

APPENDIX Report Form

DUE DATE: 30 DAYS AFTER RECEIPT OF FORM

OMB No. 0807-0634: Approval Expires 12/90

FORM **88-A62** (10-3-88) U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS

NOTICE — Response to this inquiry is required by law (Title 13, U.S. Code). By the same law YOUR REPORT TO THE CENSUS BUREAU IS **CONFIDENTIAL**. It may be seen only by sworn Census employees and may be used only 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.

1988 FARM AND RANCH IRRIGATION SURVEY

**COMPLETE AND
RETURN TO**

**Bureau of the Census
1201 East Tenth Street
Jeffersonville, IN 47133**

NOTE

Consider as irrigated all land watered by any artificial or controlled means — sprinklers, furrows or ditches, spreader dikes, etc. Include preplant, partial, supplemental, or semi-irrigation. Include irrigation of pastureland, hayland, nonbearing orchardland, and cropland from which no crops were harvested in 1988. See additional instructions on the separate instruction sheet.

Please mention the Census File Number (the 11-digit number in the upper left corner of the address label) if you write to us about this report.
(Please correct any error in name, address, and ZIP Code)

CENSUS USE ONLY	010	012	014	016	018	020	021	022
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Item 1 Was any land on the farm or ranch you operated irrigated at any time in 1988?
024 1 YES — Complete items 2 through 14 and 16 2 NO — Skip to item 15

Item 2 **ACREAGE IN 1988**

	None	Number of acres
a. All land owned	<input type="checkbox"/>	025
b. All land rented or leased from others, including land worked on shares, used rent free, in exchange for services, payments of taxes, etc. Include leased Federal, State, and railroad land. (Do not include land used on a per-head basis under a grazing permit.)	<input type="checkbox"/>	026
c. All land rented or leased to others, including land worked on shares by others and land subleased. (Do not include acres enrolled in the Conservation Reserve Program as land rented to others.)	<input type="checkbox"/>	027
d. TOTAL ACRES IN THIS PLACE — ADD acres owned (item a) and acres rented (item b), then SUBTRACT acres rented to others (item c), and enter your answer in this space.	<input type="checkbox"/>	028

Item 3 **LAND USE IN 1988**

1. Distribute all acres in this place in column (1) and all irrigated land in this place in column (2) among items a through d. If the same land had more than one use in 1988, report that land only once in the first use listed below that applies. (Please refer to the INSTRUCTION SHEET.)

	None	Number of acres (1)	None	Number of acres irrigated in 1988 (2)
a. Cropland		029	<input type="checkbox"/>	030
(1) Cropland harvested — Include all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, and vineyards	<input type="checkbox"/>	031	<input type="checkbox"/>	032
(2) 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"/>	033	<input type="checkbox"/>	034
(3) 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"/>	035	<input type="checkbox"/>	036
b. Woodland — Include woodland pastured and woodland not pastured	<input type="checkbox"/>	037	<input type="checkbox"/>	038
c. Other pastureland and rangeland — Include any pastureland other than cropland and woodland pasture	<input type="checkbox"/>	039	<input type="checkbox"/>	040
d. All other land — Include any land not reported above. Include land in house lots, barn lots, corrals, ponds, roads, wasteland, etc.	<input type="checkbox"/>	041	<input type="checkbox"/>	042
e. TOTAL ACRES — Please sum columns 1 and 2 and enter the totals in these spaces. (Acres "IN THIS PLACE" should be equal to item 2d above.)		041	<input type="checkbox"/>	042
f. How many of the acres in 3e have been laser leveled?	<input type="checkbox"/>		<input type="checkbox"/>	040

2. Irrigated and non-irrigated yields from selected crops harvested from this place in 1988

(Please refer to the INSTRUCTION SHEET)

