2023 IRRIGATION AND WATER MANAGEMENT SURVEY

Form Number: 23-XXXX (07/06/23)							
USDA							
ST CULTURE E							
National Agricultural Statistics Service							
Return your completed report to:							
Census of Agriculture 1201 East 10 th Street Jeffersonville, IN 4713							
OFFICE USE 0010 ONLY	Make corrections to name, address, and ZIP Code if necessary.						
Complete your report by mail or via the internet at www.agcounts.usda.gov • Your mandatory report is due by February 15, 2024 – Everyone, including nursery, greenhouse, and other horticultural crop producers, must return this form by this date. • To fill out the paper form, use a black or blue ballpoint pen. • Questions – Call us toll-free at 1-888-424-7828. Thank you for your cooperation.							

SECTION 1 ACREAGE IN 2023

- Report land owned, rented, or used by you, your spouse, or the partnership, corporation, or organization printed above.
- · Round to whole acres.
- Include ALL LAND, regardless of location or use cropland, pastureland, rangeland, woodland, idle land, greenhouses or other area under protection, farmsteads, Conservation Reserve Program (CRP) land, etc.

		None	Number of Acres
1.	All land owned		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 leased land (e.g., private, Federal, state, railroad) used on a per-head or animal unit month (AUM) basis under a grazing permit	□ +	0026
3.	All land rented or leased to others , including land worked on shares by others and land subleased		0027
			BOX A
4.	TOTAL ACRES in this operation (Items 1 + 2 - 3 = BOX A)	=	0028

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 and Statistical Efficiency Act of 2018, Title III of Pub. L. No. 115-435, codified in 44 U.S.C. Ch. 35 and other applicable Federal laws. For more information on how we protect your information please visit: www.nass.usda.gov/confidentiality. Response to this survey is required by law under Title 7 USC 2204(g) Public Law 105-113.

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 number is 0535-0234. The time required to complete this information collection is estimated to average 60 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.

SECTION 2 LAND IN 2023

0003 1 ☐ Yes - Continue

- Of the acres reported in **BOX A** on the previous page, indicate how all of the land was used in 2023 in column 1 below. If the same land had more than one use, report that land only once in items 1 through 3.
- Report the acres that had irrigation equipment in 2023 in Column 2. Acres with access to irrigation systems or equipment, also known as acres equipped for irrigation, include all irrigated acres and all acres that could have been irrigated in 2023, regardless of water rights. Examples include acres covered by sprinklers, drip trickle, down rows, and controlled flooding irrigation systems.
- Report the acres that were irrigated in 2023 in Column 3. Irrigation is any application of water, including partial, supplemental, or preplant irrigation, by any artificial or controlled means. Fresh, reclaimed, and recycled water are all suitable for irrigation purposes.
- Area under protection includes crops grown under glass, rigid plastic, plastic film, shade cloth, fiberglass, "tunnel" protection, and hoop houses. Crops covered temporarily, such as for frost protection, only to be further grown in the open should be reported as cropland harvested in the open.

1.	 Cropland – Exclude cropland used only for pasture 			Column 1		Column 2		Column 3
	a.	Cropland harvested in the open – Include harvested field crops and hay; and land in vegetables, orchards, citrus groves, vineyards, berries, nuts, Christmas trees, short rotation woody crops, nursery and other horticultural crops in the open	None	Number of Acres	None	Acres Reported in Column 1 with Access to Irrigation Systems or Equipment	None	Acres Reported in Column 2 that were Irrigated
	b.	Area under protection – Include nursery, greenhouse, and other horticulture under protection. Round to the nearest whole acre		0077		1129		0078
	C.	Cropland not harvested or grazed – Include cropland on which all crops failed, cropland idle, cropland used for cover crops or CRP, and cropland in summer fallow		0033		1130		0034
2.	Pa	sture						
	a.	Permanent pasture and rangeland		0135		1131		0136
	b.	Woodland pastured		0137				
	C.	Other pasture and grazing land (including rotational pasture) that could have been used for crops without additional improvements		0107		1132		0108
3.	ab far	other land – Include land not reported ove. Include woodland not pastured, msteads, home, buildings, livestock cilities, ponds, roads, wasteland, etc		0039				
				Total Acres on this Operation	ı	Total Acres with Access to Irrigation Systems or Equipment		Total Acres Irrigated
4.		TAL ACRES – Add acres in each umn and enter the totals		BOX B 0041		1133		0042
	[B0	OX B above should be the same as BOX A	on pa	ge 1.]				
5.	•	as any area irrigated on this operation in 20 Include all irrigated land in the open and all Exclude land equipped for irrigation that dic	area	under protection in	2023.			

3 No – Go to Section 16 on page 20

					- 3 -							
SE	ECTION 3 GROUND	WATER	FROM WELL	S								
1.	Did this operation irrigat	te with g	round water fro	m wells	on this	operation in 2	023?					
	⁰⁷⁶⁰ ₁ Yes – Continue)	₃	o Sectio	on 4							
	If exact amounts are no the open is less than on rural water system, repo	ie acre, i	report as one a	cre in ite	em 2. If							
2.	Report acres in the ope with ground water and to of water applied in 2023 irrigated horticultural cro in the open, irrigated su	he amou 3. Include ops grow	ınt e ∕n	None	G	es in the Open Irrigated by Fround Water		Quantity of Ground Water Applied			1: 2: 3:	Enter Code for Jnit of Measure = Total Acre-Fee = Total Gallons = Inches/Acre
	and irrigated pasturelan				0444		04	46			044	47
3. Report the area under protection irrigated with ground water in 2023. Under protection includes nursery, greenhouse, floriculture, mushrooms, vegetable seeds, and propagative materials grown under glass, rigid plastic, plastic film, shade cloth, fiberglass, "tunnel" protection, and hoop houses									n Irrigated with			
										N	lumb	er of Wells
4.	How many wells on this	operation	on were used f	or irrigat	ion in 2	023?				0460		
	Of the (item 4) wells prevention devices (acres and/or square)	(check v	alves) and how	many	Non	Number of Wells		Acres in	ı the Op			Square Feet der Protection
	irrigated with these	wells in 2	2023?									
	b. Of the (item 4) wells or other flow measu	rement o	devices and ho	w many			_			r		
	acres and/or square irrigated with these v					0683		0772		0	680	
	c. Of the (item 4) wells wells that did not red				🗆	0486						
			Depth of Well	Dept Bowl Impe	s or	Depth to Water at Start of Irrigation Season	D	Pump apacity – ischarge rom Well	Pre	perating essure at ell Head	t	Horsepower of Engines or Motors, Including Electric
		Well#	(Feet)	(Fe		(Feet)		(GPM)	+	(PSI)		(HP)
5.	Report for the first	1	0461	0463		0462	0464		0676			0761
three primary wells $\frac{0465}{2}$								0763				
	pumped in 2023.	3	0469	0471		0470	0472		0678			0765
			Average Depth of Well(s)	Aver Dept Bowl Impe	h to s or	Average Depth to Water at Start of Irrigation Season	C;	Average Pump apacity – ischarge om Well	Op Pre	verage perating essure a ell Head	t	Average Horsepower of Engines or Motors, Including Electric

