

2008 FARM AND RANCH IRRIGATION SURVEY

Form Number: 08-A621
(12/03/08)



National Agricultural
Statistics Service

Please return your
completed report to:

Census of Agriculture
1201 East 10th Street
Jeffersonville, IN 47132

OFFICE USE ONLY

0009	0010	0011

08-A621

Please make corrections to name, address, and ZIP code if necessary.

Everyone who receives a form must return one by mail or via the Internet at www.agcensus.nass.usda.gov. Your report is due by **February 17, 2009**. To fill out the proper form, use a black or blue ballpoint pen. **Duplicate forms?** If you received extra report forms for the SAME farming operation, return all report forms in the same envelope with this completed report.

Questions? Call us toll-free at **1-888-424-7824**. Thank you for your cooperation.

SECTION 1 ACREAGE IN 2008

Report land owned, rented, or used by you, your spouse, or by the partnership, corporation, or organization named on the label above. Include ALL LAND, REGARDLESS OF LOCATION OR USE - cropland, Conservation Reserve Program (CRP) and Wetlands Reserve Program (WRP) land, pastureland, rangeland, woodland, idle land, farmsteads, etc.

		Number of Acres
1. All land owned.	<input checked="" type="checkbox"/>	0025
2. All land rented or leased from others , including land worked by you on shares, used rent free, in exchange for services, payment of taxes, etc. Include federal, state and railroad land leased on a per-acre basis. Exclude all land (i.e., private, federal, state, railroad, etc.) used on a per-head or animal unit month (AUM) basis under a grazing permit.	<input type="checkbox"/> +	0026
3. All land rented or leased to others , including land worked on shares by others and land subleased.	<input type="checkbox"/> -	0027
4. TOTAL ACRES in this operation (Items 1 + 2 - 3 = item 4).	=	0028

PENALTY FOR FAILURE TO REPORT

NOTICE: Response to this inquiry is required by law (Title 7, U.S. Code). By the same law, YOUR REPORT IS CONFIDENTIAL and it will only be used for statistical purposes. Your report CANNOT be used for purposes of taxation, investigation, or regulation. The law also provides that copies retained in your files are immune from legal process.



SECTION 2 LAND IN 2008

Report all acres in this operation (SECTION 1, item 4) in column 1. If the same land had more than one use in 2008, report that land only once in the first use listed below that applies.

For column 2, report all irrigated land in this operation for items 1 and 3. In addition to fully irrigated land, report as irrigated any land to which partial, supplemental, or semi-irrigation was applied. Also include any acreage which received only preplant irrigation (watered before planting). Hayland, pastureland, or rangeland should be reported as irrigated if spring flood water was spread by canals, ditches, spreader dikes, pipes, or other works.

1. Cropland – Report acres only once in one of the following categories:

	None	Column 1 Number of Acres	None	Column 2 Acres Irrigated
a. Cropland harvested – Include all land from which crops were harvested or hay was cut, all land in orchards, citrus groves, vineyards, berries, nursery and greenhouse crops, Christmas trees, and short-rotation woody crops.	<input type="checkbox"/>	0029	<input type="checkbox"/>	0030
b. Cropland used only for pasture or grazing – Include rotation pasture and grazing land that could have been used for crops without additional improvements. . . .	<input type="checkbox"/>	0031	<input type="checkbox"/>	0032
c. Other cropland – Include cropland used for cover crops, cropland on which all crops failed, cropland in cultivated summer fallow and cropland idle	<input type="checkbox"/>	0033	<input type="checkbox"/>	0034
2. Woodland – Include woodland pastured and woodland not pastured.	<input type="checkbox"/>	0035		
3. Other pastureland and rangeland – Include any pastureland other than cropland and woodland pasture.	<input type="checkbox"/>	0037	<input type="checkbox"/>	0038
4. All other land – Include land in farmsteads, buildings, livestock facilities, ponds, roads, wasteland, etc.	<input type="checkbox"/>	0039		
5. TOTAL ACRES – Add acres in each column and enter the totals. (Column 1 total should be the same as SECTION 1, item 4.)		0041		0042

NOTE: If the total acres irrigated in item 5, column 2 is "0", go to SECTION 21.

6. For this operation, what state and county had the most irrigated acres?

State	County
0951	0950

SECTION 3 GOVERNMENT PROGRAMS IN 2008

1. During 2008, did this operation receive direct payments, counter-cyclical payments, loan deficiency payments, or marketing loan gains or participate in any quota programs or buy-out programs?

0691 1 Yes 3 No

2. Does this operation currently participate, or has it participated in the past five years, in a government payment program or technical assistance program for irrigation and/or drainage improvements? Payment programs may include cost-share or incentive payments or only technical assistance for system design or on-farm management.

0795 1 Yes – Continue 3 No – Go to SECTION 4

a. Mark (X) all programs that apply –

0698 1 USDA – Environmental Quality Incentive Program (EQIP) – Please check program →
 2 Other USDA conservation payment programs (CSP, CRP, WRP, FWP, GRP, etc.)
 3 USDA-NRCS Conservation Technical Assistance program
 4 Non-USDA Federal programs – Include EPA, Bureau of Reclamation, or other programs
 5 State programs (including CREP), local water management programs, or supply district programs
 6 Other – Specify →

0794
 1 EQIP – general
 2 Klamath River Basin
 3 Ground and Surface Water Conservation

SECTION 4 METHOD OF WATER DISTRIBUTION ON THIS OPERATION IN 2008

Report acres irrigated by each type of ON FIELD distribution or delivery system listed below. If the same land was irrigated by more than one method of distribution, report acres irrigated by each method used.

