. [If any seed purchased (item 10 = 1 or 3), ask --]

What was the total cost per unit of purchased seed for the selected field? Include operator, landlord, and contractor costs, cost of seed treatment, and technology fee.

DOLLARS & CENTS PER UNIT

1319 . __ _

- UNIT CODE
- 1 = POUNDS
- 2 = CWT
- 3 = TONS
- 4 = BUSHEL
- 22 = ACRE
- 23 = 50 LB BAGS

1320

12. What was the seeding rate per acre the first time this field was planted?

a. What method of seeding did you use on the selected field?

- 1 Water seeded (airplane)?
- 2 Drilled (dry)?
- 3 Airplane (dry)?
- 4 Other, Broadcast (dry)?

UNITS

1313 . __

- UNIT CODE
- 1 = Pounds/Acre
- 2 = CWT/Acre
- 4 = Bushels/Acre
- 25 = Seeds/Acre
- 38 = Seeds/Foot

1314

CODE

1316

ACRES

13. How many acres in the selected field had to be replanted to rice?
(Acres replanted = Number of acres x Number of times replanted.)

1315

14. For the 2020 rice crop, was the rice seed--

- 1 Treated with a pesticide prior to purchase?
- 2 Treated with a pesticide after purchase?
- 3 Not treated with a pesticide?

Code

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.

[Empty box for seed treatment name]

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

15. For the 2020 rice 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.

[Empty box for commercial seed product name]

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.

[Empty box for seed product code]

16. Was a hybrid rice seed planted in the selected field?

YES = 1

CODE
1326

[Empty box]

17. Did the rice planted on the selected field have any of the following herbicide resistant traits in 2020? Did you use any of the following herbicide resistant traits the last time rice was planted on the selected field?

2020

Last Year Rice was Planted

1 Yes
3 No

1 Yes
3 No

- a. Herbicide tolerance to imazethapyr and other imidazolinone (IMI) herbicides (e.g. ClearField®) such as Clearfield® Rice or FullPage® Rice
- b. Herbicide tolerance to quizalofop (e.g. Provisia®) such as Provisia® Rice.
- c. Herbicide tolerance to oxyfluorfen (e.g. GoalTender®) such as ROXY Rice
- d. Herbicide tolerance to glyphosate (e.g. RoundUp®)
- e. Herbicide tolerance to glufosinate (e.g. Liberty Link®)
- f. Other herbicide tolerant trait

17. Did you use an "air delivery" or "vacuum (pneumatic) planter"?

YES = 1

2323

[If item 17 is YES, ask--]

CODE

- a. Did you use a talc and/or graphite seed flow lubricant? YES = 1
- b. Did you use an alternative seed flow lubricant (e.g. Bayer Fluency Agent) instead of talc and/or graphite? YES = 1

2324
2394

19. Has harvest of the selected field been completed? YES = 1

CODE
1328

20. Now I need information about the acres harvested (or to be harvested) and the yields from the selected field.

		1 What yield per acre did you (or do you expect to) get for rice---	2 UNIT CODE 1 Pounds 2 CWT 3 Tons 4 Bushels
	ACRES	UNITS PER ACRE	CODE
a. harvested for grain, first crop?	1346	1347	1348
b. harvested for grain, ratoon crop?	1332	1333	1334
c. harvested for commercial seed contract?	1431	1432	1433
d. abandoned?	1351		
e. used for some other purpose?	1439		

CROP CODE LIST for item 21 – 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	XX Crawfish

21. Next, I need to know 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 the selected field	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	CODE	YES = 1	YES = 1
a. SPRING/SUMMER of 2020?	Rice	21	Needs a p code	Grey out	Grey out	Needs a p code	Needs a p code
a. FALL of 2019?		1343		1470	1471	2344	1345
b. SPRING/SUMMER of 2019?		1369		1472	1473	2370	1371
c. FALL of 2018?		1372		1474	1475	2373	1374
d. SPRING/SUMMER of 2018?		1375		1476	1477	2376	1377
e. FALL of 2017?		1378		1478	1479	2379	1380
f. SPRING/SUMMER of 2017?		1381		1480	1481	2382	1383
g. FALL of 2016?		1366		1482	1483	2367	1368
h. 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.