	None	Irrigated crop <i>Include preplant and supplemental or semi-irrigation</i>				Non-irrigated crop					
		Irrigated acres harvested	Average yield per irrigated acre harvested	Estimated quantity of water applied per acre		Non-irrigated acres harvested	Average yield per non-irrigated acre harvested				
				Average acre-feet	or			Total inches			
a. Corn (field) for grain or seed	<input type="checkbox"/>	050	1	Bushels, shelled	2	/10	or	3	4	5	Bushels, shelled
b. Corn (field) for silage or green chop	<input type="checkbox"/>	060	1	Tons, green	2	/10	or	3	4	5	Tons, green
c. Sorghum for grain or seed	<input type="checkbox"/>	070	1	Bushels	2	/10	or	3	4	5	Bushels
d. Wheat for grain	<input type="checkbox"/>	080	1	Bushels	2	/10	or	3	4	5	Bushels
e. Barley for grain	<input type="checkbox"/>	090	1	Bushels	2	/10	or	3	4	5	Bushels
f. Soybeans for beans	<input type="checkbox"/>	100	1	Bushels	2	/10	or	3	4	5	Bushels
g. Beans, dry edible	<input type="checkbox"/>	110	1	Cwt.	2	/10	or	3	4	5	Cwt.
h. Rice	<input type="checkbox"/>	120	1	Cwt.	2	/10	or	3	4	5	Cwt.
i. Other small grains (oats, rye, etc.)	<input type="checkbox"/>	130	1	Cwt.	2	/10	or	3	4	5	Cwt.
j. Alfalfa and alfalfa mixtures for hay or dehydrating	<input type="checkbox"/>	140	1	Tons, dry	2	/10	or	3	4	5	Tons, dry
k. All other hay including wild or native hay	<input type="checkbox"/>	150	1	Tons, dry	2	/10	or	3	4	5	Tons, dry
l. Peanuts for nuts	<input type="checkbox"/>	160	1	Pounds	2	/10	or	3	4	5	Pounds
m. Cotton	<input type="checkbox"/>	170	1	Lbs. lint	2	/10	or	3	4	5	Lbs. lint
n. Sugar beets for sugar	<input type="checkbox"/>	180	1	Tons	2	/10	or	3	4	5	Tons
o. Tobacco, all types	<input type="checkbox"/>	190	/10	Pounds	2	/10	or	3	4	/10	Pounds
p. Potatoes, Irish	<input type="checkbox"/>	200	/10	Cwt.	2	/10	or	3	4	/10	Cwt.
q. Land from which vegetables were harvested	<input type="checkbox"/>	210	/10	Cwt.	2	/10	or	3	4	/10	Cwt.
r. Berries	<input type="checkbox"/>	220	/10	Cwt.	2	/10	or	3	4	/10	Cwt.
s. Land in bearing and nonbearing fruit orchards, citrus or other groves, vineyards, and nut trees	<input type="checkbox"/>	230	/10	Cwt.	2	/10	or	3	4	/10	Cwt.
t. All other crops — Specify	<input type="checkbox"/>	240	/10	Cwt.	2	/10	or	3	4	/10	Cwt.
u. Pastureland, all types	<input type="checkbox"/>	250	/10	Cwt.	2	/10	or	3	4	/10	Cwt.

Item 4 METHOD OF WATER DISTRIBUTION IN 1988 — Report acres irrigated by each type of FIELD distribution system listed below. If same land was irrigated by more than one method, report acres irrigated by each method used. (Please refer to the INSTRUCTION SHEET.)