DO NOT report information for the delivery system used to convey water from the source to the field. Report information for the field distribution system.

1. Gravity irrigation

Acres Irrigated by Gravity System (Field Water Conveyance System)					
Total	Open Un-lined Ditch	Open Lined Ditch	Poly Tubing (or other single-year-use, lay-flat tubing)	Above-Ground pipe (except poly-tubing) ¹	Under-Ground Pipe ²
0855	0859	0857	0056	0057	0858
0865	0869	0867	0066	0067	0868
0875	0879	0877	0076	0077	0878
0885	0889	0887	0086	0087	0888

- None
- a. Down rows or furrows
- b. Controlled flooding (between borders or within basins)
- c. Uncontrolled flooding (rangeland, pastureland, etc.)
- d. Other

¹ Include gated-pipe and riser or hydrant systems connected to above-ground pipe.
² Include riser or hydrant systems connected to underground pipe.

2. Sprinkler irrigation – Inlet pressure

Acres Irrigated by Sprinkler System			
Very Low Pressure (Under 15 PSI)	Low Pressure (15 to 29 PSI)	Medium Pressure (30 to 59 PSI)	High Pressure (60 PSI or more)
0569	0576	0575	0570
0571	0577	0578	0579
0568	0565	0566	0567

- None
- a. Center pivot systems (circle)
- b. Linear move tower systems (and other linear continuous move drive systems)
- c. Solid set and permanent systems (except low-flow micro systems)
- d. Mechanical move systems –
- (i) Side roll, wheel move, or other mechanical move systems and other discrete move systems
- (ii) Big gun or traveler systems
- e. Hand-move systems

Acres Irrigated (All pressures)
0240
0241
0242

3. Drip, trickle, or low-flow micro irrigation – except poly and lay-flat tubing

- a. Surface drip (on or above ground)
- b. Sub-surface drip (root zone)
- c. Low-flow micro sprinklers, sprays (apply water at low pressure and are not self-propelled or easily moved)

Acres Irrigated (All pressures)
0248
0246
0247

4. Subirrigation – Water seepage, or use of a drainage system to maintain aquifer water table at a predetermined depth. Exclude methods reported above

Acres Irrigated
0249

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SECTION 5 ACRES IRRIGATED, ESTIMATED QUANTITY OF WATER USED, AND OFF-FARM SUPPLIED WATER USED ON THIS OPERATION BY SOURCE IN 2008

Report quantity of water in the unit or units of measure used most on this operation. If exact measurements are not available, give your best estimate for quantity of water used. If total or average acre-feet cannot be estimated, give combined pumping capacity and duration in days, or total depth of water applied, or flow quantities and duration of flow in days.

1. Acres irrigated – Include cropland and pastureland.
2. Estimated quantity of water used on this operation in 2008. Report for only one of the following options, items a through e, in the unit used most on this operation
 - a. Total acre-feet
 - OR
 - b. Average acre-feet per acre irrigated (One acre-foot covers one acre one foot deep)
 - OR
 - c. Average inches applied per acre
 - OR
 - d. Average gallons of water applied per minute (GPM)
 - OR
 - (i) Total number of 24-hour day equivalents water was applied
 - OR
 - e. Average flow in cubic feet per second (CFS)
 - OR
 - (i) Total number of 24-hour day equivalents water flow was applied

Water Source		
Ground Water (from wells)	Surface Water	
	On Farm	Off-Farm (All Suppliers)
0444 acres	0449 acres	0454 acres

Total Acre-Feet		
0955 _____	0960 _____	0965 _____
Acre-Feet Per Acre		
0445 _____	0450 _____	0966 _____
Inches Per Acre		
0448	0453	0967
GPM		
0446	0451	0968
Duration		
0447 days	0452 days	0969 days
CFS		
0956	0961	0970
Duration		
0957 days	0962 days	0971 days

3. Did this operation receive any water from an off-farm source?

0457 1 **Yes** – Continue 3 **No** – Go to SECTION 6

a. Was there a fee for the off-farm water received on this operation?

0675 1 **Yes** – Continue 3 **No** – Go to item 4 below

b. Total cost of off-farm supplied water

(i) Did the cost per unit of water (check one) –

- 0667 1 Increase as the amount of off-farm supplied water used increased?
 2 Remain the same as the amount of off-farm supplied water used increased?
 3 Decrease as the amount of off-farm supplied water used increased?

Dollars	
0456 \$	.00

4. Supplier of off-farm water – How much of this operation's off-farm water was supplied, delivered, or transferred through a project financed, constructed, or managed by –

a. U.S. Bureau of Reclamation? Include reclamation water delivered through a local district

b. Other Federal agencies such as the U.S. Army Corp of Engineers, Bureau of Indian Affairs, USDA small watershed project, etc.?

c. All other suppliers? – Specify →

0664	1 <input type="checkbox"/> None 2 <input type="checkbox"/> Some 3 <input type="checkbox"/> All 4 <input type="checkbox"/> Unknown
0665	1 <input type="checkbox"/> None 2 <input type="checkbox"/> Some 3 <input type="checkbox"/> All 4 <input type="checkbox"/> Unknown
0666	1 <input type="checkbox"/> None 2 <input type="checkbox"/> Some 3 <input type="checkbox"/> All 4 <input type="checkbox"/> Unknown

Sample Document



SECTION 6 WATER TRANSFERS IN 2008

Report water leased or rented on an annual or multi-year basis for use off this operation when the permanent right to the water was maintained by the operator. Include water rented or leased directly by this operation or this operation's irrigation provider.