DOLLARS & CENTS PER ACRE

i. [If a cover crop was planted in Spring/Summer/Fall 2019, ask—]
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]

22. 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
Conservation Tillage except no-till/strip-till	<input type="checkbox"/> 20	Implement a nutrient management plan (written plan)
Cover crop - single species	<input type="checkbox"/> 26	Split nitrogen application with at least 50% applied after planting
Cover crop mix		Precision nutrient application
Contour Farming		No fertilizer application more than 30 days before planting
Conservation crop rotation		Controlled release fertilizer
Laser Levelling		Subsurface phosphorous application
		<input type="checkbox"/> 30 Implement an integrated pest management plan - written plan
		Drift reducing spray nozzles
		<input type="checkbox"/> 32 Targeted sprayer - electrical control
		Adjacent to Field
		<input type="checkbox"/> 33 Filter strip
		<input type="checkbox"/> 34 Field border
		Riparian Buffer - grass or forest

b. For each practice or activity checked in 22a, please complete one line of this table.

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

23. 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 (HELIC) 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.....

Code	
Yes = 1	1404
No = 3	

24. Do you have a written conservation plan that specifies practices to control soil erosion?.....

Yes = 1	xxxx
No = 3	

25. 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.....

Code	
Yes = 1	1405
No = 3	

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

Loam
Clay
Sandy
Mixed

Code	
	2401

28. 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.)	
		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)].

30. 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)
- b. Conservation Security or Conservation Stewardship Programs (CSP)
- c. Conservation Reserve Program (CRP)
- d. Other Federal, State, Local or non-government source.

2611
2612
2613
2614

31. Did you harvest both rice and crawfish from the selected field during 2020?

Code	
Yes = 1	XXX
No = 3	

[If Yes, ask--]

a. Do you believe the crawfish harvest reduced the rice yield in the selected field during 2020?

Yes = 1
No = 3

Code
XXXX

[If Yes, ask--]

By what percentage do you believe the rice yield in the selected field was reduced as a result of the harvest of crawfish?

Percent
XXXX

32. Did you maintain a flood on the selected field during the winter season as a beneficial habitat for wildlife or waterfowl?

Yes = 1
No = 3

Code
XXX

[If Yes, ask--]

	Inches per Acre		Or	Total Acre-Feet
	1261	_____		1262
How much water was left on the field as a winter flood?				

Did you receive payment for maintaining a flood on the selected field?

Yes = 1
No = 3

1260

[If YES, ask--]

What was the payment you received for maintaining a winter flood on the selected field?

Dollars & Cents
Per Acre

Or

Total Dollars

1261	_____
------	-------

1262

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

YES – [Enter code 1 and continue]

NO – [Go to (multi peril crop insurance)].

CODE

1393

CODE

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

DOLLARS & CENTS
PER ACRE

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

1395	_____
------	-------

DOLLARS & CENTS PER ACRE

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

[Empty box for premium cost per acre]

PERCENT

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

[Empty box for percent deductible]

CODE

Did you (or will you) collect an indemnity payment for the selected field from the single peril policy during 2020?

YES = 1

[Empty box for indemnity payment]

34. 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--]

What percent of yield coverage did you select for the selected field?

PERCENT

1387

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

1388

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

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

PERCENT

1389

xxxx

b. Did you purchase a policy for Hurricane Insurance Protection – Wind Index in 2020? Yes = 1, NO = 3

xxxx

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

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

YEAR

What is the 2020 Approved APH (actual production history) yield for the selected field?

CWT PER ACRE

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

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

CODE

[Empty box for indemnity payment]

[Empty box]

C NUTRIENT or FERTILIZER APPLICATIONS---SELECTED FIELD

C

1. **Were commercial nutrients or fertilizers applied to the selected field for the 2020 rice crop?**.....