6. For the wells used on this operation, what is the best description for the depth to water over the last five years? Mark (X) one: 0487 1 Depth to water did not change 2 Depth to water increased 3 Depth to water decreased

(Feet)

0482

(GPM)

0484

(PSI)

0681

(HP)

0767

(Feet)

0483

(Feet)

0481

a. Report averages

for all other wells

pumped in 2023. . . .

SECTION 4	ON-FARM SURFACE WATER

1.	1. Did this operation irrigate with on-farm surface water, including recycled water and on-farm reclaimed water, in 2023?								
		eycled water is reused surface or groundwater that was d for irrigation).	previously used to irrigate a c	rop (e.g. water from a	a tailw	ater reuse pit			
	On-farm reclaimed water is on-farm livestock wastewater that has been treated for non-potable reuse purposes. (For the purposes of this irrigation survey, to be considered an irrigation application of reclaimed water, at least 0.5 inches of reclaimed water must be applied on the area during the growing season.)								
	0438	³ 1 \square Yes – Continue 3 \square No – Go to Sect	ion 5						
		exact amounts are not available, provide your best en is less than one acre, report as one acre in item		er applied. If total	area	irrigated in the			
on-farm surface water and the of water applied in 2023. Included horticultural crops grown in the		port acres in the open irrigated with farm surface water and the amount water applied in 2023. Include irrigated ticultural crops grown in the open, None	Acres in the Open Irrigated by On-Farm Surface Water	Quantity of On-Farm Surface Water Applied		Enter Code for Unit of Measure 1 = Total Acre-Feet 2 = Total Gallons 3 = Inches/Acre			
	•	gated summer fallow, and irrigated stureland	0449)451	,	0452			
3.	pro and fibe	port the area under protection irrigated with on-farrotection includes nursery, greenhouse, floriculture, d propagative materials grown under glass, rigid placeglass, "tunnel" protection, and hoop houses	mushrooms, vegetable see astic, plastic film, shade clo	eds, None oth, 04	Protection On-Fa	are Feet Under tion Irrigated with rm Surface Water			
4.		I this operation use on-farm recycled water to irrig	_	orticultural crops, g	ırown	during 2023?			
	0600	Yes – Continue $_3 \square$ No – Go to item	5 below			Course Fred			
				Acres in the Open		Square Feet Under Protection			
	a.	How many acres in the open and square feet und- were irrigated with on-farm recycled water during		0601	09	36			
5.	cro	d this operation use reclaimed water from on-farr ops, grown during 2023? (For the purposes of this irrigation hes of reclaimed water must be applied on the area during the gray of the section of the	on survey, to be considered an irrigrowing season. If this minimum a	gation application of red	claimed	d water, at least 0.5			
	_			Acres in the Open		Square Feet			
	a.	How many acres in the open and/or square feet u were irrigated with one or more applications of rec from on-farm livestock facilities during 2023?	claimed water	0587	05	Under Protection 88			
				Acre-Feet		Gallons			
	b.	How much reclaimed water from on-farm livest was used for irrigation during 2023?		0599	OR	0561			
		2.54 for migation adming 2020		· L	┙				

SECTION 5 OFF-FARM WATER

1.	Did	this operation irrigate with off-farm water	er in 2023?						
	 ac all are	LUDE res in the open and area under protection irrigated off-farm surface water, municipal (such as town o ea irrigated with reclaimed water from off-farm sou erations, or other off-farm sources	r city) water, a	and rural water suppliers	3	e water), industria	al, off-fari	n livest	ock
	0457	1 Yes – Continue 3 No – 0	Go to Section	on 6					
		xact amounts are not available, provide en is less than one acre, report as one a			/ of wate	r applied. If to	tal area	ı irriga	ated in the
2.	with of v irrig	port acres in the open irrigated n off-farm water and the amount water applied in 2023. Include gated horticultural crops grown he open, irrigated summer fallow,	None	Acres in the Ope Irrigated by Off-Farm Water		Quantity of Off-Farm Wat Applied		Uni 1 = T 2 = T 3 = Ii	ter Code for t of Measure Total Acre-Feet Total Gallons nches/Acre
		d irrigated pastureland	🗆	0454	09	68		0969	
3.	inc pro	port the area under protection irrigated voludes nursery, greenhouse, floriculture, spagative materials grown under glass, rerglass, "tunnel" protection, and hoop ho	mushrooms igid plastic,	s, vegetable seeds, plastic film, shade	and cloth,	None	Prot	ection I	eet Under rrigated with m Water
4	D:-	d	41-1					Dol	llars
4.	0675	d you pay for the off-farm water received	-				0456		
	007	 1 Yes – Report the total dollars paid 3 No – Continue 	i for the off-	-iarm water			\$.00
5.		ow much of this operation's off-farm wate transferred through a project financed, o U.S. Bureau of Reclamation?			0664				
	a.	Include reclamation water delivered th	rough a loc	al district	1	None	2 S	ome	3 All
	b.	Other Federal agencies such as the U Bureau of Indian Affairs, and USDA sr			0665	None	2 🔲 S	ome	з 🗌 All
	C.	All other suppliers? Include town and city water. Specify:	1012		0666	None	2 🔲 S	ome	з 🔲 All
6.	live tha app is n	It this operation use reclaimed water fro estock operations, or other off-farm source thas been treated for non-potable reuse dication of reclaimed water, at least 0.5 inches of rot met, mark (X) "No" below.)	ces to irriga e purposes eclaimed wate	te any crops in 202 . (For the purposes of the must be applied on the	23? Off-fanis irrigation	arm reclaimed n survey, to be co	water nsidered	is was an irrig	tewater _{lation}
	0002	1 Yes – Continue 3 No – 0	30 to Section	on 6				Sc	uare Feet
	a.	How many acres in the open and/or squeeze irrigated with one or more application.				Acres in the (Jpen	Unde	er Protection
		from off-farm sources during 2023?				. 0597		0598	
	b.	How much reclaimed water from off-f was used for irrigation during 2023?				Acre-Feet 0644	0	R 064	Gallons 5
	C.	What sources of reclaimed water were	used on thi	s operation in 2023	3? Mark	(X) all that app	oly.		
		¹⁰⁰¹ ☐ Municipal	¹⁰⁰² Inc	lustrial					
		1003 ☐ Off-farm livestock operation	¹⁰⁰⁴ Ot	her – Specify: 1005					