		None	Acres irrigated
a. Sprinkler Irrigation			
(1) Center pivot			
a.	High pressure (60 PSI or greater)	<input type="checkbox"/>	570
b.	Low pressure (under 60 PSI)	<input type="checkbox"/>	571
(2) Mechanical-move			
a.	Low Energy Precision Application (LEPA) — Application of water below leaf canopy	<input type="checkbox"/>	572
b.	All other mechanical move systems	<input type="checkbox"/>	573
(3) Hand move			
(4) Solid set and permanent system			
b. Gravity Irrigation			
(1) Gated pipe			
(2) Open ditch, siphon tubes			
(3) Flooding from underground pipe with valves, ditches, canals, dikes, and any other gravity method (excluding methods reported above)			
c. Drip or trickle irrigation			
d. Subirrigation (water applied beneath the ground, maintenance of water table at a predetermined depth)			

Item 5 METHOD OF WATER DISTRIBUTION, IRRIGATION FREQUENCY, AND APPLICATION OF COMMERCIAL FERTILIZERS AND PESTICIDES IN IRRIGATION WATER BY SELECTED CROPS IN 1988

(Please refer to the INSTRUCTION SHEET)

Mark (X) all boxes that apply

	None	Method of water distribution				Application of commercial fertilizer or pesticides in irrigation water		How many times were crops irrigated?		
		Sprinkler	Gravity	Drip or trickle	Sub-irrigation	Commercial fertilizer	Pesticide application	Less than 3	3 to 7	8 or more
a. Corn (field) for grain or seed	<input type="checkbox"/>	260 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	600 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
b. Corn (field) for silage or green chop	<input type="checkbox"/>	260 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	603 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
c. Sorghum for grain or seed	<input type="checkbox"/>	270 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	606 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
d. Wheat for grain	<input type="checkbox"/>	280 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	609 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
e. Barley for grain	<input type="checkbox"/>	290 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	612 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
f. Soybeans for beans	<input type="checkbox"/>	300 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	615 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
g. Beans, dry edible	<input type="checkbox"/>	310 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	618 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
h. Rice	<input type="checkbox"/>	320 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	6 <input type="checkbox"/>	6 <input type="checkbox"/>	621 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
i. Other small grains (oats, rye, etc.)	<input type="checkbox"/>	330 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	624 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
j. Alfalfa and alfalfa mixtures for hay or dehydrating	<input type="checkbox"/>	340 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	627 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
k. All other hay including wild or native hay	<input type="checkbox"/>	350 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	630 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
l. Peanuts for nuts	<input type="checkbox"/>	360 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	633 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
m. Cotton	<input type="checkbox"/>	360 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	636 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
n. Sugar beets for sugar	<input type="checkbox"/>	370 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	639 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
o. Tobacco, all types	<input type="checkbox"/>	380 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	642 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
p. Potatoes, Irish	<input type="checkbox"/>	390 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	645 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
q. Land from which vegetables were harvested	<input type="checkbox"/>	400 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	648 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
r. Berries	<input type="checkbox"/>	590 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	6 <input type="checkbox"/>	6 <input type="checkbox"/>	651 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
s. Land in bearing and nonbearing fruit orchards, citrus or other groves, vineyards, and nut trees	<input type="checkbox"/>	410 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	654 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
t. All other crops	<input type="checkbox"/>	420 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	657 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
u. Pastureland, all types	<input type="checkbox"/>	430 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	6 <input type="checkbox"/>	6 <input type="checkbox"/>	660 1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>

Item 6 ACRES IRRIGATED AND ESTIMATED QUANTITY OF WATER USED IN 1988 BY SOURCE

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

None 444 Acres irrigated

a. Ground water from a well or wells located on this farm or another farm. Acres irrigated

Estimated quantity of water used in 1988 — Report in unit most convenient for you

(1) Average acre-feet per acre irrigated (one acre-foot covers one acre one foot deep) ... 445 / 10

OR

(2) Gallons of water applied and duration ... 448 } Total gallons per minute

OR

(3) Total inches applied — Include all applications ... 448 } No. of 24 hour day equivalents water was applied.