YES = 1

CODE	EDIT TABLE
0202	0200

[If COMMERCIAL nutrient or fertilizer applied, continue; else go to item 6.]

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.)**.....

NUMBER
0203

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

CHECKLIST

√	INCLUDE	√	EXCLUDE
<input type="checkbox"/>	Custom applied nutrients and fertilizers	<input type="checkbox"/>	Micronutrients
<input type="checkbox"/>	Nutrients or fertilizers applied in the fall of 2019 and those applied earlier if the selected field was fallow in 2019.	<input type="checkbox"/>	Unprocessed manure
<input type="checkbox"/>	Commercially prepared manure or compost	<input type="checkbox"/>	Nutrients or fertilizers applied to previous crops in the selected field
		<input type="checkbox"/>	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				3	4	5	6	7
	[Enter percentage analysis or actual pounds of plant nutrients applied per acre.]				What quantity was applied per acre?	[Enter material code.]	When was this applied?	How was this applied?	How many acres were treated in this application?
	N Nitrogen	P ₂ O ₅ Phosphate	K ₂ O Potash	S Sulfur	[Leave this column blank if actual nutrients were reported.]	1 Pounds 12 Gallons 19 Pounds of actual nutrients	1 In the fall before seeding 2 In the spring before seeding 3 At seeding 4 After seeding	[Refer to code list above.]	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

TABLE 000	LINE 00
------------------	----------------

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.]

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
0219

OR

OFFICE USE
0215

TOTAL DOLLARS
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
0221

OR

TOTAL DOLLARS
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 rice crop?

Yes = 1
No = 3

Code
0218

7. Was a soil test for soil organic matter performed on this rice field at some point in the last 10 years?

Yes = 1
No = 3

Code
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 rice 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 rice 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 rice 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.1

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	Yes = 1 No = 3	Code
	2 Soil/plant tissue test costs were included in the total fertilizer costs reported in item 5		0232
	3 Some other reason		Code
b. Did you receive a payment from the Conservation Stewardship Program for performing a stalk or leaf tissue test for nitrogen application?.....		Yes = 1 No = 3	3231

[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
i. Results of a soil or plant tissue test?.....	Yes = 1 No = 3 0233
ii. Crop consultant recommendation?.....	Yes = 1 No = 3 0234
iii. Fertilizer dealer recommendation?.....	Yes = 1 No = 3 0235
iv. Extension service recommendation?.....	Yes = 1 No = 3 0236
v. Cost of nitrogen and/or expected commodity price?.....	Yes = 1 No = 3 0237
vi. Contractor recommendation?.....	Yes = 1 No = 3 0238
vii. Routine practice – operator's own determination based on past experience, yield goal, etc.	Yes = 1 No = 3 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?.....	<input type="checkbox"/>	2561		2562

13. Was time-released fertilizer applied to the selected field?	Code
	Yes = 1 No = 3 XXXX

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

[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	Yes = 1 No = 3 0240

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 rice 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	AND	Units Per Acre	OR	Total Units
0248		0249		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	OR	Total Dollars
0284		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	OR	Total Dollars
0287		0288

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

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

Miles
0291

i. Of the manure or compost applied to the selected field, was any tested for nutrient content prior to application?

Code
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 what percent did you reduce the commercial nitrogen fertilizer application rate on the selected field?

0263

Code

xvii. Did you adjust the rice 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 rice, 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 [e.g. 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 [e.g. plant rice 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

(i) [If YES, ask--]

Percent

By what percent did you reduce the amount of commercial nitrogen fertilizer applied for 2020?

1225

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 rice crop, including both custom applications and applications made by this operation.

1. Were any herbicides, insecticides, fungicides or other biocontrols or pesticides used on this rice field for the 2020 crop?

