

AGRICULTURAL RESOURCE MANAGEMENT SURVEY

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COTTON PRODUCTION PRACTICES AND COSTS REPORT FOR 2019

VERSION 11	ID _____	TRACT 01	SUBTRACT __	C-TYPE 103
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CONTACT RECORD

DATE	TIME	NOTES

INTRODUCTION:

[Introduced yourself, and ask for the operator. Rephrase in your own words.]

The information you provide will be used for statistical purposes only. Your responses will be kept confidential and any person who willfully discloses any identifiable information about you or your operation is subject to a jail term, a fine, or both. This survey is conducted in accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107-347 and other applicable Federal laws. For more information on how we protect your information please visit: <https://www.nass.usda.gov/confidentiality>. 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 is 0535-0218. The time required to complete this information collection is estimated to average 65 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] 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

COTTON FIELD SELECTION

Total Planted Acres

1. How many acres of cotton did this operation plant for the 2019 crop year?.....

0050	.	__
------	---	----

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

[If skip row cotton was planted, exclude the acreage in the skips.]

I will follow a simple procedure to make a random selection from the cotton fields planted for the 2019 crop.

Total Number of
Fields Planted

2. What is the total number of cotton fields that were planted on this operation?.....

0020

[If only one field enter "1" and go to item 4.]

3. Please list these field(s) 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

4. The field selected is _____ (field name/number/description).
During this interview, the cotton questions will be about this selected cotton field.
[Be sure the operator can identify the selected field.]

5. 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

		Acres
1. How many acres of cotton did this operation plant in the selected field for the 2019 crop?.....	1301	
[If skip row cotton was planted, exclude acreage in the skips.]		Code
a. Are the acres in the selected field Certified Organic?.....	Yes=1 No=3	1300
[If item 1a = 1, go to item 2.]		Code
b. Was the selected field transitioning into organic cotton production in 2019?.....	Yes=1 No=3	1399
		Code
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 or a share of the crop? 5 rented for some combination of cash and share of the crop? 6 used rent free?	1302
[If field is cash rented (item 2 = 2, 3, or 5), ask item 3, otherwise go to item 4.]		Dollars & Cents per Acre
3. What was the cash rent paid per acre for the selected 2019 cotton field?.....		1303 . ____
[If field is share rented (item 2 = 4 or 5), ask--]		Percent
4. What was the landlord's share of the crop from the selected field?.....		1304
[If field is rented (item 2 = 2, 3, 4, 5, or 6) ask--]		
5. What was the total cost for all inputs provided by any landlord for the 2019 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	1305 . ____
	OR	Total Dollars
		1306
		Year
6. In what year did you (the operator listed on the label) start operating the selected field?.....		1312 _____
		M M D D
7. On what date was the selected field planted?.....		1308 _____ 2019
		Pounds per Acre
a. Excluding pounds of seed cotton, what was your yield goal for cotton lint at planting for the selected field?.....		3316
		Code
8. What type of cotton was planted on the selected field?.....	1 Upland 2 Pima - extra long staple or ELS	3317

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--

- a. Genetically modified organism/genetically engineered (GMO/GE) purchased seed?.....
- b. Non genetically modified organism/genetically engineered (Non-GMO/GE) purchased seed?.....
- c. Homegrown seed?.....

Dollars & Cents per Unit	Unit Code		Percent of Seed Planted
	1 Pounds	22 Acre	
1214	23 Approx 50 Lb. Bag	40 250,000 Seed Bag	1216
1217			1219
			1318

100%

[If homegrown, ask--]

- i. What was the cost for cleaning and treating this seed?.....

Cents per Pound

3321

10. What was the seeding rate per acre the first time the selected field was planted?.....

1313

3314

- 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?

Unit Code

- 1 Pound/Acre
- 23 50 Pound Bags/Acre
- 25 Seeds/Acre
- 38 Seeds/Foot
- 40 250,000 Seed Bags/Acre

Units per Acre

Code

1316

[If 10a = 2, ask--]

- b. What was the average cotton row width?.....

Inches

1322

11. Did the selected field have skip-row cotton?.....

Yes=1
No=3

1323

[If no skip-row, go to item 12]

- a. What was the common skip pattern?.....

1324

1325

Inches

- b. What was the average width of the skip?.....

1326

Acres

12. How many acres in the selected field had to be replanted to cotton?.....

1315

(Acres replanted = Number of acres x Number of times replanted)

Code

13. Was a hybrid cotton seed planted in the selected field?.....

Yes=1
No=3

1327

14. For the 2019 cotton crop, was the cotton 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.....

1289

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.....

Code
2325

2019	2018
1 Yes	1 Yes
4 N/A no cotton in field	4 N/A no cotton in field
Code	Code

15. Did you plant GMO/GE seeds for the 2019 or 2018 crop years?.....

2300	2301
------	------

[If item 15 = 1 for either, continue, otherwise, go to item 17.]

16. Did the cotton planted on the selected field have any of the following genetically modified organism/genetically engineered (GMO/GE) traits in 2019 or 2018? [Leave the second column blank if field was not planted with cotton in 2018.]