1. Did this operation rent or lease water to others for use off this operation in 2008? Include both agricultural and non-agricultural purposes.

0531 1 **Yes – Continue** 3 **No – Go to SECTION 7**

2. Report the quantity of water transferred to others in 2008 for each source listed –

- a. Ground water from on-farm wells None
- b. Surface water from on-farm sources
- c. Water normally received from an off-farm supplier

Water Quantity (Acre-Feet)	
0532	
0533	
0534	

3. Mark (X) below all uses or recipients of transferred water –

- 0535 1 Other agricultural producers
- 2 Municipal or industrial water users
- 3 Environmental uses (water quality, in-stream flow, habitat improvement)
- 4 Unknown use of transferred water – If unknown, check Item (a) or (b) below

- 0536 1 (a) Water was part of a pool used by several producers
- 2 (b) Water rented or leased was arranged by this operation's irrigation provider

SECTION 7 EXPENDITURES FOR IRRIGATION FACILITIES AND EQUIPMENT ON THIS OPERATION IN 2008

Report expenditures, purpose, and sources of funding assistance in 2008 for the construction of irrigation facilities on this operation and purchase of irrigation equipment and machinery for this operation. Include estimates of expenditures made by or shared with others (landlords or government agencies), including programs such as Environmental Quality Incentive Program (EQIP). Report the cost of maintenance and repairs in SECTION 13.

	None	Total Expenditures (Dollars)	Principal Purpose of Expenditures (Mark (X) principal purpose only)		Primary Source of Funding Assistance (Mark (X) primary source only)
			0512	0513	
1. Purchase of new or replacement irrigation equipment and machinery – Include sprinklers, pipes, siphons, nozzles, pumps, motors, engines, etc. Do not include computers <input type="checkbox"/>		\$.00	0512 1 <input type="checkbox"/> Replacement 2 <input type="checkbox"/> Water conservation 3 <input type="checkbox"/> New expansion	0513 1 <input type="checkbox"/> No funding assistance 2 <input type="checkbox"/> EQIP 3 <input type="checkbox"/> Other USDA cost-share program 4 <input type="checkbox"/> Non-USDA cost-share program	
2. New well construction or deepening of existing wells – Include drilling costs, cost of casing, and any costs to prepare well for installation of pump. Do not include cost of pumps or motors <input type="checkbox"/>		\$.00	0516 1 <input type="checkbox"/> Replacement 2 <input type="checkbox"/> Water conservation 3 <input type="checkbox"/> New expansion	0517 1 <input type="checkbox"/> No funding assistance 2 <input type="checkbox"/> EQIP 3 <input type="checkbox"/> Other USDA cost-share program 4 <input type="checkbox"/> Non-USDA cost-share program	
3. Construction or improvement of permanent storage and distribution systems – Include dams, ponds, reservoirs, permanent ditches, canals, flumes, etc. <input type="checkbox"/>		\$.00	0520 1 <input type="checkbox"/> Replacement 2 <input type="checkbox"/> Water conservation 3 <input type="checkbox"/> New expansion	0521 1 <input type="checkbox"/> No funding assistance 2 <input type="checkbox"/> EQIP 3 <input type="checkbox"/> Other USDA cost-share program 4 <input type="checkbox"/> Non-USDA cost-share program	
4. Land clearing and leveling for irrigation purposes <input type="checkbox"/>		\$.00	0523 1 <input type="checkbox"/> Replacement 2 <input type="checkbox"/> Water conservation 3 <input type="checkbox"/> New expansion	0524 1 <input type="checkbox"/> No funding assistance 2 <input type="checkbox"/> EQIP 3 <input type="checkbox"/> Other USDA cost-share program 4 <input type="checkbox"/> Non-USDA cost-share program	
5. Computers, control panels, and software for irrigation water management <input type="checkbox"/>		\$.00	0544 1 <input type="checkbox"/> Replacement 2 <input type="checkbox"/> Water conservation 3 <input type="checkbox"/> New expansion	0545 1 <input type="checkbox"/> No funding assistance 2 <input type="checkbox"/> EQIP 3 <input type="checkbox"/> Other USDA cost-share program 4 <input type="checkbox"/> Non-USDA cost-share program	



SECTION 8 ACRES HARVESTED, CROP YIELDS, AND PASTURE ON THIS OPERATION IN 2008

For each crop listed, report separately irrigated land and non-irrigated land. Report acreage as irrigated if any water was artificially applied either before planting or during the growing season in 2008.

Crops and Pastureland	Irrigated Land Include preplant and supplemental or semi-irrigation					Non-Irrigated Land	
	Irrigated Acres Harvested	Average Yield Per Irrigated Acre	Average Estimated Quantity of Water Applied Per Acre			Non-Irrigated Acres Harvested	Average Yield Per Non-Irrigated Acre
			Acre-Feet Per Acre	OR	Inches Per Acre		
1. Corn for grain or seed – Exclude popcorn and sweet corn <input type="checkbox"/>	0050	0051 Bu.	0052	or	0053	0054	0055 Bu.
2. Corn for silage or greenchop – Exclude popcorn and sweet corn <input type="checkbox"/>	0060	0061 Tons	0062	or	0063	0064	0065 Tons
3. Sorghum for grain or seed <input type="checkbox"/>	0070	0071 Bu.	0072	or	0073	0074	0075 Bu.
4. Wheat for grain or seed <input type="checkbox"/>	0080	0081 Bu.	0082	or	0083	0084	0085 Bu.
5. Barley for grain or seed <input type="checkbox"/>	0090	0091 Bu.	0092	or	0093	0094	0095 Bu.
6. Soybeans for beans <input type="checkbox"/>	0100	0101 Bu.	0102	or	0103	0104	0105 Bu.
7. Beans, dry edible <input type="checkbox"/>	0110	0111 Cwt.	0112	or	0113	0114	0115 Cwt.
8. Rice <input type="checkbox"/>	0120	0121 Cwt.	0122	or	0123		
9. Other small grains (oats, rye, etc.) <input type="checkbox"/>	0130		0132	or	0133	0134	
10. Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage) <input type="checkbox"/>	0140	0141 Tons, dry	0142	or	0143	0144	0145 Tons, dry
11. All other hay, including small grain, other tame, and wild hay (dry hay, greenchop, and silage) <input type="checkbox"/>	0150	0151 Tons, dry	0152	or	0153	0154	0155 Tons, dry