CODE	EDIT TABLE
0302	0300

YES = 1

[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 defoliant, 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	3	4	5	6	OR	7	8	
		What products were applied to the selected field? [Show product Codes from Respondent Booklet.]	Was this product bought in liquid or dry form? [Enter L or D]	If this was part of a tank mix, enter line number of first product in mix	When was this applied? 1 Before planting 3 At planting 4 After planting 5 Defoliation prior to harvest	How much was applied per acre per application?	What was the total amount applied per application in the selected field?	[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	

L I N E	9	10	11	12	13	
	How was this product applied? [Enter Code from above.]	How many acres in the selected field were treated with this product? ACRES	How many times was it applied? NUMBER	Were these applications made by--- 1 Operator, partner or family member? 2 Custom applicator? 3 Employee/Other?	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--]

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.

Dollars & Cents Per Acre	Or	Total Dollars
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.

Dollars & Cents Per Acre	Or	Total Dollars
0334 _____		0335

a. How much was spent for herbicide products applied to the selected field? INCLUDE operator, landlord, and contractor costs.. . . .

Dollars & Cents Per Acre	Or	Total Dollars
3034 _____		3035

b. How much was spent for insecticide products applied to the selected field? INCLUDE operator, landlord, and contractor costs.. . . .

Dollars & Cents Per Acre	Or	Total Dollars
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 rice 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]

1. Were weather data used to assist in determining either the need or when to make pesticide applications?
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?
3. Were pesticides with different mechanisms of action rotated or tank mixed for the primary purpose of keeping pests from becoming resistant to pesticides?

	Code
Yes = 1 No = 3	0800
Yes = 1 No = 3	0801
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]

4. Were herbicides applied to this rice field before weeds emerged?
5. Were herbicides applied to this rice field after weeds emerged?
6. Were records kept for the selected field to track the activity or numbers of weeds, insects, or diseases?
7. Did you use published information on infestation thresholds to determine when to take measures to manage pests in the selected field?

	Code
Yes = 1 No = 3	0803
Yes = 1 No = 3	0805
Yes = 1 No = 3	0823
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

9. Was an established scouting process such as systematic sampling, recording counts, etc. used or were insect traps used in the selected field?

	Code
Yes = 1 No = 3	0809

10. Was scouting for pests done in the selected field due to---

- a. a pest advisory warning?
- b. a pest development model?

	Code
Yes = 1 No = 3	0810
Yes = 1 No = 3	0811

	1	2	3
		[If YES, ask---] What was the infestation level for [column 1]?—	[If column 1 = YES, ask---] Who did the majority of the scouting for [column 1]?
		1 Worse than normal 2 Normal 3 Less than normal	1 Operator, partner or family member 2 An employee 3 Farm supply or chemical dealer 4 Independent crop consultant or commercial scout
9. Was this rice field scouted for--	YES = 1	CODE	CODE
a. Weeds?	0812	0813	0814

b. Insects or mites?	0815	0816	0817
c. Diseases?	0818	0819	0820

[If scouted by crop consultant or commercial scout, ask item 10; else go to item 11.]

10. How much was charged for the scouting services for the selected field?
 [Include operator, landlord and contractor cost.]

	DOLLARS & CENTS PER ACRE	OR	TOTAL DOLLARS
	0821		0822

OFFICE USE

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

12. Were scouting data compared to published information on infestation
 thresholds to determine when to take measures to manage pests in the selected field? YES = 1

13. Did you use field mapping of previous weed problems to assist you in making
 weed management decisions? YES = 1

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.]