2019	2018
1 Yes	1 Yes
4 N/A no cotton in field	4 N/A no cotton in field
Code	Code

- a. Insect resistance (Bt).....
- b. With multiple (pyramided) modes of action.....
- c. Herbicide Tolerance (HT) to Glyphosate such as Roundup Ready®.....
- d. Herbicide Tolerance (HT) to 2, 4-D such as Enlist®.....
- e. Herbicide Tolerance (HT) to Dicamba such as Extend®.....
- f. Herbicide Tolerance (HT) to Glufosinate such as Liberty Link®.....

2302	2303
2304	2305
2306	2307
2308	2309
2310	2311
2312	2313

17. Did the cotton planted on the selected field have any of the following non-genetically modified/genetically engineered (non-GMO/non-GE) traits in 2018 or 2019? [Leave the second column blank if field was not planted with cotton in 2018.]

2019	2018
1 Yes	1 Yes
4 N/A no cotton in field	4 N/A no cotton in field
Code	Code

- a. Bacterial blight resistance.....
- b. Root-Knot nematode (RKN) resistance.....
- c. Verticillium wilt tolerance.....
- d. Fusarium wilt tolerance such Race 4 FOV.....

2348	2349
2350	2351
2352	2353
2354	2355

18. For the 2019 cotton crop, did you plant a commercial seed product on the selected field?.....

Code
Yes=1
No=3
2340

[If item 18 = 1, ask--]

Commercial Seed Product Name

a. What was the name of the seed product? Write the seed product name in the box provided (e.g. DP1820B3XF, PHY250 W3FE, ST4550GLTP).....

2342

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

Code
2343

19. Did you use a genetically engineered, insect resistant seed variety for the 2019 crop?..... Yes=1 2326
 No=3

[If item 19 = 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

20. Was a refuge for insect pests planted on the selected field?..... Yes=1 2371
 No=3

[If item 20 = 1 continue, otherwise go to item 23.]

21. What percent of the selected field was used as refuge in order to comply with Bt cotton insect resistant management guidelines?..... Percent
 2328

22. What is the size in acres of the refuge? Refuge may be adjacent to the field or a separate block within 1/2 mile of the field..... Acres
 2372

23. Has harvest of the selected field been completed?..... Yes=1 1328
 No=3

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

24. How many acres in the selected cotton field were or will be--	Acres	1	2
		What yield per acre did you or do you expect to get for cotton lint-- Units per Acre	Unit code 1 Pounds 2 CWT 3 Tons Code
a. harvested for lint?.....	2346	2347	1348
b. abandoned?.....	1351		

Crop Code List for item 25 - Previously Planted Crops			
190 Barley	311 Grasses including clover	240 Sorghum, all	292 Other crop
6 Corn for grain	1 Hay, alfalfa	26 Soybeans	312 Cover crop mix
5 Corn for silage	11 Hay, all other	263 Wheat, durum or spring	16 Peanuts
282 Cotton, pima	15 Oats	165 Wheat, winter	
281 Cotton, upland	22 Rye	318 No crop planted	
302 CRP	34 Ryegrass	291 Other field crop	

25. Please report the history of crops 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 Code	3 Was this a cover crop? Yes=1 No=3	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 Code	5 Was the selected field irrigated? Yes=1 No=3	6 Was the selected field no-till or strip- tilled? ^{1/} Yes=1 No=3
Season and Year	Crop Name	Crop Code					
a. Spring/Summer of 2019?.....	Cotton	283	1486			2345	1344
b. Fall of 2018?.....		1343	1487	1470	1471	2344	1345
c. Spring/Summer of 2018?.....		1369	1488	1472	1473	2370	1371
d. Fall of 2017?.....		1372	1489	1474	1475	2373	1374
e. Spring/Summer of 2017?.....		1375	1490	1476	1477	2376	1377
f. Fall of 2016?.....		1378	1491	1478	1479	2379	1380
g. Spring/Summer of 2016?.....		1381	1492	1480	1481	2382	1383
h. Fall of 2015?.....		1366	1493	1482	1483	2367	1368
i. Spring/Summer of 2015?.....		1340	1494	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 2018, ask--]

j. What was the seed cost per acre for the cover crop?.....

Dollars & Cents
per Acre

1468	•__ __
1495	•__ __

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

[Enter zero if no program payment was received.]

26. 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 (HELCS) requirements. 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 No=3	1404

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

Yes=1
No=3

Code
[]

28. 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.....

Yes=1
No=3

Code
1405
[]

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

1 Nearly level 0 - 2%
2 Even, moderate grade 3 - 9%
3 Variable, moderate grade
4 Even, steep grade over 10%
5 Variable, steep grade

Code
2400
[]

30. What is the primary soil texture of the selected field?.....

1 Loam
2 Clay
3 Sandy
4 Mixed
5 Silty

Code
2401
[]

31. 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	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:	
	Yes=1 No=3	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).