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SECTION 8 Continued –

Crops and Pastureland	Irrigated Land Include preplant and supplemental or semi-irrigation					Non-Irrigated Land	
	Irrigated Acres Harvested	Average Yield Per Irrigated Acre	Average Estimated Quantity of Water Applied Per Acre			Non-Irrigated Acres Harvested	Average Yield Per Non-Irrigated Acre
			Acre-Feet Per Acre	OR	Inches Per Acre		
None <input type="checkbox"/>	0550	0551	0552	or	0553	0554	0555
12. Peanuts <input type="checkbox"/>		Lbs. . . . .	. . . . .	or			Lbs.
13. Cotton <input type="checkbox"/>	0160	0161	0162	or	0163	0164	0165
		Lbs. lint . . . . .	. . . . .	or			Lbs. lint
14. Sugarbeets for sugar <input type="checkbox"/>	0170	0171	0172	or	0173	0174	0175
		Tons . . . . .	. . . . .	or			Tons
15. Tobacco, all types <input type="checkbox"/>	0180	0181	0182	or	0183	0184	0185
	. . . . .	Lbs. . . . .	. . . . .	or	. . . . .	. . . . .	Lbs.
16. All land from which vegetables, potatoes, and melons were harvested <input type="checkbox"/>	0186		0187	or	0188	0189	
	. . . . .		. . . . .	or	. . . . .	. . . . .
Report for selected vegetable crops:	0850	0851	0852	or	0853	0854	0975
a. Sweet corn <input type="checkbox"/>		Cwt. . . . .	. . . . .	or		. . . . .	Cwt.
b. Tomatoes in the open <input type="checkbox"/>	0860	0861	0862	or	0863	0864	0985
	. . . . .	Cwt. . . . .	. . . . .	or	. . . . .	. . . . .	Cwt.
c. Lettuce and romaine <input type="checkbox"/>	0870	0871	0872	or	0873	0874	0995
	. . . . .	Cwt. . . . .	. . . . .	or	. . . . .	. . . . .	Cwt.
d. Potatoes – Exclude sweet potatoes <input type="checkbox"/>	0190	0191	0192	or	0193	0194	0195
	. . . . .	Cwt. . . . .	. . . . .	or	. . . . .	. . . . .	Cwt.
17. All berries <input type="checkbox"/>	0560		0562	or	0563	0564	
	. . . . .		. . . . .	or	. . . . .	. . . . .
18. Land in bearing and non-bearing fruit orchards, citrus or other groves, vineyards, and nut trees <input type="checkbox"/>	0210		0212	or	0213	0214	
	. . . . .		. . . . .	or	. . . . .	. . . . .
19. All other crops – Specify <input type="checkbox"/>	0220		0222	or	0223	0224	
<input type="text"/>			or			
20. Pastureland, all types <input type="checkbox"/>	0230		0232	or	0233	0234	
			. . . . .	or			

Sample Document

SECTION 9 PRIMARY METHOD OF WATER DISTRIBUTION, APPLICATION OF AGRICULTURAL CHEMICALS IN IRRIGATION WATER, AND WATER SOURCE BY IRRIGATED ACRES HARVESTED ON THIS OPERATION IN 2008

Report only irrigated acres harvested. Report separately the primary distribution method, chemigation, and water source. Refer to the Pressure and Gravity Irrigation Systems ID codes listed below for column 1.

PRESSURE AND GRAVITY IRRIGATION SYSTEMS ID CODES FOR COLUMN 1 BELOW

Pressure Systems

- 01 = Hand-move System
- 02 = Solid or Permanent Set System
- 03 = Side Roll or Wheel Line System
- 04 = Big Gun System
- 05 = Linear Move System (PSI less than 15)
- 06 = Linear Move System (PSI 15 to 29)
- 07 = Linear Move System (PSI equal to or greater than 30 and less than 60)
- 08 = Linear Move System (PSI equal to or greater than 60)
- 09 = Center Pivot System (PSI less than 15)
- 10 = Center Pivot System (PSI 15 to 29)
- 11 = Center Pivot System (PSI equal to or greater than 30 and less than 60)
- 12 = Center Pivot System (PSI equal to or greater than 60)
- 13 = Low-Flow Irrigation (drip, trickle, or micro sprinkler systems)
- 14 = Other Pressure System – Specify type ↴

Gravity Systems

- 15 = Siphon-Tube System (from unlined ditches)
- 16 = Siphon-Tube System (from lined ditches)
- 17 = Portal- or Ditch-Gate System (from unlined ditches)
- 18 = Portal- or Ditch-Gate System (from lined ditches)
- 19 = Poly-Pipe or Lay-Flat Tubing System
- 20 = Gated-Pipe System (not poly-pipe)
- 21 = Improved Gated-Pipe (surge flow or cablegation system, but not poly-pipe)
- 22 = Subirrigation
- 23 = Open Discharge from well or pump
- 24 = Other Gravity System – Specify type ↴