SECTION 6	DIIMDG IIGED E	AND PUMP EXPEN	CEC
SECTIONS	FUNIFS USED I	AND FUNIT LAFLIN	JL

1.	Were any pumps used on this operation for irrigation during 2023?
	INCLUDE
	• all pumps supplying irrigation to or through any distribution system (e.g., gravity, s

• a	II pumps supp	lying irriga	tion to or	through any	distribution	system	(e.g.,	gravity,	sprinkler,	drip

al	l pumps movir	ıg water	into	tanks	s or reserv	oirs on	the o	operation [·]	for irrigat	tion in	2023
----------------------	---------------	----------	------	-------	-------------	---------	-------	------------------------	-------------	---------	------

EXC	LL	JDE
$ \wedge$ \cup	、Ĺし	םטו

• any pumps used exclusively for non-irrigation applications such as home use or aquaculture

• any pumps not owned or rented b	by this operation, such as p	pumps operated by a water company
-----------------------------------	------------------------------	-----------------------------------

0488 ₁ Yes – Continue	₃ No – Go to Section 7
i Los Continue	

2. Report pumps by use. If the same pump has multiple uses, report that pump only once in items a through d.

		None	Number of Pumps Used	Vertical Lift (Average Feet)	Discharge Capacity (Average GPM)	Discharge Operating Pressure (Average PSI)
	Mall more a		1135			
a.	Well pumps	Ш				
b.	Tailwater pits (pits that hold water previously used for irrigation).	П	0490	0774	0491	0687
C.	Ponds, lakes, reservoirs, rivers, canals, etc		0492	0775	0493	0688
d.	Relifting or boosting water within system (pumps providing additional lift, pressure, or lateral movement)		0494	0776	0777	0778

3. Report the energy expense by power source. Report the fuel used and power expense for pumping irrigation water for the pumps reported above. Report energy expense for acres in the open and area under protection. If both exist for a single energy source, report their combined expenses. Include the cost of any additional charges such as the fuel adjustment charge or any other type of charge which was based on the amount of power or fuel purchased. Include landlord's share. If irrigated acres in the open were less than one acre, round to one acre.

			Used to Power			ated with ed from Wells	Area Irrigated with Pumped Surface Water (Both on- and off-farm)		
PO'	WER SOURCE	None	Other Pumps Used (Reported Above)	Pumps (Dollars)	Acres in the Open (Whole Acres) Square Fe Under Protection		Acres in the Open (Whole Acres)	Square Feet Under Protection	
			0495	0496	0497	0124	0781	0537	
a.	Electricity			\$.00					
			0498	0499	0500	0125	0782	0538	
b.	Natural gas			\$.00					
			0501	0502	0503	0126	0783	0539	
C.	LP gas, propane, or butane			\$.00					
			0504	0505	0506	0127	0784	0540	
d.	Diesel and biodiesel fuel			\$.00					
			0507	0508	0509	0128	0890	0541	
e.	Gasoline, ethanol, and blends			\$.00					
f.	Solar and other pumps without direct energy expense		0779		0780	0129	0786	0542	

SECTION 7

EXPENDITURES FOR IRRIGATION INFRASTRUCTURE

EXPENDITURE AND FUNDING ASSI	STANCE CODES – USE IN THE TABLE BELOW
CODE PRIMARY PURPOSE OF EXPENDITURE	CODE PRIMARY SOURCE OF FUNDING ASSISTANCE
1 = New expansion 2 = Water conservation 3 = Energy conservation 4 = Scheduled replacement or maintenance	1 = No funding assistance or loans 2 = NRCS Environmental Quality Incentives Program (EQIP) 3 = Other USDA financial assistance or loans 4 = Non-USDA and all other financial assistance or loans

Report the 2023 expenditure cost, acres affected (rounded to the nearest acre), primary purpose of expenditure, and primary source of funding assistance by expenditure category using the Expenditure and Funding Assistance Codes from the table above. Include the portion of the expenditures made by or shared with others (landlords or government agencies), including programs such as the Environmental Quality Incentives Program (EQIP).

