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2023 IRRIGATION AND WATER MANAGEMENT SURVEY

	LUZU IIX	RIGATION AND WATER MANAGEMENT GORVET
Form Number: (07/06/2		
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National Agr Statistics S		
Return y completed re		
Census of Agriculture 1201 East 10 th Street Jeffersonville, IN 47132		
OFFICE USE O	010	Make corrections to name, address, and ZIP Code if necessary.
Your match horticulture To fill ou	andatory reural crop pro ural crop pro ut the paper t	by mail or via the internet at www.agcounts.usda.gov port is due by February 15, 2024 – Everyone, including nursery, greenhouse, and other oducers, must return this form by this date. form, use a black or blue ballpoint pen. s toll-free at 1-888-424-7828. Thank you for your cooperation.
SECTION 4	ACDEAC	PE IN 2022

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.	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.		opland – Exclude cropland used only r 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	e 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	e 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 5. Include pps grow	ınt ∍ ⁄n	None	G	es in the Open Irrigated by Fround Water		Groun Ap _l	ntity of d Water plied		Unit 1 = To 2 = To 3 = In	er Code for of Measure otal Acre-Fee otal Gallons aches/Acre
	and irrigated pasturelan				0444		04	146			0447	
3.	Report the area under protection includes nurs seeds, and propagative shade cloth, fiberglass,	ery, gre materia	enhouse, floric Is grown under	ulture, m glass, r	nushroo igid pla	ms, vegetable stic, plastic filn	n,		None	Protec	ction In	eet Under rigated with Water
										Nu	ımber	of Wells
4.	How many wells on this	operation	on were used f	or irrigat	ion in 2	023?				0460		
	a. Of the (item 4) wells prevention devices (acres and/or square	, how m	any used backt alves) and how	flow many	Non	Number of Wolle		Acres in	n the Op			uare Feet Protection
	irrigated with these											
	b. Of the (item 4) wells or other flow measu	rement o	devices and ho	w many								
	acres and/or square irrigated with these v					0683		0772		06	80	
	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		Horsepower of Engines or Motors, Including Electric
		Well#	(Feet)	(Fe		(Feet)	1	(GPM)		(PSI)		(HP)
_	Donort for the first	1	0461	0463		0462	0464		0676		070	61
5.	Report for the first three primary wells	2	0465	0467		0466	0468		0677		070	63
	pumped in 2023.	3	0469	0471		0470	0472		0678		070	65
			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 at ell Head		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
	ON-I AKIN COKI ACE WATEK

1.	Dic	I this operation irrigate with on-farm surface water, i	ncluding recycled water ar	nd on-farm reclaime	d wa	ater, in 2023?
		e ycled water is reused surface or groundwater that was p d for irrigation).	oreviously used to irrigate a cr	rop (e.g. water from a	tailw	ater reuse pit
	(Fo	farm reclaimed water is on-farm livestock wastewater r the purposes of this irrigation survey, to be considered a aimed water must be applied on the area during the grow	an irrigation application of recl			
	0438	³ ₁ \square Yes – Continue ₃ \square No – Go to Section	on 5			
		exact amounts are not available, provide your best e en is less than one acre, report as one acre in item		er applied. If total a	rea	irrigated in the
2.	on- of \	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
	irriç	gated summer fallow, and irrigated	0449	451	1	0452
 4. 	pro and fibe	port the area under protection irrigated with on-farm tection includes nursery, greenhouse, floriculture, rd propagative materials grown under glass, rigid placerglass, "tunnel" protection, and hoop houses	nushrooms, vegetable see astic, plastic film, shade clo	ods, None Conth, 045	Protection of the Protection o	are Feet Under tion Irrigated with rm Surface Water during 2023?
				Acres in the Open		Square Feet Under Protection
	a.	How many acres in the open and square feet under were irrigated with on-farm recycled water during		0601		36
5.	incl	d this operation use reclaimed water from on-farm ops, grown during 2023? (For the purposes of this irrigation has of reclaimed water must be applied on the area during the grown	n survey, to be considered an irriç rowing season. If this minimum al	gation application of recl	aimed	water, at least 0.5
	0543	³ 1 Yes – Continue $_3$ No – Go to Section	on 5			Square Feet
	a.	How many acres in the open and/or square feet ur were irrigated with one or more applications of rec	laimed water	Acres in the Open 0587	05	Under Protection
		from on-farm livestock facilities during 2023?		<u> </u>		
	b.	How much reclaimed water from on-farm livesto	nck facilities	Acre-Feet	ΛP	Gallons
	D.	was used for irrigation during 2023?		0599	OR	0561