Total inches

None 449 Acres irrigated

b. On-farm surface supply not controlled by a water supply organization (stream, drainage ditch, lake, pond, spring, or reservoir on or adjacent to this farm). Acres irrigated

Estimated quantity of water used in 1988 — Report in unit most convenient for you

(1) Average acre-feet per acre irrigated (one acre-foot covers one acre one foot deep) ... 450 / 10

OR

(2) Gallons of water applied and duration ... 451 } Total gallons per minute

OR

(3) Total inches applied — Include all applications ... 453 } No. of 24 hour day equivalents water was applied.

Total inches

Item 6 ACRES IRRIGATED AND ESTIMATED QUANTITY OF WATER USED IN 1988 BY SOURCE — Continued

c. Off-farm water suppliers (U.S. Bureau of Reclamation; irrigation district; mutual, private, cooperative, or neighborhood ditches; commercial company or municipal or community water system)? **None — Go to item 7** 454 Acres irrigated

(1) How much water was received? 455 Total acre-feet

(2) Total cost of water received — Include all assessments, fees, or charges paid to water suppliers 456 \$ - 00 Dollars only

a. If water was received at no cost, check 675 1 No cost

(3) Did you allow any of your regular allocation of water to be used by others in 1988? 457 1 Yes — Enter number of acre-feet 458

458 2 No

Item 7 NUMBER OF IRRIGATION WELLS ON THIS PLACE IN 1988, WELL DEPTH, AND PUMPING CAPACITY

a. Wells used in 1988 None 480 Number of wells used

	Enter number of feet			Pump capacity (Discharge from well) GPM	Operating pressure PSI	
	Depth of well	Depth to water at start of irrigation season	Pumping depth (Depth to bowls or impellers)			
(1) For places with 5 or less wells pumped in 1988, report the following information	Well number 1	461	1	2	3	676
	Well number 2	466	1	2	3	677
	Well number 3	469	1	2	3	678
	Well number 4	473	1	2	3	679
	Well number 5	477	1	2	3	680
(2) For places with more than 5 wells pumped in 1988, report the average for all wells	Average depth of well	481	1	2	3	681
	All wells					

b. Wells not used in 1988, but capable of being used (Exclude abandoned wells.) None 485 Number of wells not used

c. Does any part of your system contain back-flow-prevention devices? 683 1 Yes 2 No

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Item 8 PUMPS, OTHER THAN WELL PUMPS, ON THIS PLACE IN 1988

Report all pumps on this place, whether they are in service or not, USED FOR — None

	Number of pumps	Average discharge capacity GPM
a. Tailwater pits <input type="checkbox"/>	490	491
b. Ponds, lakes, reservoirs, rivers, etc. <input type="checkbox"/>	492	493
c. Relifting or boosting water within system <input type="checkbox"/>	494	

Item 9 ENERGY USE ON THIS PLACE IN 1988 FOR PUMPING IRRIGATION WATER BY POWER SOURCE — Include 1988 fuel adjustment cost. (Please refer to the INSTRUCTION SHEET.)

	Number of wells or pumps powered by type of energy used	Total cost of fuel used		Total quantity of fuel used	Acres irrigated by type of energy used
		Dollars	Cents		
a. Electricity <input type="checkbox"/>	495	496	00	884 Kwh	497
b. Natural gas <input type="checkbox"/>	498	499	00	665 Mcf	500
c. LP gas, propane, or butane <input type="checkbox"/>	501	502	00	888 Gal.	503
d. Diesel fuel <input type="checkbox"/>	504	505	00	667 Gal.	506
e. Gasoline and gasohol <input type="checkbox"/>	507	508	00	668 Gal.	509

Item 10 MAINTENANCE AND REPAIR COSTS FOR IRRIGATION EQUIPMENT AND FACILITIES ON THIS PLACE IN 1988

(Please refer to the INSTRUCTION SHEET)

Include expenditures incurred in day-to-day operations; all other expenditures should be reported in item 11.