Irrigated Crops and Pastureland	None	Primary Method of Water Distribution (Enter Irrigation System ID Code from above.)		Chemigation Using Irrigation System		Water Source (Column totals may exceed irrigated crop acres reported in Section 8 when more than one water source was used.)		
		Column System ID Code	Percent of Irrigated Crop Using This System	Commercial Fertilizer (Acres)	Pesticide Application (Acres)	Ground Water from Wells (Acres)	On-Farm Surface Water (Acres)	Water from Off-Farm Suppliers ¹ (Acres)
1. Corn for grain or seed – Exclude popcorn and sweet corn	<input type="checkbox"/>	0250	0251	0252	0253	0255	0254	0256
		ID	%					
2. Corn for silage or greenchop – Exclude popcorn and sweet corn	<input type="checkbox"/>	0260	0261	0262	0263	0265	0264	0266
		ID	%					
3. Sorghum for grain or seed	<input type="checkbox"/>	0270	0271	0272	0273	0275	0274	0276
		ID	%					
4. Wheat for grain or seed	<input type="checkbox"/>	0280	0281	0282	0283	0285	0284	0286
		ID	%					
5. Barley for grain or seed	<input type="checkbox"/>	0290	0291	0292	0293	0295	0294	0296
		ID	%					
6. Soybeans for beans.	<input type="checkbox"/>	0300	0301	0302	0303	0305	0304	0306
		ID	%					
7. Beans, dry edible.	<input type="checkbox"/>	0310	0311	0312	0313	0315	0314	0316
		ID	%					
8. Rice	<input type="checkbox"/>	0320	0321	0322	0323	0325	0324	0326
		ID	%					
9. Other small grains (oats, rye, etc.)	<input type="checkbox"/>	0330	0331	0332	0333	0335	0334	0336
		ID	%					
10. Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage)	<input type="checkbox"/>	0340	0341	0342	0343	0345	0344	0346
		ID	%					
11. All other hay, including small grain, other tame, and wild hay (dry hay, greenchop, and silage).	<input type="checkbox"/>	0350	0351	0352	0353	0355	0354	0356
		ID	%					

¹ Off-farm water supplies may include water purchased from the U.S. Bureau of Reclamation; a state, county, or local district; mutual, private, cooperative, or neighborhood ditches; or commercial or municipal water systems.

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SECTION 9 Continued –

PRESSURE AND GRAVITY IRRIGATION SYSTEMS ID CODES FOR COLUMN 1 BELOW

Pressure Systems

- 01 = Hand-move System
- 02 = Solid or Permanent Set System
- 03 = Side Roll or Wheel Line System
- 04 = Big Gun System
- 05 = Linear Move System (PSI less than 15)
- 06 = Linear Move System (PSI 15 to 29)
- 07 = Linear Move System (PSI equal to or greater than 30 and less than 60)
- 08 = Linear Move System (PSI equal to or greater than 60)
- 09 = Center Pivot System (PSI less than 15)
- 10 = Center Pivot System (PSI 15 to 29)
- 11 = Center Pivot System (PSI equal to or greater than 30 and less than 60)
- 12 = Center Pivot System (PSI equal to or greater than 60)
- 13 = Low-Flow Irrigation (drip, trickle, or micro sprinkler systems)
- 14 = Other Pressure System – Specify type

Gravity Systems

- 15 = Siphon-Tube System (from unlined ditches)
- 16 = Siphon-Tube System (from lined ditches)
- 17 = Portal- or Ditch-Gate System (from unlined ditches)
- 18 = Portal- or Ditch-Gate System (from lined ditches)
- 19 = Poly-Pipe or Lay-Flat Tubing System
- 20 = Gated-Pipe System (not poly-pipe)
- 21 = Improved Gated-Pipe (surge flow or cablegation system, but not poly-pipe)
- 22 = Subirrigation
- 23 = Open Discharge from well or pump
- 24 = Other Gravity System – Specify type

Irrigated Crops and Pastureland	Primary Method of Water Distribution (Enter Irrigation System ID Code from above.)		Chemigation Using Irrigation System		Water Source (Column totals may exceed irrigated crop acres reported in Section 8 when more than one water source was used.)		
	Column 1 System ID Code	Percent of Irrigated Crop Using This System	Commercial Fertilizer (Acres)	Pesticide Application (Acres)	Ground Water from Wells (Acres)	On-Farm Surface Water (Acres)	Water from Off-Farm Suppliers ¹ (Acres)
None <input type="checkbox"/>	0580	0581	0582	0583	0585	0584	0586
12. Peanuts <input type="checkbox"/>	0360	0361	0362	0363	0365	0364	0366
13. Cotton <input type="checkbox"/>	0370	0371	0372	0373	0375	0374	0376
14. Sugarbeets for sugar <input type="checkbox"/>	0380	0381	0382	0383	0385	0384	0386
15. Tobacco, all types <input type="checkbox"/>	0474	0475	0476	0477	0479	0478	0480
16. All land from which vegetables, potatoes, and melons were harvested <input type="checkbox"/>	0900	0901	0902	0903	0905	0904	0906
Report for selected vegetable crops:							
a. Sweet corn <input type="checkbox"/>	0910	0911	0912	0913	0915	0914	0916
b. Tomatoes in the open <input type="checkbox"/>	0920	0921	0922	0923	0925	0924	0926
c. Lettuce and romaine <input type="checkbox"/>	0390	0391	0392	0393	0395	0394	0396
d. Potatoes – Exclude sweet potatoes <input type="checkbox"/>	0590	0591	0592	0593	0595	0594	0596
17. All berries <input type="checkbox"/>	0410	0411	0412	0413	0415	0414	0416
18. Land in bearing and non-bearing fruit orchards, citrus or other groves, vineyards, and nut trees <input type="checkbox"/>	0420	0421	0422	0423	0425	0424	0426
19. All other crops – Specify <input type="text"/> <input type="checkbox"/>	0430	0431	0432	0433	0435	0434	0436
20. Pastureland, all types <input type="checkbox"/>							

¹ Off-farm water supplies may include water purchased from the U.S. Bureau of Reclamation; a state, county, or local district; mutual, private, cooperative, or neighborhood ditches; or commercial or municipal water systems.