- a. Use the services of a diagnostic laboratory for pest identification or soil plant tissue pest analysis for the selected field?
- b. Plow down crop residue (*using conventional tillage*)?
- c. Remove/burn down crop residue?
- d. Rotate crops in the selected field during the past three years?
- e. Maintain ground covers, mulches, or other physical barriers?
- f. Choose crop variety because of specific resistance to a certain pest?
- g. Use no-till or minimum till?
- h. Plan planting locations to avoid cross infestation of pests?
- i. Adjust planting or harvesting dates?
- j. Chop, spray, mow, plow, or burn field edges, lanes, ditches, roadways, or fence lines? ..
- k. Clean equipment and field implements after completing field work to reduce the spread of pests?
- l. Adjust row spacing, plant density or row directions?
- m. Have the seed treated for insect or disease control after you purchased the seed for the selected field?
- n. Maintain a beneficial insect or vertebrate habitat?
- o. Use a flamer to kill weeds?
- p. Maintain buffer strips or border rows to isolate rice from non-organic crops or land, or did you take a buffer harvest?
- q. Plant earlier or later to avoid weeds?

	CODE
Yes = 1 No = 3	0841
Yes = 1 No = 3	0842
Yes = 1 No = 3	0843
Yes = 1 No = 3	0844
Yes = 1 No = 3	0845
Yes = 1 No = 3	0846
Yes = 1 No = 3	0847
Yes = 1 No = 3	0848
Yes = 1 No = 3	0849
Yes = 1 No = 3	0850
Yes = 1 No = 3	0851
Yes = 1 No = 3	0852
Yes = 1 No = 3	0854
Yes = 1 No = 3	0855
Yes = 1 No = 3	0857
Yes = 1 No = 3	0856
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

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
-------------------	------

Code

19. Was the selected field left in fallow in 2019 to help manage insects on the selected field?

Yes = 1 No = 3	0864
-------------------	------

Yes = 1
No = 3
Code

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	0861
	Code
28. Did pests (weeds, insects, pathogens, animals) cause any yield loss on the selected field in spite of your pest control efforts?	0827 YES = 1
[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?			Code		Units Per Acre		Total Units
		BUSHEL TONS	828	AND	829	OR	830

UNIT CODES

- 1 POUNDS
- 2 CWT
- 3 TONS
- 4 BUSHEL

UNITS PER ACRE

--	--

23. 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?.....

Completion Code for Pest Management Data	
1 Incomplete/Refusal	0500

F FIELD OPERATIONS--SELECTED FIELD F

1. Including custom operations, I need to list field work performed by machines on the selected field for the 2020 rice 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---	
<input type="checkbox"/>	Land Forming/Levee Building
<input type="checkbox"/>	Tillage
<input type="checkbox"/>	Preparing for Irrigation
<input type="checkbox"/>	Planting
<input type="checkbox"/>	Fertilizer & Pesticide applications
<input type="checkbox"/>	Harvesting & Hauling to storage or first point of sale
Exclude	
<input type="checkbox"/>	Lime & Gypsum/landplaster applications
<input type="checkbox"/>	Compost & Non-Commercial Manure applications

LINE No.	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? CODE	7 [Record size unit Code.] CODE	8 How many acres were covered? [Exclude land forming and hauling operations] ACRES	9 OR 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/} CODE	11 What was the fuel type of the tractor? [Record fuel type only if Power Code equals 1-5] 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 rice crop.
 (Exclude labor that was reported for field work performed by machines.)

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

1 CUSTOM SERVICE	2 Including operator, landlord, and contractor costs, how much was spent for [column 1] on the selected field for the 2020 rice crop? DOLLARS & CENTS PER ACRE
<p>Which of the following services were performed for the 2020 rice crop on the selected field?</p> <p>← [Check box for each service performed; refer to item 1 if necessary.]</p>	
<input type="checkbox"/> a. Custom laser leveling of land $\frac{\text{Cost per hour} \times \text{Total hours}}{\text{Total acres in the field}} = \text{Dollars \& cents per acre}$	1121 . .
<input type="checkbox"/> b. Other custom land preparation and/or shaping	1122 . .
<input type="checkbox"/> c. Custom planting and/or reseeding	1123 . .
<input type="checkbox"/> d. Custom harvesting	1124 . .
<input type="checkbox"/> e. Custom hauling to storage or point of first sale $\frac{\text{Dollars \& cents per unit} \times \text{Total units hauled from field}}{\text{Acres harvested in field}} = \text{Dollars \& cents per acre}$	1126 . .
<input type="checkbox"/> Custom harvesting and hauling from field to storage or point of first sale $\frac{\text{Dollars \& cents per unit} \times \text{Total units hauled from field}}{\text{Acres harvested in field}} = \text{Dollars \& cents per acre}$	1127 . .