Amount spent for maintenance and repairs of irrigation equipment and facilities in 1988, including maintenance of on-farm ditches. *Include landlord's share — Give estimate if actual figures are unavailable.* None

	Dollars	Cents
610	\$	00

Item 11 EXPENDITURES IN 1988 FOR IRRIGATION WELLS, PUMPS, EQUIPMENT, AND OTHER IRRIGATION FACILITIES ON THIS PLACE

(Please refer to the INSTRUCTION SHEET)

Report expenditures in 1988 for irrigation facilities on this place whether made by you or someone else. *Include landlord's share — Give estimates if actual figures are unavailable.* None

	Total expenditures		Purpose of expenditure Mark (X) principal purpose		
	Dollars	Cents	Replacement	Conservation	New expansion
a. Purchase of irrigation equipment and machinery — Include sprinklers, pipes, siphons, nozzles, pumps, motors, engines, etc., at net cost <input type="checkbox"/>	511	00	512		
	\$		1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
b. 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 and motors.) <input type="checkbox"/>	515	00	516		
	\$		1 <input type="checkbox"/>		3 <input type="checkbox"/>
c. Construction or improvement of permanent storage and distribution systems (dams, ponds, reservoirs, permanent ditches, canals, flumes, etc.) <input type="checkbox"/>	619	00	520		
	\$		1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
d. Land clearing and leveling for irrigation purposes <input type="checkbox"/>	623	00	524		
	\$			2 <input type="checkbox"/>	3 <input type="checkbox"/>

Item 12 IRRIGATION PRACTICES IN 1988

a. How did you decide when to apply water in 1988? — Mark (X) all that apply

- 527 Condition of crop (observation)
 Feel of the soil
 Use of soil moisture sensing devices such as moisture blocks or tensiometers
 Use of commercial scheduling service
 Media reports on crop-water needs (newspapers, radio, and TV)
 Water delivered by irrigation organization in turn (no choice by water user)
 By calendar schedule
 Other — Specify _____

b. Did you have to discontinue irrigation during 1988 long enough to AFFECT crop yields?

- 669 Yes — If "Yes", answer the following. No — Go to item 13
 (Mark (X) all that apply) —
 670 Shortage of surface water (water from reservoirs, lakes, streams, water supply organizations, etc.)
 Shortage of ground water (lowering water level of wells or depletion of ground water)
 Irrigation equipment failure
 Energy shortage
 Poor water quality
 Loss of water rights
 Cost of water
 Other — Specify _____

Item 13 OTHER USES OF IRRIGATION WATER ON THIS PLACE IN 1988

Was irrigation used for any of the following secondary purposes?

- a. Prevent freeze damage None
 b. Crop cooling to delay early budding or blooming
 c. Leaching to remove salts from the soil (salinity control)
 d. Other — land disposal of liquid livestock waste, etc. — Specify

Acres on which applied	
440	
441	
442	
443	

Item 14 WATER MANAGEMENT PRACTICES FOR OPERATORS USING GRAVITY IRRIGATION

Did you use gravity irrigation to irrigate any land in 1988 (acres reported in item 4b)?

- 671 Yes — If "Yes", answer the following: — No — Go to item 15

On how many acres did you use these techniques?

- a. Irrigation water captured for further use (tailwater pits) None
 b. Surge flow or cablegation technique
 c. Use of any special furring techniques, such as wide-spaced bed furling, compacted furling, or furrow diking — Specify technique used

Number of acres	
672	
673	
674	

Item 15 IRRIGATED LAND IN 1987

a. Was any land irrigated on this place in 1987? Do not answer this item if you irrigated any land in 1988.

- 528 Yes — Answer b and c below — No — Go to item 16

b. Reason for not irrigating in 1988 — Mark (X) any of the following that apply:

- 529 Sufficient soil moisture — no irrigation needed
 Shortage of surface water (water from reservoirs, lakes, streams, water supply organizations, etc.)
 Shortage of ground water (lowering water level of wells or depletion of ground water)
 Irrigation uneconomical due to high fuel and power costs and/or low commodity prices
 Irrigation equipment failure
 Loss of water rights
 Sold water rights
 Other — Specify _____

c. Do you consider your discontinuance of irrigation to be permanent?