EX	PENDITURE TYPE	None	Total Cost of Expenditure (Include amount financed)	Irrigated Acres Affected by Expenditure (Acres)	Enter Code from Above for Primary Purpose of Expenditure	Enter Code from Above for Primary Source of Funding Assistance
1.	Purchase of new or replacement irrigation equipment and machinery – Include sprinklers, pipes, siphons, nozzles, pumps, engines, motors, filtration equipment, etc. Exclude		0511	0514	0512	0513
	computers, computer control panels, and software		\$.00			
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.		0515	0518	0516	0517
	Exclude cost of pumps or motors		\$.00			
3.	Construction or improvement of permanent storage and distribution systems – Include dams, ponds, reservoirs,		0519	0522	0520	0521
	permanent ditches, canals, flumes, etc	П	\$.00	0022	0020	
4.	Computers, control panels,	_				
	computer controlled valves, software, and software-controlled		0544	0547	0545	0546
	hardware for irrigation water management		\$.00			
5.	Clearing or leveling non-irrigated land for new irrigation acres (the		0548	0526		0549
	primary purpose is expansion of irrigation acres)		\$.00			
6.	Land leveling of previously irrigated land (the primary		0556	0559	0557	0558
	purpose cannot be new expansion)		\$.00			

SECTION 8 METHOD OF WATER DISTRIBUTION IN FIELDS IN THE OPEN

1.	• • [I this operation irrigate any fields in the nclude acres of horticultural crops gro Exclude crops grown under protection crops grown under protection will be re	own in the open: glass, rigid	en or uı plastic,	plastic			g "tunnel"	protectio	on. (Metl	nods for
	0489	9 ₁ ☐ Yes – Continue 3 ☐ No	– Go to Sect	ion 13							
one	me	acres irrigated by each type of FIELD ethod of distribution, report acres irriga or the delivery system used to convey	ated by each	method	d used.	Report	inforr	mation for			
				,				ated by Gra		em	
2.	Gra	avity irrigation None	Total Acres	Op	ined pen tch	Lined Oper Ditch	1	Poly Pipe (or other single-yea use, lay-fla tubing)	Abo ar Pip	ve Ground e (except oly pipe) ¹	Underground Pipe ²
	a.	Down rows or furrows	0855	0859		0857		0056	0057		0858
	b.	Controlled flooding (within borders, levees, or basins)	0865	0869		0867		0066	0067		0868
	C.	Uncontrolled flooding (rangeland, pastureland, etc.)	0875								
	d.	Other gravity systems, including water seepage	0885								
			¹ Include gated ² Include riser of							ound pipe.	
						Acres i	n the	Open Irriga	ted by Sr	orinkler S	/stem
3.	Sni	rinkler irrigation – Inlet pressure		None	Pre	ry Low essure r 15 PSI)	Р	Low Pressure to 29 PSI)	Medi Press (30 to 5	ium sure	High Pressure 60 PSI or more)
J.	•			None	0569	1 13 P31)	0576		0575		570
	a. b.	Center pivot systems (circle) Linear move tower systems (and other linear continuous move drive systems)			0571		0577		0578	С	579
	C.	Solid set or permanent systems (except low-flow micro systems)			0568		0565		0566	C	567
		(except less new micro eyeteme)							<u> </u>	Acr	es Irrigated
	d.	Mechanical move systems							None	(all	pressures)
		(i) Side roll, wheel move, or other mecl and other discrete move systems.								0240	
		(ii) Big gun or traveler systems								0241	
	e.	Hand-move systems, including hand wat the open					ps gro	own in		0242	
	f.	Other sprinkler systems								0243	
4.	Dri	p, trickle, or low-flow micro irrigation							None		es Irrigated pressures)
	a.	Surface drip (on or above ground)								0248	
	b.	Sub-surface drip (root zone)								0246	
	C.	Low-flow micro sprinklers or sprays (thesand are not self-propelled or easily move								0247	
	d.	Other drip, trickle, or low-flow micro systematics	ems							0249	
5.	Ну	droponics								1136	

SECTION 9

ADDITIONAL PRACTICES FOR IRRIGATION METHODS IN FIELDS IN THE OPEN

١.	(Refer to Section 8, item 2.)	n systems of equipment to imgate any acres in the oper	1 111 202	.o ?
	1137 ₁ Yes – Continue 3	□ No – Go to Section 10		
2.	On how many acres in the open did y	ou use the following practices?	None	Number of Acres
		er pits, restrict runoff by diking end of the field, of irrigations, or irrigate only alternative rows		0404
	b. Use any precision-leveling			0406
		veling were considered zero grade ee decline)?		1138
	special furrowing practices such as	er-soluble polyacrylamide (PAM); or use s wide-spaced bed furrowing, compacted		0409
	d. Use surge flow or a surge irrigation	n system (intermittent application of water to a furrow).		1139
	e. Use a cablegation system (consta	ant slow flow application to a furrow)		1140
	f. Apply mulch or other types of row of	covers		1141
3.	tubes in any way? Software features i	software for the measuring or planning of their gravity irr include determining the location for the pipes or tubes, t neter of the holes, and the distance between holes for o	he loca	tion for drilling
	1142 1 Yes 3 No			

SECTION 10 ACRES IRRIGATED IN THE OPEN

1.	Did this operation irrigate any land in the open in 2023?
	• Include irrigated harvested cropland, pastureland, summer fallow, and failed cropland.
	1134 ₁ Yes – Continue ₂ No – Go to Section 13

For each item listed, report the irrigated harvested acres or acres irrigated for non-harvested items in the first column. For selected crops, report the average yield from the irrigated harvested acres in the second column. Then report the average irrigation water applied per acre for the entire year in either feet or inches for the acres reported in column one. 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. **Report nursery and other horticultural crops grown in the open in item 18.**

			Irrigated Land Include preplant and supplemental or semi-irrigation							
	Irrigated Crops		Irrigated Acres Harvested	ner Irrigated			Average Estimated Quantity of Water Applied per Acre in 2023			
			Tialvested	Acre	Harvested	Feet	Tenths	OR	Inches	
2.	Corn for grain or seed – Exclude popcorn and sweet corn	None	0050	0051	Bu.	0052		OR	0053	
3.	Corn for silage or greenchop – Exclude popcorn and sweet corn		0060	0061	Tenths Tons	0062		OR	0063	
4.	Sorghum for grain or seed		0070	0071	Bu.	0072		OR	0073	
5.	Wheat for grain or seed		0080	0081	Bu.	0082		OR	0083	
6.	Soybeans for beans		0106	0101	Bu.	0102		OR	0103	
7.	Beans, dry edible		0110	0111	Cwt.	0112		OR	0113	
8.	Rice – Include post harvest water applied to improve residue decomposition		0120	0121	Cwt.	0122		OR	0123	
9.	Other small grains (barley, oats, rye, etc.)		0130			0132		OR	0133	
10.	Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage)		0140	0141	Tenths Tons, dry	0142		OR	0143	
11.	All other hay and haylage including small grain, other tame, and wild hay (dry hay, greenchop, and silage)		0150	0151	Tenths Tons, dry	0152		OR	0153	