8. Is laser leveling ever performed on the selected field? Code

Yes = 1
No = 3

[If Yes, ask --]

a. On average, how many years are there between laser leveling operations performed on the selected field? Years

8. Was the rice harvested and hauled from the selected field dried (or will be dried) before it was sold or stored? Code

Yes = 1
No = 3

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? Code

Yes = 1
No = 3

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

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

b. Soil or tissue sample collection? Yes = 1
No = 3

c. Pest control recommendations/management service? Yes = 1
No = 3

- d. Pest scouting? Yes = 1 1132
No = 3
- e. Irrigation management service (i.e. irrigation scheduling)? Yes = 1 1133
No = 3
- f. Yield map or remote sensing map development/interpretation? Yes = 1 1134
No = 3
- g. Other custom or technical service? [Specify: _____] Yes = 1 1135
No = 3

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	Or	1137
----	----	------

12. Please report how any data from the selected field in 2018 will be stored and accessed. [Enter code "1" for all that apply.]

- a. Did you access data collected from the selected field on a --
- | | |
|--|-------------|
| | CODE |
| (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 rice field? Yes = 1 2460
No = 3

[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---

- a. add/improve tile drainage?
- b. negotiate new crop leases?
- c. Help determine input use for management zones?

		Code
Yes = 1	No = 3	1141
Yes = 1	No = 3	1144
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--

- a. Input dealers without other fee-for-services?..
- b. Input dealers with other fee-for-services?
- c. Custom service providers?
- d. USDA/University extension services?

		Code
Yes = 1	No = 3	2491
Yes = 1	No = 3	2492
Yes = 1	No = 3	2493
Yes = 1	No = 3	2494

[If crop management recommendations were obtained, ask--]

- 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.

Dollars & Cents Per Acre	Or	Total Dollars
3150		3151

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

		Code
Yes = 1	No = 3	xxxx

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

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

- Weed analysis?
- Spraying herbicide or fungicide?
- Insect analysis?
- Insect control?
- Yield analysis?
- Moisture analysis?
- Equipment check?

		Code
Yes = 1	No = 3	xxxx
Yes = 1	No = 3	xxxx
Yes = 1	No = 3	xxxx
Yes = 1	No = 3	xxxx
Yes = 1	No = 3	xxxx
Yes = 1	No = 3	xxxx

Did you purchase the UAV?

		Code
Yes = 1	No = 3	xxxx

If 16b = Yes, then ask –

- i. What is the replacement cost of the UAV?

Total Dollars

Do you pay an annual fee for use of UAV?

Yes = 1
No = 3

Code
xxxx

If 16c = Yes, then ask --

Total Dollars
xxxx

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

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?

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

19. Was guidance auto-steering (excluding Light Bar) used on the selected field?

Yes = 1
No = 3

Code
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

Dollars & Cents Per Acre

Or

Total Dollars

d. What is the annual fee for guidance auto-steering?

Code
2164

20. Was a variable rate applicator used on the selected field?

Yes = 1
No = 3

[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	2	3	4	5	6
Was a variable rate applicator used on the selected field for--	Tool Used	Was this applicator— 1 Sensor-based 2 GPS-based 3 Both 4 Neither	Was this applicator— 1 New, owned 2 Used, owned 3 Leased	What year was the applicator first used?	Premium paid for the applicator
	Yes = 1 No = 3	Code	Code	Year	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 rice 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 rice crop.