32. Did the land use practices for this field include subsurface drainage?.....

Yes=1
No=3

Code
2402
[]

33. 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?.....
- a. Environmental Quality Incentives Program (EQIP).....
 - b. Conservation Stewardship Program (CSP).....
 - c. Conservation Reserve Program (CRP).....
 - d. Other Federal, State, Local, or non-Government source.....

Unit Code
 1 Current
 2 Past
 3 Never

2611
2612
2613
2614

NOTES:

34. 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		
<input type="checkbox"/> 1 No-till/strip-till	<input type="checkbox"/> 12 Grass waterway	<input type="checkbox"/> 30 Implement an integrated pest management plan - written plan
<input type="checkbox"/> 2 Conservation tillage except no-till/strip-till	<input type="checkbox"/> 20 Implement a nutrient management plan - written plan.	<input type="checkbox"/> 31 Drift reducing spray nozzles
<input type="checkbox"/> 3 Cover crop - single species	<input type="checkbox"/> 26 Split nitrogen application with at least 50% applied after planting	<input type="checkbox"/> 32 Targeted sprayer - electrical control
<input type="checkbox"/> 4 Cover crop mix	<input type="checkbox"/> 21 Precision nutrient application	Adjacent to Field
<input type="checkbox"/> 5 Contour farming	<input type="checkbox"/> 23 No fertilizer application more than 30 days before planting	<input type="checkbox"/> 33 Filter strip
<input type="checkbox"/> 6 Conservation crop rotation	<input type="checkbox"/> 24 Controlled release fertilizer	<input type="checkbox"/> 34 Field border
<input type="checkbox"/> 10 Terraces	<input type="checkbox"/> 22 Subsurface phosphorous application	<input type="checkbox"/> 35 Riparian buffer - grass or forest

b. For each practice or activity checked in 34a, please complete one line of this table.

1 Practice or Activity on the Selected Field	2 Practice Code (see item 34a)	3 On the selected field for this practice, have you ever received at any time--		4 Does this practice or activity help satisfy--	5 Was this practice or plan used on the selected field in 2019? Yes=1 No=3
		Technical or planning assistance?	Financial Assistance?		
	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

35. In 2019, was the cotton in the selected field covered by a single or named peril crop insurance policy (e.g. hail, replant, wind, freeze)?.....

Code

Yes=1	2520
No=3	

[If item 35 = 1 ask, otherwise go to item 36.]

a. In 2019, was the cotton in the selected field covered by more than one single or named peril crop insurance policies (e.g. hail, replant, wind, freeze)?.....

Code

Yes=1	2517
No=3	

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

Dollar & Cents
per Acre

2521	. ____
------	--------

c. What was the percent deductible for the single peril policy covering the selected field? [Record no deductible as "0"].

Percent

2522	
------	--

d. What premium cost per acre did you pay for the single peril policy covering the selected field?....

Dollar & Cents
per Acre

2523	. ____
------	--------

e. Did you or will you collect an indemnity payment for the selected field from the single peril policy during 2019?.....

Code

Yes=1	1394
No=3	

36. In 2019, was the cotton in the selected field covered by a multi-peril crop insurance policy?..

Code

Yes=1	1385
No=3	

[If item 36 = 1 continue, otherwise go to Section C]

a. Which coverage did you obtain?.....

- | |
|--|
| 1 Federal CAT - basic catastrophic insurance |
| 2 Yield Protection (YP) |
| 3 Revenue Protection (RP) |
| 4 Other multi-peril crop insurance |

Code

1386	
------	--

[If item 36a = 2, ask--]

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

Percent

1387	
------	--

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

Percent

1388	
------	--

[If item 36a = 3, ask--]

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

Percent

1389	
------	--

b. What type of unit coverage did you purchase for the selected field?.....

- | |
|--------------|
| 1 Basic |
| 2 Optional |
| 3 Enterprise |

Code

2524	
------	--

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

Year

2525	_ _ _ _
------	---------

d. What is the 2019 Approved APH (actual production history) yield for the selected field?.....

Pounds per Acre

2526	
------	--

e. What was the premium paid for multi-peril crop insurance for the selected field in 2019? EXCLUDE any sign-up fee.....

Dollars & Cents
per Acre

2527	. ____
------	--------

f. Did you or will you collect an indemnity payment for the selected field from multi-peril crop insurance during 2019?.....

Code

Yes=1	2528
No=3	

1. Were commercial nutrients or fertilizers applied to the selected field for the 2019 cotton crop? INCLUDE those from operators, landlords, and contractors.....

Yes=1
No=3

Code	Office Use Edit Table
0202	0200

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

2. How many commercial nutrient or fertilizer applications were made to the selected field for the 2019 crop? INCLUDE applications made by airplanes and custom applicators.....

Number
0203

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

CHECKLIST

INCLUDE

EXCLUDE

Custom applied nutrients or fertilizers

Micronutrients

Nutrients or fertilizers applied in the fall of 2018 and those applied earlier if the selected field was fallow in 2018.