SECTION 10 NUMBER OF IRRIGATION WELLS ON THIS OPERATION IN 2008, INCLUDING WELL DEPTH AND PUMPING CAPACITY

1. Did this operation irrigate with water from wells in 2008?
 0760 1 **Yes** – Continue 3 **No** – Go to SECTION 11

Number
0460

2. How many wells were used in 2008?

a. Report for the first 3 primary wells pumped in 2008 →

Well #	Depth of Well (Feet)	Depth to Water at Start of Irrigation Season (Feet)	Depth to Bowls or Impellers (Feet)	Pump Capacity – Discharge From Well (GPM)	Operating Pressure at Well Head (PSI)	Size of Engine for All Motors, Including Electric (HP)	Total Hours Operated For the Season
1.	0461	0462	0463	0464	0676	0761	0762
2.	0465	0466	0467	0468	0677	0763	0764
3.	0469	0470	0471	0472	0678	0765	0766
Average	Average	Average	Average	Average	Average	Average	Average
Depth of Well (Feet)	Depth to Water at Start of Irrigation Season (Feet)	Depth to Bowls or Impellers (Feet)	Pump Capacity – Discharge From Well (GPM)	Operating Pressure at Well Head (PSI)	Size of Engine for All Motors, Including Electric (HP)	Total Hours Operated For the Season	Hours Operated For the Season
0481	0482	0483	0484	0681	0767	0768	

b. Report for all other wells pumped in 2008

3. How many pumping stations (wells from item 2 above with associated piping systems) used backflow prevention devices (check valves) in 2008?

Number
0770

a. In 2008, how many acres were irrigated with these (item 3) wells?

Acres
0771

4. How many wells from item 2 above had flow meters or other flow measurement devices?

Number
0683

a. In 2008, how many acres were irrigated with these (item 4) systems?

Acres
0772

5. Has the average depth to water for the wells supplying this operation changed in the last five years?
 0773 1 **Yes** – Continue 3 **No** – Go to item 6 below

a. If yes, check one. 0487 1 Increased depth 2 Decreased depth

Number
0486

6. How many of the wells used in 2008 are free flowing (artesian wells)?

Number
0485

7. How many wells were not used in 2008, but were capable of being used? Exclude abandoned wells.



SECTION 11 PUMPS, OTHER THAN WELL PUMPS, USED FOR IRRIGATION ON THIS OPERATION IN 2008

Report for all surface water pumps on this operation, whether or not they were used in 2008.

	Number of Pumps	Vertical Lift (Average Feet)	Discharge Capacity (Average GPM)	Discharge Operating Pressure (Average PSI)
1. Tailwater pits <input type="checkbox"/>	0490	0774	0491	0687
2. Ponds, lakes, reservoirs, rivers, canals, etc. <input type="checkbox"/>	0492	0775	0493	0688
3. Relifting or boosting water within system <input type="checkbox"/>	0494	0776	0777	0778

SECTION 12 ENERGY USE ON THIS OPERATION IN 2008 FOR PUMPING WATER BY POWER SOURCE

Report the expenditures for fuel and power used in 2008 for irrigation pumping by each type of energy used on this operation. Include the cost of any additional charges such as a fuel adjustment charge or any other type of charge which was based on the amount of power or fuel purchased. Include landlord's share.

Power Source	Number of Pumps	Total Cost of Energy Used (Dollars)	Acres Irrigated by Water Source	
			Ground Water From ¹ Wells (Acres)	On-Farm Surface ² Water (Acres)
1. Electricity <input type="checkbox"/>	0495	0496 \$.00	0497	0781
2. Natural gas <input type="checkbox"/>	0498	0499 \$.00	0500	0782
3. LP gas, propane, or butane <input type="checkbox"/>	0501	0502 \$.00	0503	0783
4. Diesel and biodiesel fuel <input type="checkbox"/>	0504	0505 \$.00	0506	0784
5. Gasoline and gasohol – Include ethanol blends <input type="checkbox"/>	0507	0508 \$.00	0509	0785
6. Solar and other renewable. <input type="checkbox"/>	0779		0780	0786

¹ Include only acres for wells reported in Section 10, items 2a and 2b.
² Include only acres for pumps reported in Section 11.

SECTION 13 MAINTENANCE AND REPAIR COSTS FOR IRRIGATION EQUIPMENT AND FACILITIES ON THIS OPERATION IN 2008

Report all expenses in 2008 for keeping irrigation equipment and facilities in working order. Include expenses for tune-ups, oil changes, ditch and canal cleanout, repairs to pumps, motors, pipes, canals, and sprinkler systems, etc. Exclude construction or improvement costs reported in SECTION 7.

1. Amount spent for maintenance and repairs of irrigation equipment and facilities in 2008 including maintenance of on-farm ditches. Include payments made by landlords. Give estimate if actual figures are not available <input type="checkbox"/>	None <input type="checkbox"/>	Dollars 0510 \$.00
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SECTION 14 LABOR COSTS FOR IRRIGATION ON THIS OPERATION IN 2008

Report gross cash payments to employees, including family members, before deductions for social security, taxes, insurance premiums, etc. and payments for contract labor. Exclude customwork.