- 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.]
- 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.)
 [If operator cannot provide item 2b. ask (i) & (ii). else go to 2c1]
 - (i) What is the total number of hours this system was used to apply water to the selected field during the rice growing season?
 - (ii) How many gallons per minute were applied?
- c. What percent of the water used to irrigate the selected field through this system came from surface water sources?
- d. What was the number of times the selected field was irrigated during the rice growing season using this system? (Include any pre-plant irrigation.)

Unit	System 1
System Type Code	1161
Inches Per Acre Or Total Acre-Feet	1162
	1163
Total Hours	1164
Gallons Per Minute	1165
Percent	1166
Number Of Irrigations	1167
Code	1168
Gallons Per Minute	1169
Pounds Per Square Inch	1170
Code	1171
Horsepower	1172
Gallons Per Minute	1173
Acres	1174

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.] |
|---|

f. What was the average pumping rate?

g. [If item 2a = Code 1-9 (PRESSURE SYSTEM), ask---]
 What was the system operating pressure?

- | |
|---|
| 1 DIESEL
2 GASOLINE
3 LP GAS
4 NATURAL GAS
5 ELECTRICITY
6 SOLAR POWER |
|---|

h. What was the primary motor type used to pump the water?

i. What was the average motor size?

j. [If NO PUMP was used (item 2e = 99), ask---]
 What was the average flow rate?

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.)

3. What was the cost of the fuel or electricity used to irrigate the selected field?
 (Include operator, landlord, and contractor costs.)

	DOLLARS & CENTS PER ACRE	OR	TOTAL DOLLARS
	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 OR TOTAL DOLLARS
1193 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

FEET
1204

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

[If Pipe systems were used (item 2a = 10, 11, 14, 15, or 16), ask---]

Days

9. 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

10. 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

FEET
1213

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

11. Is the run-off from this field--

1 Retained at the end of the field?

Code



	2 Reused to irrigate on the farm? 3 Collected in evaporation ponds on the farm? 4 Drained from the farm 5 There is no run-off 1214
--	--	-----------------

Did you reduce the water applied to the selected field in 2020 due to reduced availability of water supplies?

Code
Yes = 1
No = 3

1215

13. If the selected field was flood irrigated using a gravity system, which water management approach was used?

1 Permanent flooding? 2 Pinpoint flooding? 3 Delayed Flooding 4 Intermittent, controlled, or alternate wetting and drying (AWD) irrigation? 5 Furrow, or raised bed irrigation? Code 1214
---	-------------------------

Which of the following approaches are used to manage drainage of this field? Answer all that apply.

Code	
Yes = 1 No = 3	xxxx
Yes = 1 No = 3	xxxx
Yes = 1 No = 3	xxxx
Yes = 1 No = 3	xxxx
Yes = 1 No = 3	xxxx

- Natural drying of the field (when weather allows)
- Opening of levee gates or intentional breach of levee?
- Controlled drainage outlet?
- Treatment of drainage water with saturated buffers, filter strips, or constructed wetlands?
- Treatment of drainage water with a bioreactor?



CONCLUSION

LOCATION OF SELECTED FIELD

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

2. What county is the selected rice field in?

COUNTY NAME	OFFICE USE COUNTY FIPS CODE
	0010

Field description.

FOR STATES WITH GPS UNITS ONLY

Field location.

	LATITUDE		LONGITUDE
N	0054	W	0055
	<small>d d m m s s</small>		<small>d d d m m s s</small>

3. [ENUMERATOR ACTION: *Mark map to indicate where the selected rice 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?

	CODE
YES = 1	9990
	HH MM
	0005

6. ENDING TIME [MILITARY].

RECORDS USE

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

- a. [fertilizer data?]. YES = 1
- b. [pesticide data?]. YES = 1
- c. [majority of this expense data?]. YES = 1

CODE
0011
0012
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	9911
	<small>M M D D</small> 16	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	9901	1-Op/Mgr	9902	2-Tel	9903	9998	9989		
2-R		2-Sp		3-Face-to-Face					
3-Inac		3-Acct/Bkpr							
4-Office Hold		4-Partner							
		9-Other							
								Eval.	Change
								9900	9985