Unprocessed manure

Commercially prepared manure or compost

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 nutrients were reported]	4 [Enter material code] 1 Pounds 12 Gallons 19 Pounds of actual nutrients	5 When was this applied? 1 In the fall before seeding 2 In the spring before seeding 3 At seeding 4 After seeding	6 How was this applied? [Refer to code list above]	7 How many acres in the selected field were treated in this application? Acres
	N Nitrogen	P ₂ O ₅ Phosphate	K ₂ O Potash	S Sulfur					
	01	31	32	33					
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?..... Code
Yes=1 0214
No=3

[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?..... Code
Yes=1 0216
No=3

[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	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 2018. EXCLUDE lime, gypsum, purchased manure, and purchased compost.....

	Dollars & Cents per Acre	OR	Total Dollars
0221	. ____		0222

[If custom applied and the cost of materials 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 2019 cotton crop?..... Code
Yes=1 0218
No=3

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

[If item 7 = 1, ask--]

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

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

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

c. Based on these tests, is your soil organic matter content?..... Code
3228

	1 Increasing 2 Decreasing 3 Staying roughly the same
--	--

8. Was a soil or plant tissue test performed on the selected cotton field in 2018 or 2019 for the 2019 crop?..... Code
Yes=1 0224
No=3

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

9. Was a soil test for phosphorus performed on the selected cotton field in 2018 or 2019 for the 2019 crop?..... Code
Yes=1 0225
No=3

[If item 9 = 1 ask--]

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

10. Was a soil test for nitrogen performed on this cotton field in 2018 or 2019 for the 2019 crop?... Code
Yes=1 0227
No=3

[If item 10 = 1, ask--]

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

11. Was a plant tissue test or leaf analysis for nutrient deficiency performed on the selected field in 2018 or 2019 for the 2019 crop?.....

	Code
Yes=1	0229
No=3	

12. How much was spent for these soil and plant tissue tests on the selected field? INCLUDE operator, landlord, and contractor costs.....

Dollars & Cents per Acre	OR	Total Dollars
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

b. Did you receive a payment from the Conservation Stewardship Program for performing a stalk or leaf tissue test for nitrogen application?.....

	Code
Yes=1	3231
No=3	

[Enumerator Action: Refer to the 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--

a. Results of a soil or plant tissue test?.....	Code
	0233
b. Crop consultant recommendation?.....	Code
	0234
c. Fertilizer dealer recommendation?.....	Code
	0235
d. Extension Service recommendation?.....	Code
	0236
e. Cost of nitrogen and/or expected commodity price?.....	Code
	0237
f. Contractor recommendation?.....	Code
	0238
g. Routine practice - operator's own determination based on past experience, yield goal, etc.	Code
	0239

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

h. How much nitrogen inhibitor did you mix with the nitrogen applied to the selected field?.....

None	Pounds per Acre	OR	Gallons per Acre
<input type="checkbox"/>	2561		2562

14. Is lime ever applied to the selected field?.....

	Code
Yes=1	0242
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 2018 or 2019 for the 2019 crop?.....

	Code
Yes=1	0240
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 2019 cotton crop? EXCLUDE commercially prepared manure.....

	Code
Yes=1	0246
No=3	

[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 or compost 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 2019 cotton crop, what was the percent of manure or compost applied--

i. in the Fall before planting?.....

Percent
+ 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 manure or compost--.....

- 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?
- 2 Purchased?
- 3 Obtained at no cost off this operation?
- 4 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	0286
No=3	

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

iii. 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 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	0261
No=3	

16. Were the manure application rates to the selected field influenced by Federal, State, or local restrictions?.....

Code

Yes=1	0264
No=3	

[If item 16 = 1, ask--]

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

i. Nitrogen requirement of the crop?.....

Code

Yes=1	0265
No=3	

ii. Phosphorus requirement of the crop?.....

Code

Yes=1	0266
No=3	

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 2019 cotton 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 cotton field for the 2019 crop?.....	Yes=1 No=3	Code 0302	Office Use Edit Table 0300
---	---------------	--------------	----------------------------------

[Probe for applications made in the fall of 2018 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.	EXCLUDE adjuvants, nutrients or fertilizers reported earlier and seed treatments.	Office Use	Table	0399
INCLUDE biological and botanical pesticides.		Line in Table	001	

Chemical Product Name	L I N E	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)

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

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

a. Are you able to report the cost of chemical, biocontrol, and pesticide products and custom application separately?..... Yes=1 No=3 Code

[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 2018 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.

5. Was the cotton that was grown in the selected field in 2019 covered by the boll weevil eradication program (BWEPP)?..... Yes=1 No=3 Code

[If item 5 = 1, ask--]

a. What phase has the eradication program reached in the selected field?.....

1 Active eradication phase 2 Post-eradication phase?	0336
---	------

b. For 2019, what was your assessment on the selected field to participate in the BWEPP? INCLUDE operator, landlord and contractor charges for 2019.