1. Wages paid for –	None <input type="checkbox"/>	Dollars 0787 \$.00
a. Hired irrigation labor <input type="checkbox"/>		
b. Contract irrigation labor <input type="checkbox"/>		0788 \$.00

SECTION 15 IRRIGATION PRACTICES IN 2008

1. How did this operation decide when to schedule water use in 2008? Mark (X) all that apply –

- 0527
- 1 Condition of crop (observation)
 - 2 Feel of the soil
 - 3 Use of soil moisture-sensing devices such as moisture blocks or tensionmeters
 - 4 Use of plant moisture-sensing devices such as pressure (chamber) bombs or infrared (IR) thermometer
 - 5 Use of irrigation scheduling service, including commercial and government
 - 6 Reports on daily crop-water evapo-transpiration (ET) use (Internet, newspapers, radio, TV, fax, and email)
 - 7 Water delivered by irrigation organization in turn (no choice by water user)
 - 8 Personal calendar schedule
 - 9 Computer simulation models (not from a commercial service)
 - 10 When neighbors began to irrigate
 - 11 Other – Specify →

2. Did this operation have to discontinue irrigation during 2008 long enough to affect crop yields?

- 0669
- 1 **Yes** – Continue
 - 3 **No** – Go to SECTION 16

a. Mark (X) all reasons that apply –

- 0670
- 1 Shortage of surface water (water from reservoirs, lakes, streams, water supply organizations, etc.)
 - 2 Shortage of ground water (lowering water level of wells or depletion of ground water)
 - 3 Irrigation equipment failure
 - 4 Energy price increases or energy shortage
 - 5 Poor water quality
 - 6 Loss of water rights not due to voluntary transfers
 - 7 Cost of purchased water
 - 8 Other – Specify →



SECTION 16 OTHER USES OF IRRIGATION WATER ON THIS OPERATION IN 2008

1. Report irrigation used for any of the following purposes –

	None	Acres on Which Applied
a. Prevent freeze damage	<input type="checkbox"/>	0440
b. Crop cooling to delay early budding, blooming, or to reduce heat stress (cool crop canopy)	<input type="checkbox"/>	0441
c. Leaching to remove salts from the soil (salinity control)	<input type="checkbox"/>	0442
d. Disposal of liquid livestock waste	<input type="checkbox"/>	0488
e. To provide wildlife or waterfowl habitat	<input type="checkbox"/>	0439
f. Other – Specify → <input type="text"/>	<input type="checkbox"/>	0443

SECTION 17 WATER MANAGEMENT PRACTICES FOR GRAVITY IRRIGATION SYSTEMS

1. Did this operation use gravity irrigation systems to irrigate any of the acres on this operation (SECTION 4, item 1) in 2008?

0671 1 **Yes** – Continue 3 **No** – Go to SECTION 18

2. On how many acres did you use the following techniques?

	None	Number of Acres
a. Irrigation water captured for further use (tailwater pits)	<input type="checkbox"/>	0672
b. Water restricted from running off by diking end of field	<input type="checkbox"/>	0789
c. Surge flow or cablegation technique	<input type="checkbox"/>	0673
d. Shortening of furrow length	<input type="checkbox"/>	0684
e. Limited irrigation set time or number of irrigations, to reduce water applied	<input type="checkbox"/>	0685
f. Alternate row irrigation	<input type="checkbox"/>	0686
g. Water-soluble polyacrylamide (PAM)	<input type="checkbox"/>	0699
h. Mulch or other types of row covers	<input type="checkbox"/>	0790
i. Gravity system with laser leveling	<input type="checkbox"/>	0791
j. Special furrowing techniques, such as wide-spaced bed furrowing, compacted furrowing, or furrow diking – Specify technique used ↴ <input type="text"/>	<input type="checkbox"/>	0674

Sample Document

SECTION 18 IMPROVEMENTS TO IRRIGATION SYSTEMS ON THIS OPERATION SINCE 2003 THAT REDUCED ENERGY USE AND/OR CONSERVED WATER

Consider as an improvement changes in equipment or management practices. For example, retrofitting a sprinkler system for low pressure operation or adopting irrigation scheduling as a management practice.

1. Has this operation implemented improvements to its irrigation system on existing irrigated acres since 2003?

0693 1 **Yes** – Continue 3 **No** – Go to item 3 below

2. What were the results of these improvements on a per-acre basis? Mark (X) all that apply –

- 0694 1 Improved crop yield or quality
 2 Reduced energy costs
 3 Reduced water applied
 4 Reduced labor costs
 5 Reduced fertilizer or pesticide losses
 6 Reduced soil erosion
 7 Reduced tail water
 8 Other – Specify → _____

3. What are barriers to implementing improvements that might reduce energy and/or conserve water in this operation's irrigation system? Mark (X) all that apply –

- 0695 1 Investigating improvements is not a priority at this time
 2 Risk of reduced yield or poorer quality crop yields from not meeting water needs
 3 Physical field/crop conditions limit system improvements
 4 Improvement(s) will reduce costs, but not enough to cover installation costs
 5 Cannot finance improvements
 6 Landlord(s) will not share cost of improvements
 7 Uncertainty about future availability of water
 8 Will not be farming this operation long enough to justify new improvements
 9 Other – Specify → _____