				Include preplar		gated Land supplemental or se	mi-irrigat	tion		
	Irrigated Crops, Pastureland, and Other Land		Irrigated Harve		Average Yield per Irrigated Acre		Average Estimated Quantity of Water Applied per Acre in 2023			
			Harve	,3100	Harvested		Feet	Tenths	OR	Inches
		None	0550		0551		0552		00	0553
12.	Peanuts					Lbs.			OR	
			0160		0161		0162		OR	0163
13.	Cotton					Lbs. lint			UK	
14.	All land from which vegetables, potatoes, and melons were		0186	Tenths			0187		OR	0188
	harvested									
	a. Sweet corn		0850	Tenths	0851	Cwt.	0852		OR	0853
		_	0860	Tenths	0861	Own.	0862			0863
	b. Tomatoes in the open					Cwt.			OR	
	. Lattice and named		0870	Tenths	0871	_	0872		OR	0873
	c. Lettuce and romained. Potatoes – Exclude sweet	Ш	0190	Tenths	0191	Cwt.	0192			0193
	d. Potatoes – Exclude sweet potatoes		0190	Tenuis	0191	Cwt.	0192		OR	0193
			0560	Tenths			0562		OR	0563
	All berries.	Ш	0004				0000			0000
16.	All other crops grown in the open and not listed		0621				0622		OR	0623
	Specify: 0620								OIX	
			Irrigated	Acres						
17.	Land in bearing and non-bearing fruit orchards, citrus or other groves, vineyards, and nut trees		0210	Tenths			0212		OR	0213
18.	Nursery and other horticultural crops		0690	Tenths			0691			0692
	grown in the open (Note: Nursery, greenhouse, and other horticultural crops grown under protection will be								OR	
	reported in a later section.)									
			0230				0232		OR	0233
	Irrigated pastureland, all types									
20.	All other irrigated land types such as failed cropland, idle land, and land in summer fallow		1144				1145		OR	1146
	canillion fallow	<u> </u>					l	1		

SECTION 11

FIELD WATER DISTRIBUTION AND WATER SOURCE USED IN THE OPEN

- 1. Did this operation irrigate any land in the open in 2023?
 - Include irrigated harvested cropland, pastureland, summer fallow, and failed cropland.

1143	Yes – Continue	₃ No – Go to Section 13
	11 165 - Continue	31 1 NO – GO 10 SECTION 13

WATER DISTRIBUTION CODES – USE IN THE TABLE BELOW							
CODE PRESSURE SYSTEM	CODE GRAVITY SYSTEM						
01 = Hand-move system 02 = Solid set or permanent system 03 = Side roll or wheel line system 04 = Big gun or traveling gun system 05 = Linear move system (under 15 PSI) 06 = Linear move system (15 to 29 PSI) 07 = Linear move system (30 to 59 PSI) 08 = Linear move system (60 PSI or more) 09 = Center pivot system (under 15 PSI) 10 = Center pivot system (15 to 29 PSI) 11 = Center pivot system (30 to 59 PSI) 12 = Center pivot system (60 PSI or more) 13 = Low-flow irrigation (drip, trickle, or micro sprinkler system) 14 = Other pressure system including hydroponics – Specify:	 15 = Down rows or furrows from unlined open ditches 16 = Down rows or furrows from lined open ditches 17 = Down rows or furrows from poly pipe, lay-flat tubing, or above ground or underground pipe 18 = Controlled flooding within borders, levees, or basins from unlined open ditches 19 = Controlled flooding within borders, levees, or basins from lined open ditches 20 = Controlled flooding within borders, levees, or basins from poly pipe, lay-flat tubing, or above ground pipe 21 = Controlled flooding within borders, levees, or basins from underground pipe 22 = Uncontrolled flooding (rangeland, pastureland, etc.) including open discharge from a well or pump 23 = Other gravity system – Specify: 						

Report for irrigated acres in the open. For each irrigated crop in the open, report the primary field distribution method, acres irrigated by water source, and acres on which chemigation was used in the irrigation system. Refer to the table above for the water distribution codes.

	Irrigated Crops, Pastureland,	Enter Code from Above for Primary	crop acres	Water Source otals may exceed reported in Section water source	Acres on which chemigation was applied through the irrigation system			
	and Other Land		Method of Field Water Distribution	Ground Water from Wells	On-Farm Surface Water ¹	Off-Farm Water (All Suppliers) ²	Commercial Fertilizer	Pesticide Application
				(Acres)	(Acres)	(Acres)	(Acres)	(Acres)
2.	Corn for grain or seed – Exclude popcorn and sweet corn	None	0250	0255	0254	0256	0252	0253
3.	Corn for silage or greenchop – Exclude popcorn and sweet corn		0260	0265	0264	0266	0262	0263
4.	Sorghum for grain or seed		0270	0275	0274	0276	0272	0273
5.	Wheat for grain or seed		0280	0285	0284	0286	0282	0283
6.	Soybeans for beans		0300	0305	0304	0306	0302	0303
7.	Beans, dry edible		0310	0315	0314	0316	0312	0313
	•		0320	0325	0324	0326	0322	0323
8. 9.	Other small grains (barley, oats, rye, etc.).		0330	0335	0334	0336	0332	0333
10.	Alfalfa and alfalfa mixtures (dry hay, greenchop, and silage)		0340	0345	0344	0346	0342	0343
11.	All other hay including small grain, other tame, and wild hay (dry hay, greenchop, and silage)		0350	0355	0354	0356	0352	0353

On-farm water source includes recycled water and reclaimed water from on-farm livestock operations.