Dollars & Cents per Acre	OR	Dollars & Cents per Bale
0337		0338

c. How did the level of secondary cotton pests in 2019 compare with the level prior to participating in the BWEPP? (e.g., beet armyworm, budworms, plant bugs, or aphids).....

1 Increased 2 Decreased 3 No change	0339
---	------

Ask for California and Texas only

Code

6. Was the cotton in the selected field covered by an area-wide pink bollworm eradication or suppression program (PBWP)?.....

Yes=1
No=3

0341

[If item 6 = 1, ask--]

Dollars & Cents per
Acre

OR

Dollars & Cents
per Bale

a. For the current crop year, what was the costs on the selected field to participate in the PBWP?.....

0342

0343

[INCLUDE operator, landlord, and contractor costs per acre and/or per bale charges for this year's cotton. If you receive a credit on your PBWP assessment for planting Bt cotton to control pink bollworm, report only the amount of the assessment you, your landlord, or your contractor paid.]

Now I have some questions about your pest management decisions and practices used on the selected field for the 2019 cotton 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	0800
No=3	

Code	
Yes=1	0801
No=3	
Code	
Yes=1	0802
No=3	

[Enumerator Action: Were herbicide (pesticide product codes 10000-99000) applications reported in Section D, item 1, column 2?]

Yes - Continue No - Go to item 6

4. Were herbicides applied to this cotton field before weeds emerged?.....
5. Were herbicides applied to this cotton 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	0803
No=3	

Yes=1	0805
No=3	

Yes=1	0823
No=3	

Yes=1	0824
No=3	

8. In 2019, 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 11.]
 The selected field was not scouted. [Enter code 3 and go to item 13.]

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? EXCLUDE traps checked as part of either BWEP or PBWP.....

Code	
Yes=1	0809
No=3	

Yes=1	2450
No=3	

- a. Did you measure the damage of budworm or bollworm infestations on the selected field?.....

[If item 9a = 1, ask--]

- b. If traps were used, what was the average insect count per acre?.....

Count	
	2451

- i. If boll damage scores were recorded (1 to 4), what was the average boll damage score per acre?.....

1 Damage in 1 locule
 2 Damage in 2 locules
 3 Damage in 3 locules
 4 Damage in all locules
 5 Not applicable

Code	
.....	2452

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

- a. a pest advisory warning?.....

Yes=1	0810
No=3	

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

Yes=1	0811
No=3	

1	2	3	4
11. Was this cotton field scouted for--		[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 is 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?.....	Yes=1 No=3 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 12, otherwise go to item 13.]

12. How much was charged for the scouting services for the selected field? INCLUDE operator, landlord, and contractor costs.....	Dollars & Cents per Acre	OR	Total Dollars
	0821 .__ __		0822
a. If scouting performed at no cost, explain: _____			Office Use 0333 Code
13. Did you use field mapping of previous weed problems to assist you in making weed management decisions?.....		Yes=1 No=3	0825 Code
14. Did you do any of the following other types of pest management for the specific purpose of managing or reducing the spread of pests in the selected field?			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
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. Maintain buffer strips or border rows to isolate organic cotton from non-organic crops or land, or did you take a buffer harvest?.....
- p. Use a flamer to kill weeds?.....
- q. Plant earlier or later to avoid weeds?.....

Code	
Yes=1	0856
No=3	
Yes=1	0857
No=3	
Yes=1	0865
No=3	

- 15. Were any beneficial organisms, such as insects, nematodes, or fungi, applied or released in the selected field to manage pests?.....
- 16. Were floral lures, attractants, repellants, pheromone traps, or other biological pest controls used on the selected field?.....

Code	
Yes=1	0853
No=3	
Yes=1	0858
No=3	

[If item 15 or item 16 = 1, 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

- 17. Was a trap crop, excluding fallow, grown to help manage insects in the selected field?.....
- 18. Was the selected field left in fallow in 2018 to help manage insects on the selected field?.....
- 19. 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?.....

Code	
Yes=1	0863
No=3	
Yes=1	0864
No=3	
Code	
Yes=1	0861
No=3	

- 20. What was the difference in yields in the Bt crop with the yields in the non-Bt refuge crop?.....

Units per Acre	Unit Code 1 Pounds 2 Bales
1810	1811

- 21. Did you use a soil-insecticide or insecticidal seed treatment in the refuge in 2019?.....
- 22. Did pests such as weeds, insects, pathogens, or animals, cause any yield loss on the selected field in spite of your pest control efforts?.....

Code	
Yes=1	1812
No=3	
Yes=1	0827
No=3	

[If item 22 = 1, 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?.....

Units	Code	AND	Unit per Acre	OR	Total Units
1 Bales 2 Pounds	0828		0829		0830

- 23. If you used Bt seeds on the selected field in 2019, indicate the number of consecutive years you have planted Bt seeds.....

Number of Years
0831

[Note: A producer who used Bt cotton in 2019 and 2018, but conventional in 2017, has used Bt cotton for "2" consecutive years.]

[If item 23 is greater than 1, ask--]

- a. If you have ever switched from a Bt seed with a single mode of action to a Bt seed with multiple (pyramided) modes of action, indicate the year that this change was made.....