SECTION 19 SOURCES OF IRRIGATION INFORMATION

1. What sources of information does this operation rely on for guidance in reducing irrigation costs or to conserve water used for irrigation? Mark (X) all that apply –

- 0696 1 Extension agents or university specialists
 2 Private irrigation specialists or crop consultants hired by owner or operator
 3 Irrigation equipment dealers
 4 Local irrigation district employees or others hired by the water supplier
 5 Government specialists from the Natural Resources Conservation Service, local conservation district, Bureau of Reclamation, or other federal and state agencies
 6 Media reports or information in the press
 7 Neighboring farmers
 8 Electronic information services (Internet, DTN, Internet links to private or public data sources, etc.)
 9 Other – Specify → _____



SECTION 20 RECYCLED AND/OR RECLAIMED WATER USE ON THIS OPERATION IN 2008

Report recycled and reclaimed water use in 2008 separately. **Recycled water** is the reuse of surface or groundwater that has already been used to irrigate a crop on the operation (i.e. water recycled from a tailwater reuse pit). **Reclaimed water** is wastewater that has been treated for non-potable reuse purposes. Include any reclaimed water used from livestock operations or from off-farm wastewater sources such as municipal or industrial wastewater.

RECYCLED WATER

1. Did this operation use recycled water to irrigate any crops in 2008?

0600 1 **Yes** – Continue 3 **No** – Go to item 2 below

a. How many acres on this operation were irrigated with one or more applications of recycled water during 2008?

	Acres
0601	

RECLAIMED WATER

2. Did this operation use reclaimed water to irrigate any crops in 2008?

0603 1 **Yes** – Continue 3 **No** – Go to SECTION 22

a. How many acres on this operation were irrigated with one or more applications of reclaimed water during 2008?

	Acres
0604	

b. How much reclaimed water was used on this operation for irrigation during 2008?

Acre-Feet	or	Gallons
0605		0606

3. Identify the sources of reclaimed water used on this operation in 2008. Mark (X) all that apply –

- 0607 1 Municipal
 2 Industrial
 3 On-farm livestock operation
 4 Off-farm livestock operation
 5 Other – Specify →

4. Was any reclaimed water purchased for use on this operation in 2008?

0608 1 **Yes** – Continue 3 **No** – Go to item 5 below

a. How much reclaimed water was purchased in 2008?

Acre-Feet	or	Gallons
0609		0610

b. What was the average price **paid** for reclaimed water in 2008?

Dollars Per Acre-Foot	or	Dollars Per 1,000 Gallons
0611 \$.00		0612 \$.00

5. Did this operation receive payment for reclaimed water used on this operation in 2008?

0613 1 **Yes** – Continue 3 **No** – Go to SECTION 22

a. How much reclaimed water did this operation receive payment for in 2008?

Acre-Feet	or	Gallons
0614		0615

b. What was the average price **received** for using reclaimed water in 2008?

Dollars Per Acre-Foot	or	Dollars Per 1,000 Gallons
0616 \$.00		0617 \$.00

Sample Document

SECTION 21 IRRIGATED LAND IN 2007

Complete this section ONLY if you DID NOT irrigate any land in 2008

1. Was any land irrigated on this operation in 2007?
 0528 1 **Yes** – Continue 3 **No** – Go to SECTION 22

2. Reasons for not irrigating in 2008 – Mark (X) all that apply

- 0529 1 Sufficient soil moisture – no irrigation needed
 2 Surplus soil moisture or flooding
 3 Shortage of surface water (water from reservoirs, lakes, streams, water supply organizations, etc.)
 4 Shortage of ground water (lowering water level of wells or depletion of ground water)
 5 Irrigation uneconomical due to high fuel and power costs and/or low commodity prices
 6 Abandoned irrigation because of land degradation (soil erosion, soil salinity, etc.)
 7 Loss of water rights (not due to voluntary transfers)
 8 Restrictions on water use
 9 Sold or leased water rights or annual water allocation
 10 Converted to non-agricultural use
 11 Converted to an agricultural enterprise not requiring irrigation
 12 Available surface water too salty due to drought conditions
 13 Other – Specify → _____

3. Do you consider the discontinuance of irrigation on this operation to be permanent?
 0530 1 **Yes** 3 **No**

SECTION 22 VALUE OF SALES IN 2008

1. What was the gross value of all agricultural products sold from this operation in 2008? Include landlord's share. Mark (X) only one –

- 0980 1 \$0 - \$9,999 2 \$10,000 - \$24,999 3 \$25,000 - \$49,999 4 \$50,000 - \$99,999
 5 \$100,000 - \$249,999 6 \$250,000 - \$499,999 7 \$500,000 - \$999,999 8 \$1,000,000 and over

2. What percent of total sales were from **irrigated** crop sales?

Percent
0981

3. What percent of total sales were from **non-irrigated** crop or livestock sales?

0982
100%

SECTION 23 PERSON COMPLETING THIS FORM – Please print

Name	Date (MM-DD-YYYY)	Telephone with Area Code
_____	9910 _____	_____

Would you like to receive a free copy of the results of this survey in the mail? 0099 1 **Yes** 3 **No**

The survey results will also be available on the Internet at <http://www.nass.usda.gov> in the fall of 2009.

Thank you for your response

OFFICE USE

Response	Respondent	Mode	Enum.	Eval.	Optional Use
1-Comp 2-R 3-Inac	9901 1-Op/Mgr 2-Sp 3-Acct/Bkpr 4-Partner 9-Oth	9902 1-Mail 2-Tel 3-Face-to-Face 4-CATI 5-Web	9903 0098	0100	0002 0003

S/E Name _____

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The time to complete this information collection is estimated to average 45 minutes per response.