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.

Irrigated Crops, Pasturelar	Enter Code from Previous Page for Primary	crop a	Water Source (Column totals may exceed irrigated crop acres reported in Section 10 when more than one water source was used.)						Acres on which chemigation was applied through the irrigation system			
and Other Land		Method of Field Water Distribution		Ground Water from Wells		rm /ater¹	Off-Farm W (All Supplie		Commer Fertilize		Pesticid Applicati	
	None				(Acres	s)	(Acres)		(Acres	i)	(Acres)
12. Peanuts	0580	0585		0584		0586		0582		0583		
13. Cotton	🗆	0360	0365		0364		0366		0362		0363	
14. All acres in the open from which vegetables, potatoes, and melon were harvested		0474	0479	Tenths	0478	Tenths	0480	Tenths	0476	Tenths	0477	Tenths
a. Sweet corn		0900	0905	Tenths	0904	Tenths	0906	Tenths	0902	Tenths	0903	Tenths
b. Tomatoes in the open	🗆	0910	0915	Tenths	0914	Tenths	0916	Tenths	0912	Tenths	0913	Tenths
c. Lettuce and romaine		0920	0925	Tenths	0924	Tenths	0926	Tenths	0922	Tenths	0923	Tenths
d. Potatoes – Exclude sweet potatoes	🗆	0390	0395	Tenths	0394	Tenths	0396	Tenths	0392	Tenths	0393	Tenths
15. All berries		0590	0595	Tenths	0594	Tenths	0596	Tenths	0592	Tenths	0593	Tenths
All other crops grown in the open and not listed		1120	1125	•	1124	•	1126	·	1122	•	1123	•
Specify: 1119												
17. Land in bearing and non-bearing fruit orchards, citrus or other grow vineyards, and nut trees	· —	0410	0415	Tenths	0414	Tenths	0416	Tenths	0412	Tenths	0413	Tenths
18. Nursery and other horticultural cr grown in the open (Note: Nursery, greenhouse, and other horticultural c grown under protection will be reporte a later section.)	rops ed in	1110	1115	Tenths	1114	Tenths	1116	Tenths	1112	Tenths	1113	Tenths
19. Irrigated pastureland, all types	🗆	0430	0435		0434		0436		0432		0433	
20. All other irrigated land types such failed cropland, idle land, and lan summer fallow	id in	1148	1149		1150		1151		1152		1153	

On-farm water source includes recycled water and reclaimed water from on-farm livestock operations.
 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.

C				М	4	•
D	E(21	IU	N	ш	4

IRRIGATION FOR NURSERY AND OTHER HORTICULTURAL CROPS GROWN IN THE OPEN

1.		ere any irrigated nursery, floriculture, sod, propagative materials open (including natural shade) on this operation in 2023?	, Chris	stmas tr	ees, or oth	er ho	rticultural crops g	rown in
	0751	Yes – Continue 3 No – Go to Section 13						
					A	cres ir	n the Open	
					Total Acres		Irrigated Acre	es
			None			Tenths		Tenths
2.		port total acres and irrigated acres for nursery and other rticultural crops grown in the open (including natural shade)		0737			0738	
3.		r nursery and other horticultural crops in the open, enter the total eration in 2023.	al acre	s and ir	rrigated acı	es by	/ crop category o	n this
		RSERY AND OTHER HORTICULTURAL CROPS THE OPEN	None		Total Acres	Tenths	Irrigated Acre	es Tenths
	a.	Floriculture and bedding crops		0739	I		0740	
		Bedding/garden plants - annuals, herbaceous perennials, vegetable plants; cut flowers and cut florist greens; indoor foliage plants; potted flowering plants; hanging baskets.						
	b.	Nursery crops		0741			0742	
		Nursery stock - ornamentals, shrubs, flowering trees, evergreens, live Christmas trees, fruit and nut trees and plants, vines, palms, ornamental grasses, bareroot herbaceous perennials; aquatic plants						
				0743			0744	
	C.	Sod						
	d.	Propagative materials		0745			0746	
		Bulbs, corms, rhizomes, tubers, cuttings, seedlings, liners, plugs, flower seeds, tobacco plants	. 🗆					
	e.	Christmas trees and short rotation woody crops		0747			0748	
	f.	Other horticultural crops – Specify: 1010		0749			0750	
	••				i			!

SECTION 12 CONTINUED -

4. For nursery and other horticultural crops in the open, report area irrigated in 2023 by method used. If more than one method was used on the same area, report for all methods that apply. Report the quantity of water and the unit measure for each irrigation method used on this operation for the entire year. If the total quantity of water (column 2) is unknown, then use column 3 to report the quantity of water used instead.

			1	2					3	
				a.	b.		a.		b.	C.
			Total Acres Irrigated or Watered	Quantity of Water Applied in 2023	Enter Code for Unit of Measure 1 = Acre-Feet 2 = Gallons	OR	Average Flow Rate		Number of Hours per Week Used in 2023	Number of Weeks Used in 2023
					3 = Inches/Acre		(Gallons per Minute)	r		
IRF	RIGATION METHODS	None	Tenths				Ten	ths		
a.	Hand watered		0796	0797	0798	OR	0799		0800	0801
b.	Gravity irrigation		0802	0803	0804	OR	0805		0806	0807
C.	Sprinkler		0808	0809	0810	OR	0811		0812	0813
d.	Drip, trickle, or low-flow micro irrigation		0814	0815	0816	OR	0817		0818	0819
e.	Hydroponics		1157	1158	1159	OR	1160		1161	1162

5. For each method used to irrigate nursery and other horticultural crops in the open, report the percentage of water applied by source. If more than one source was used, report all that apply. For example, if the only source for hand watered crops was ground water, then report 100 percent in column 1, row a. If this operation used gravity irrigation and half of the water came from ground water and half came from on-farm surface water, then report 50 percent in column 1, row b and 50 percent in column 2, row b.