Year
0832

24. If you used Ht seeds on the selected field in 2019, indicate the number of consecutive years you have planted Ht seeds.....

Number of Years
1813

[Note: A producer who used Ht cotton in 2019 and 2018, but conventional cotton in 2017, has used Ht cotton for "2" consecutive years.]

a. What year did you first plant any Ht seeds on the selected field?.....

Year
1814

25. If you used GMO/GE glyphosate-resistant seeds on the selected field in 2019, indicate the number of consecutive years you have planted GMO/GE glyphosate-tolerant corn, soybeans, cotton, or any other GMO/GE glyphosate tolerant crop.....

Number of Years
1970

[If item 25 = 1 continue, otherwise go to Section F.]

a. What year did you plant any GMO/GE glyphosate-tolerant seeds on the selected field?.....

Year
1971

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

1 Active Ingredients	2 2019 Yes=1 No=3	3 2018 Yes=1 No=3	4 2017 Yes=1 No=3	5 2016 Yes=1 No=3	6 2015 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®)	2016	2017	2018	2019	2020

27. Have herbicide tolerant seeds been planted on the selected field any time since 2015?.....

Code
Yes=1
No=3
2021

[If item 27 = 1 continue, otherwise go to item 28.]

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? Yes=1 No=3	3 What was the first year you noticed a decline in the effectiveness of herbicides in controlling weeds in the selected field? Year	4 Stop planting herbicide resistant crops with this trait? Yes=1 No=3	5 Change tillage practices? Yes=1 No=3	6 Switch to an alternative herbicide? Yes=1 No=3
a. Glyphosate (e.g. Roundup®)	2022	2023	2024	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. 2, 4-D (e.g. Enlist®)	2037	2038	2039	2040	2041

28. If untreated either with insecticides or Bt seeds, how much yield loss (e.g. bales per acre) do you think each of the following would most likely cause on the selected field?

Unit Code
 1 Pounds
 2 CWT
 3 Tons
 4 Bales

- a. bollworms.....
- b. cutworms.....
- c. insect pests other than bollworms or cutworms.....

Code	AND	Units per Acre	OR	Total Units
2042		2043		2044
2045		2046		2047
2048		2049		2050

29. If untreated either with herbicides, tillage, or cultivation, how much yield loss (e.g. bales per acre) do you think weeds would most likely cause on the selected field?.....

Unit Code
 1 Pounds
 2 Bales

Code
 2051

AND

Unit per Acre
 2052

OR

Total Units
 2053

Completion Code for Pest Management Data	
1 Incomplete/Refusal	0500

F FIELD OPERATIONS--SELECTED FIELD

1. Including custom operations, I need to list field work performed by machines on the selected field for the 2019 cotton 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 2018, list operations starting with fall 2017.
- 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.

Check List

INCLUDE all field work using machines for--

- Land forming/Levee Building
- Tillage
- Preparing for Irrigation
- Planting
- Fertilizer & Pesticide applications
- Harvesting
- Module building
- Hauling from field to gin

EXCLUDE

- Lime & Gypsum/land plaster applications
- Compost & Non-commercial manure applications

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

1 L I N E No.	2 S E Q U E N C E 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 Column 5 = code 6, skip columns 6 thru 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 Bales 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 and hauling? [Example: backhoes, disk border maker, ditcher, rear mounted blade, trucks, wagons, forklift etc.] Hours	10 What power source was used? Tractors 1 <40 HP 2 40-99 HP 3 100-149 HP 4 150-199 HP 5 >=200 HP OR 66 Animal Drawn 77 Pick up ^{1/} 99 Self-Propelled 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 2019 cotton crop.
 EXCLUDE labor that was reported for field work performed by machines.

Type of Workers	How many hours did (type of worker) spend on the selected field--		
	1	2	3
	scouting for weeds, insects and diseases? Hours	irrigating? Hours	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 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

4. 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
1118 . ____		2118		3118

5. Was any contract labor used on the selected field?.....

Code
Yes=1 No=3
1116

[If item 5 = 1, 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 the selected field for the 2019 cotton crop.

1 Custom Service	2 Including operator, landlord, and contractor costs, how much was spent for [column1] on the selected field for the 2019 cotton crop? Dollars & Cents per Acre
Which of the following services were performed for the 2019 cotton crop on the selected field? [Check box for each service performed; refer to item 1 if necessary.]	
<input type="checkbox"/> a. Custom land preparation, shaping and/or leveling?.....	1121 .__ __
<input type="checkbox"/> b. Custom cultivating?.....	1122 .__ __
<input type="checkbox"/> c. Custom planting and/or reseeding?.....	1123 .__ __
<input type="checkbox"/> d. Custom harvesting?.....	1124 .__ __
<input type="checkbox"/> e. Custom module building? (Dollars & cents per unit x Total units hauled from field ÷ Acres harvested in field = Dollars & cents per acre)	1125 .__ __
<input type="checkbox"/> f. Custom hauling from field to gin? (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 gin cannot be separated, ask--]	
<input type="checkbox"/> g. Custom harvesting, module building, and hauling from field to gin? (Dollars & cents per unit x Total units hauled from field ÷ Acres harvested in field = Dollars & cents per acre)	2127 .__ __

[Note: Do not report cotton ginning costs. If harvesting, module building, and/or hauling costs cannot be separated from ginning costs, report the nonresponse code (-1) for those costs that cannot be separated.]