- 530 Yes
 No

Item 16 PERSON COMPLETING THIS FORM — Please print

Name	Date	Telephone	
		Area code	Number

ADDITIONAL INSTRUCTIONS FOR THE 1988 FARM AND RANCH IRRIGATION SURVEY

In completing the questionnaire, if exact figures are not available, give your best estimate. An estimate is more useful than an omitted answer.

- ▶ **Item 3.1 — LAND USE** — All acres "In This Place" should be reported only once, in the first category that applies.

Similarly, for each category of land use, report the acres irrigated in 1988 in the appropriate category.

Report all cropland, pastureland, and rangeland watered by artificial means at any time during 1988. In addition to fully irrigated land, report as irrigated any lands to which partial, supplemental, or semi-irrigation was applied. Also include any acreage which received only preplant irrigation (watered before planting). Haylands, pastureland, or rangeland should be reported as irrigated if spring flood water was spread by canals, ditches, spreader dikes, pipes, or other works.

- ▶ **Item 3.2 — IRRIGATED AND NON-IRRIGATED CROP YIELDS** — For each crop harvested, report separately the acreage and average yield from irrigated land and non-irrigated land.

Report harvested crops as irrigated if any water was artificially applied either before planting or during the crop growing season in 1988. Report the crop as irrigated if water was applied to supplement rainfall, even if the amount of water applied was not sufficient to obtain maximum yields.

Please give your best estimate of the quantity of water applied per acre for each irrigated crop. Report in either average acre-feet (one acre-foot covers one acre one foot deep) or total inches applied.

- ▶ **Item 4 — METHOD OF WATER DISTRIBUTION** — This item refers to the method used to spread water over the land. Report the acres of land irrigated by each type of field distribution system listed. Do not report information for the delivery system used to convey water from the source to the field, instead report information for the FIELD distribution system used.

- ▶ **Item 5 — METHOD OF WATER DISTRIBUTION, ETC., BY SELECTED CROPS** — Pesticides include chemicals used to control insects, weeds, nematodes, and diseases. Check the appropriate box if ANY commercial fertilizer or pesticides were used on a crop, even if only a portion of the crop was treated.

Report the maximum number of times any field for a crop was irrigated. Include the number of preplant irrigation applications in this figure.

- ▶ **Item 9 — ENERGY USE FOR IRRIGATION PUMPING** — Report the expenditures for fuel and power used in 1988 for irrigation pumping by each type of energy used on this place. Include in the cost figures any additional charges such as the "fuel adjustment charge" or any other type of additional charge which is based on the amount of power or fuel purchased.

Also report the total quantity of fuel used in the units specified and the acres irrigated by each type of energy used on this place. Again, give best estimates if actual figures are not available.

- ▶ **Item 10 — MAINTENANCE AND REPAIR COSTS** — Report all expenses in 1988 for keeping irrigation equipment and facilities in working order. Include expenses for tune-ups, oil changes, and repairs to pumps, motors, pipes, canals, sprinkler systems, etc. Also include expenses for ditch and canal cleanout.

- ▶ **Item 11 — IRRIGATION EXPENDITURES** — Report expenditures made in 1988 for the construction of irrigation facilities and purchase of irrigation equipment and machinery on this place. Include estimates of expenditures made by or shared with others (landlords, government agencies, etc.). Report cost of maintenance and repairs in Item 10.

NOTE — Based on tests with farmers and ranchers, it takes from 30 to 60 minutes to complete this form with most operators completing it in 43 minutes per response. If you have any comments regarding these estimates or any other aspect of this survey, send them to the Associate Director for Management Services, Room 2027, Bureau of the Census, Washington, DC 20233; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.