		Water Source									
	1 Ground Water from Wells	2 On-Farm Surface Water	3 Off-Farm Water (All Suppliers)	Total							
IRRIGATION METHODS	(Percent)	(Percent)	(Percent)								
a. Hand watered	0832	0833	0834	100%							
b. Gravity irrigation	0835	0836	0837	100%							
c. Sprinkler	0838	0839	0840	100%							
d. Drip, trickle, or low-flow micro irrigation	0841	0842	0843	100%							
e. Hydroponics	<mark>1163</mark>	1164	1165	100%							

For each irrigation method used, columns 1 + 2 + 3 must equal 100 percent.

SECTION 13						
SECTION 13	(Q)	-	-	IA	NI	42
	r-1	-	-	IU	N.	1.3

1.	Were any irrigated nursery or greenhouse crops, floriculture, mushrooms, vegetable seeds, propagative materials, or other horticultural crops grown under protection on this operation in 2023? Include crops grown under glass, rigid plastic, plastic film, shade cloth, fiberglass, "tunnel" protection, and hoop houses. Exclude crops temporarily covered for early germination, frost protection, etc. Report crops grown under natural shade in Section 12.									
	0627	1 Yes – Continue	3							
					Square Fee	t Under Protection				
				None	Total Area	Irrigated Area				
2.		port total area and irrigated area ป other horticultural crops grown เ			0628	0629				
3.	For nursery or greenhouse crops, floriculture, mushrooms, vegetable seeds, propagative materials, or other horticultural crops grown under protection, enter the total area and irrigated area by horticultural crop category on this operation in 2023.									
		RSERY, GREENHOUSE, AND O OPS UNDER PROTECTION	OTHER HORTICULTURAL	None	Total Area (Square Feet)	Irrigated Area (Square Feet)				
	a.	Floriculture and bedding crops			0630	0631				
		Bedding/garden plants - annuals, herbac plants; cut flowers and cut florist greens flowering plants; hanging baskets	indoor foliage plants; potted							
	b.	Nursery crops			0632	0633				
		Nursery stock - ornamentals, shrubs, flo Christmas trees, fruit and nut trees and grasses, bareroot herbaceous perennial	plants, vines, palms, ornamental							
	C.	Propagative materials			0636	0637				
		Bulbs, corms, rhizomes, tubers, cuttings seeds, tobacco plants, vegetable seeds, fields.	vegetable transplants to farm							
	d.	Food crops grown under protect	ion		0638	0639				
		Tomatoes, other vegetables and fresh c	ut herbs, fruits and berries							
	e.	Mushrooms			0640	0641				
		Other Leaffeeltens Leaves 2	ee . 1011		0642	0643				
	f.	Other horticultural crops – Spec	ту: '''	_ ⊔						

SECTION 13 CONTINUED -

4. For nursery, greenhouse, and other horticultural crops under protection, report area irrigated in 2023 by method used. If more than one method was used on the same area, report for all methods that apply. Report the quantity of water and the unit measure for each irrigation method used on this operation for the entire year. If the total quantity of water (column 2) is unknown, then use column 3 to report the quantity of water used instead.

			· · · · · · · · · · · · · · · · · · ·				1			
			1		2					
			Total Area Irrigated or Watered		a. Quantity of Water Applied in 2023	b. Enter Code for Unit of Measure 1 = Acre-Feet 2 = Gallons 3 = Gallons/Sq Ft. 4 = Inches/Sq Ft.	OR	a. Average Flow Rate (Gallons per Minute)	b. Number of Hours per Week Used in 2023	c. Number of Weeks Used in 2023
IRE	RIGATION METHODS	None	(Square Feet)					Tenths		
a.	Hand watered		0701		0702	0703	OR	0704	0705	0706
b.	Gravity irrigation		0707		0708	0709	OR	0710	0711	0712
C.	Sprinkler		0713		0714	0715	OR	0716	0717	0718
d.	Drip, trickle, or low-flow micro irrigation		0719		0720	0721	OR	0722	0723	0724
e.	Hydroponics		1166		1167	1168	OR	1169	1170	1171

5. For each method used to irrigate nursery, greenhouse, or other horticultural crops under protection, report the percentage of water by source applied. If more than one source was used, report all that apply. For example, if the only source for hand watered crops was ground water, then report 100 percent in column 1, row a. If this operation used gravity irrigation and half of the water came from ground water and half came from on-farm surface water, then report 50 percent in column 1, row b and 50 percent in column 2, row b.

		Water Sour	се	
	1	2	3	
	Ground Water from Wells	On-Farm Surface Water	Off-Farm Water (All Suppliers)	Total
IRRIGATION METHODS	(Percent)	(Percent)	(Percent)	
a. Hand watered	0646	0647	0648	100%
b. Gravity irrigation	0649	0650	0651	100%
c. Sprinkler	0652	0653	0654	100%
d. Drip, trickle, or low-flow micro irrigation	0655	0656	0657	100%
e. Hydroponics	1172	1173	1174	100%

For each irrigation method used, columns 1 + 2 + 3 must equal 100 percent.