8. 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 1196
No=3

[If item 8 = 1 continue, otherwise go to item 11.]

9. 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 1129 No=3
b. Soil or tissue sample collection?.....	Yes=1 1130 No=3
c. Pest control recommendations/management service?.....	Yes=1 1131 No=3
d. Pest scouting, excluding any activity for the BWEP or PBWP?.....	Yes=1 1132 No=3
e. Irrigation management service such as 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

10. If Yes to any of these services in item 9a-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 cost of materials and/or application.....

Dollars & Cents per Acre	OR	Total Dollars
1136 .__ __		1137

11. Please report how any data from the selected field in 2019 will be stored and accessed.

a. Did you access the data collected from the selected field on a --

- i. Paper hard copy?.....
- ii. Personal computer?.....
- iii. Mobile device?.....

		Code
Yes=1	2485	
No=3		
Yes=1	2486	
No=3		
Yes=1	2487	
No=3		
Yes=1	2488	
No=3		

[If item 11b = 1 continue, otherwise go to item 12.]

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

		Code
Yes=1	2489	
No=3		
Yes=1	2490	
No=3		
Yes=1	2460	
No=3		

12. Were there or will there be any data collection tools such as yield monitors, GPS mapping, etc. used during field operations on this cotton field?.....

[If item 12 = 1, continue, otherwise go to item 13.]

Please report the data collection technologies you used on the selected field in 2019 to produce this crop. 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 the cell in that column 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 12a column 2 = 1, continue, otherwise go to item 15.]

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

- a. add/improve tile drainage?.....
- b. negotiate new crop leases?.....
- c. help determine chemical input use?.....

		Code
Yes=1	1141	
No=3		
Yes=1	1144	
No=3		
Yes=1	1143	
No=3		

[If any of item 12 column 2 = 1, continue, otherwise go to item 15]

14. Using data collected from the previous tools table in item 12, did you obtain crop management recommendations, such as data interpretation, in 2019 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	2491
No=3	
Yes=1	2492
No=3	
Yes=1	2493
No=3	
Yes=1	2494
No=3	

[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

15. Was any of the following GPS-enabled (Global Positioning System) equipment used to produce cotton the selected field in 2019?

- a. Mounted in-cab heads-up displays?.....
- b. Smart phones or computer tablets?.....
- c. Automatic section control, such as auto sprayer boom controls or automatic section shut offs?.....

	Code
Yes=1	2155
No=3	
Yes=1	2156
No=3	
Yes=1	2165
No=3	

16. 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
2166		2167

17. Was any guidance auto-steering equipment, excluding Light Bar, used on the selected field?...

	Code
Yes=1	2148
No=3	

[If item 17 = 1 continue, otherwise go to item 18.]

a. Was the guidance auto-steering equipment.....

1 New, owned
2 Used, owned
3 Leased

Code
2158

b. What year was guidance auto-steering equipment first purchased?.....

Year
2159

c. What is the replacement cost for guidance auto-steering equipment?.....

Dollars & Cents per Acre	OR	Total Dollars
2160		2161

Code

18. Was a variable rate applicator used on this field?.....

Yes=1
No=3

2164

[If item 18 = 1 continue, otherwise go to Section G]

Please report the variable rate applicator types you used on the selected field to produce the cotton in 2019.

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

Acres

1. How many acres in the selected field were irrigated for the 2019 cotton crop?.....

1160	.____
------	-------

[If none, go to Conclusion]

2. Now I have some questions about the irrigation system and water used on the selected field for the 2019 cotton crop.

a. What type of irrigation system was used to irrigate the selected field?
[Show System Type Codes in the Respondent Booklet. Enter System Type Code for system that applied the most water.].....

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 and applied by any irrigation system.....

Unit	System
System Type Code	1161
Inches per Acre OR Total Acre Feet	1162 1163

[If operator cannot provide item 2b, ask (i) and (ii), otherwise go to 2c]

i. What is the total number of hours this system was used to apply water to the selected field during the cotton 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 cotton growing season using this system? INCLUDE any pre-plant irrigation.....

Number of Irrigations	1167
-----------------------	------

e. What 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
--------------------	------

[If item 2a = code 1-9 (Pressure System), ask--]

g. 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
------------	------

[If item 2e = 99, ask--]

j. 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 2019 growing season? EXCLUDE the selected field.....