SECTION 14 **IRRIGATION AND WATER MANAGEMENT PRACTICES**

1.	How did you decide when to irrigate in 2023? Mark (X) all that apply –
	1020 ☐ Condition of crop (observation or experience)
	1021 Feel of the soil
	1022 ☐ Use of soil moisture-sensing devices (moisture blocks, tensiometers, capacitance, other electronic sensors)
	1023 ☐ Use of plant moisture-sensing devices such as pressure (chamber) bombs or infrared (IR) thermometer
	1024 ☐ Use of irrigation scheduling service, including commercial and government
	1025 Reports on daily crop-water evapo-transpiration (ET) use (Internet, newspapers, radio, TV, fax, or email)
	1026 ☐ When water was delivered or available by irrigation water supplier (no choice by water user)
	1027 Personal calendar schedule
	1028 ☐ Computer simulation models (not from a commercial service)
	¹⁰²⁹ ☐ When neighbors began to irrigate
2.	Did you have to discontinue irrigation during 2023 long enough to affect crop yields?
	⁰⁶⁶⁹ ₁ ☐ Yes – Continue 3 ☐ No – Go to item 3
	None Number of Acres
	a. On how many acres did you discontinue irrigation long enough to affect crop yields for any reason during 2023?
	b. What were the reasons for discontinuing irrigation? Mark (X) all that apply –
	¹⁰³⁰ Shortage of surface water (water from reservoirs, lakes, streams, water supply organizations, etc.)
	¹⁰³¹ Shortage of ground water (lowering water level of wells or depletion of ground water)
	¹⁰³² Irrigation equipment failure
	¹⁰³³ Energy price increases or energy shortage
	¹⁰³⁴ ☐ Water salinity too high
	¹⁰³⁵ Loss of water rights not due to voluntary transfers
	¹⁰³⁶ ☐ Cost of purchased water
	1037 Other – Specify: 1038
3.	used for irrigation? Mark (X) all that apply –
	 1040 ☐ Extension agents or university specialists 1041 ☐ Private irrigation specialists or crop consultants hired by owner or operator 1042 ☐ Irrigation equipment dealers 1043 ☐ Local irrigation district employees or others hired by the water supplier
	Government specialists from the Natural Resources Conservation Service, local conservation district, Bureau of Reclamation, or other Federal or state agencies Media reports or information in the press
	Neighboring farmers 1046 Neighboring farmers Neighboring farmers 1047 Electronic information services (Internet, DTN, Internet links to private or public data sources, etc.) 1048 None
4.	Did this operation participate in on-farm groundwater recharge by applying excess water to irrigated fields or other recharge sites such as basins, ditches, and ponds?
	1154 1 Yes 3 No

SECTION 14 CONTINUED -

5.	 Did any of the following prevent you from implementing improvements that would have reduced energy and conserved water in your irrigation system during the past five years? Mark (X) all that apply – 								
	1070 ☐ Investigating improvements is not a priority at this time								
	1071 Risk of reduced yield or poorer quality crop from not meeting water needs								
	1072 Physical field or crop conditions limit system improvements								
	1073 ☐ Improvements will reduce costs, but not enough to recover implementation costs								
	1074 ☐ Cannot finance improvements								
	1075 Landlord(s) will not share cost of improvements								
	□ Uncertainty about future availability of water								
	1077 Will not be farming this operation long enough to justify new improvements								
	1078 Improvements will increase management time or cost								
	<u> </u>								
6.	Has this operation made irrigation and/or drainage improvements above regular maintenance	e in the past five years?							
0.	10209 $_1$ Yes – Continue 3 No – Go to Section 15	e in the past live years:							
	3 No - Go to Section 15								
_									
7.		rovements?							
	⁰²¹¹ ₁ Yes – Continue 3 No – Go to Section 15								
	From which of the following sources did you receive technical or financial assistance for the Mark (X) all that apply –	hese improvements?							
	SOURCE OF ASSISTANCE Technical Assistance								
	(i) USDA programs for water conservation and environmental improvements (CTA, EQIP, RCPP, AMA, WMB, CIG, etc.)	0216							
	(ii) Other USDA programs for stewardship (such as CSP) or easements (ACEP/WRP, CRP (including CREP), etc.)	0218							
	(iii) Non-USDA Federal programs from agencies such as the Bureau of	0235							
	Reclamation and EPA								
	0236	0237							
	(iv) State programs, local water management, or water supply districts								
	0238	0239							
	(v) Private businesses such as equipment dealers, bankers, and lenders								
SE	ECTION 15 LABOR USED FOR IRRIGATION								
UL	EADOR GOED FOR INCIDATION								
	Total Hours of Paid	Average Hourly Wage							
1.	- None Irrigation Labor Per Yea								
1.	irrigation work on this operation in 2023 and the average 0732	0733							
	hourly wage. (Exclude contract labor.)	\$							
		Total Expense for							
	Non	•							
	_	0788							
2.	Report contract irrigation labor expenses on this operation in 2023	.00							

SECTION 16 NO IRRIGATED LAND OR LAND WITH UNUSED IRRIGATION SYSTEMS

1.	Complete this section if you did not irrigate any land or if you had acres with access to irrigation systems or equipment that did not receive any irrigation in 2023. If you did irrigate all of your equipped land in 2023, skip to Section 17.							
2.	and availability? Include all land that was irrigated and all land that could have been irrigated during 2022.							
	1155 ₁ Yes – Continue ₃ No – Go to Section 17							
3.	Was any of the land with access to irrigation systems in the previous question irrigated in 2022?							
	1156 1 Yes 3 No							
4.	What were the reasons for not irrigating in 2023? Mark (X) all that apply. 1050							
	Has this operation ceased irrigation permanently?							
SE	CTION 17 VALUE OF SALES IN 2023							
1.	Which range includes the gross value of all agricultural products sold from this operation in 2023 including landlord's share? Mark (X) only one –							
	⁰⁹⁸⁰ ₁ ☐ \$ 0 - \$9,999							
	$_{5}$ \square \$100,000 - \$249,999 $_{6}$ \square \$250,000 - \$499,999 $_{7}$ \square \$500,000 - \$999,999 $_{8}$ \square \$1,000,000 and over							
	Percent							
2.	What percent of total sales were from irrigated crop sales, including irrigated nursery or greenhouse crops, floriculture, sod, mushrooms, vegetable seeds, and propagative materials?							
	0982							
3.	What percent of total sales were from non-irrigated crop sales and livestock sales?							
	100%							
SE	CTION 18 PERSON COMPLETING THIS FORM – Please Print							
109								
Nar	ne: Phone: <u>()</u> Date: Date:							
109	5							
	nail:							
	Thank you for your cooperation.							
	The complete report will be available on the Internet at http://www.nass.usda.gov in fall of 2024.							

OFFICE USE													
Response		Respondent		Mode		Enum.	Eval.	R. Unit	Change	Optional Use			
1-Comp 2-R 3-Inac	9901	1-Op/Mgr 2-Sp 3-Acct/Bkpr 4-Partner 9-Oth	9902	1-PASI (Mail) 2-PATI (Tel) 3-PAPI (Face-to- Face)	9903	9998	9900	9921	9985	9907	9908	9906	9916
S/E Name													