Acres	1174
-------	------

<p>3. What was the cost of the fuel or electricity used to irrigate the selected field? INCLUDE operator, landlord, and contractor costs.....</p>	<p>Dollars & Cents per Acre</p> <div style="border: 1px solid black; padding: 2px; width: 100px;">1189 .__</div>	<p>OR</p>	<p>Total Dollars</p> <div style="border: 1px solid black; padding: 2px; width: 100px;">1190</div>
			<p>Code</p>
<p>4. Was any water purchased to irrigate the selected field? INCLUDE landlord's share and purchases from all sources.....</p>		<p>Yes=1 No=3</p>	<p>1191</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
<p>[If item 4 = 1 continue, otherwise go to item 5.]</p>			
<p>a. What was the total cost for the water purchased for the selected field during the 2019 growing season? INCLUDE operator, landlord, and contractor costs and ditch maintenance costs for the selected field.....</p>	<p>Dollars & Cents per Acre</p> <div style="border: 1px solid black; padding: 2px; width: 100px;">1193 .__</div>	<p>OR</p>	<p>Total Dollars</p> <div style="border: 1px solid black; padding: 2px; width: 100px;">1194</div>
			<p>Total Dollars</p>
			<p>1201</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
			<p>Total Dollars</p>
<p>5. What would be the total cost to replace all the siphon tubes used on the selected field?.....</p>			<p>1202</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
<p>[If poly pipe system was used, item 2a = 14, ask--]</p>			
<p>6. What was the total amount spent for poly pipe used on the selected field during the 2019 growing season? INCLUDE operator, landlord, and contractor costs.....</p>			<p>1203</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
<p>[If gated pipe system was used, item 2a = 15 or 16, ask--]</p>			
<p>7. What was the average diameter of gated pipe used to irrigate the selected field?.....</p>			<p>Inches</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
			<p>Feet</p>
<p>a. What was the total length of gated pipe used?.....</p>			<p>1204</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
			<p>Code</p>
<p>8. Were wells used to supply irrigation water for the selected field?.....</p>		<p>Yes=1 No=3</p>	<p>1205</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
<p>[If item 8 = 1 continue, otherwise go to item 9.]</p>			
<p>a. How many wells were used to irrigate the selected field?.....</p>			<p>Number</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
			<p>Inches</p>
<p>b. What was the average diameter of the outer well casing?.....</p>			<p>1206</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
			<p>Feet</p>
<p>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.....</p>			<p>1207</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
			<p>Code</p>
<p>d. Were other fields irrigated using water pumped from wells that supplied water to the selected field?.....</p>		<p>Yes=1 No=3</p>	<p>1208</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
<p>[If item 8d = 1 continue, otherwise go to item 9.]</p>			
<p>e. Excluding the selected field, how many other acres on this operation were irrigated using the same wells during the 2019 growing season?.....</p>			<p>Acres</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
			<p>Code</p>
<p>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.....</p>		<p>Yes=1 No=3</p>	<p>1210</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
<p>[If item 9 = 1 continue, otherwise go to Conclusion.]</p>			
<p>a. What was the average diameter in inches of the most common type of this additional pipe used?.....</p>			<p>1211</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
			<p>Inches</p>
<p>b. How many feet of this additional pipe were used to bring water to the selected field?.....</p>			<p>1212</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>
			<p>Feet</p>
			<p>1213</p> <div style="border: 1px solid black; padding: 2px; width: 100px;"> </div>

NOTES:

CONCLUSION

Location of Selected Field

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

1. What county is the selected cotton field in?.....

County Name

Office Use
State County FIPS Code

	0010
--	------

a. Field description.....

--

b. Field location.....

	N	0054		_____		0055		_____			
		<small>d</small>		<small>d</small>		<small>d</small>		<small>d</small>		<small>d</small>	
		<small>m</small>		<small>m</small>		<small>m</small>		<small>m</small>		<small>s</small>	
		<small>s</small>		<small>s</small>		<small>s</small>		<small>s</small>			

OR

	0051		0052	
	<small>decimal</small>		<small>decimal</small>	

[Enumerator Action: Mark map to indicate where the selected cotton field is located. Be sure the "X" marked on map is in the county identified above.]

We will need additional information to complete this study. We will contact you in February or March 2020 to collect it. I'll call you then to set up a time that is good for you.

To receive the complete results of this survey on the release date, to http://www.nass.usda.gov/Surveys/Guide_to_NASS_Surveys/

2. To have a summary emailed to you at a later date, please enter your email address.

1095

3. Ending time [Military].....

	H	H	M	M					
	0005								

Record Use

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

Code	Code	Code
Yes=1 No=3	Yes=1 No=3	Yes=1 No=3
0011	0012	0013
[fertilizer data].....	[pesticide data].....	[majority of this expense data?].....

Supplements Used

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

Number	Number	Number
0041	0042	0043
Fertilizer Supplement.....	Pesticide Supplement.....	Field Operations.....

Reported by: _____	9910	9911
	M M D D 19	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-Spouse 3-Acct/Bkpr 4-Partner 9-Other		9902 2-PATI (tel) 3-PAPI (Face-to-Face)		9903 9998		9989		
								Eval.		Change
								9900		9985