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.	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 the	rough a loc	al district	0664	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 squ were irrigated with one or more applica				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, sp
	 all pumps moving water into tanks or reservoirs on the operation for irrigation in 202

•	all pumps	supplying	irrigation	to or through	any	distribution	system	(e.g.,	gravit	y, sprinkler,	drip)

• a	II pumps movin	g water into ta	nks or reservoirs on	the operation	for irrigation in 2023
-----	----------------	-----------------	----------------------	---------------	------------------------

		ΠГ	
EXC	LU	UE	

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

 any pumps not owned or rented by this operation, such as pumps operated by a water comp 	pany
---	------

0488 ₁ Yes – Continue	₃ No – Go to Section 7
i L i continue	3 110 00 to occitor i

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)
_	\\/all mumana		1135			
a.	Well pumps	Ш				
b.	Tailwater pits (pits that hold water previously used for irrigation)		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.

			Number of Wells and	Cost of Energy Used to Power			ated with ed from Wells	Area Irrigated with Pumped Surface Wate (Both on- and off-farm	
РО	OWER SOURCE		Other Pumps Used (Reported Above)	Pumps (Dollars)		Acres in the Open (Whole Acres)	Square Feet 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 ASSISTANCE 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).

EXPENDITURE 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 group Exclude crops grown under protection props 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

1.	Did this operation use gravity irrigation systems or equipment to irrigate any acres in the operation (Refer to Section 8, item 2.)	n in 202	23?
	1137 ₁ Yes – Continue ₃ No – Go to Section 10		
2.	On how many acres in the open did you use the following practices?	None	Number of Acres
	a. Capture irrigation runoff in tailwater pits, restrict runoff by diking end of the field, limit irrigation set times or number of irrigations, or irrigate only alternative rows		0404
	b. Use any precision-leveling		0406
	i. How many acres of precision-leveling were considered zero grade (fields with a zero percent/degree decline)?		1138
	c. Shorten the furrow length; use water-soluble polyacrylamide (PAM); or use special furrowing practices such as wide-spaced bed furrowing, compacted furrows, or furrow diking		0409
	d. Use surge flow or a surge irrigation system (intermittent application of water to a furrow).		1139
	e. Use a cablegation system (constant slow flow application to a furrow)		1140
	f. Apply mulch or other types of row covers		1141
3.	Did this operation use any computer software for the measuring or planning of their gravity in tubes in any way? Software features include determining the location for the pipes or tubes, holes into the pipes or tubes, the diameter of the holes, and the distance between holes for or	the 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	per	age Yield 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

			Irrigated Land Include preplant and supplemental or semi-irrigation							
	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>						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	₁ Yes – Continue	₃ No – Go to Section 13
,	11 I res – 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 totals may exceed reported in Sectione water source	on 10 when	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 [one 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	
0.	- Coybeans for beans.	0310	0315	0314	0316	0312	0313	
7.	Beans, dry edible							
8.	Rice [0320	0325	0324	0326	0322	0323	
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	
	All other hay including small grain, other tame, and wild hay (dry hay, greenchop, and silage) [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.

SECTION 11 CONTINUED -

	Irrigated Crops, Pastureland,		Enter Code from Previous Page for Primary	crop a	Water So otals may e reported in one water s	Acres on which chemigation was applied through the irrigation system							
	and Other Land		Method of Field Water Distribution	Ground Water from Wells		On-Far Surface W		Off-Farm W (All Supplie		Commerc Fertilize		Pesticide Application	
			Distribution	(Acres)		(Acres)	(Acres)		(Acres))	(Acres)	
12. F	Peanuts	None	0580	0585		0584		0586		0582		0583	
13. (Cotton		0360	0365		0364		0366		0362		0363	
١	All acres in the open from which vegetables, potatoes, and melons		0474	0479	Tenths	0478	Tenths	0480	Tenths	0476	Tenths	0477	Tenths
	were harvested		0900	0905	Tenths	0904	Tenths	0906	Tenths	0902	Tenths	0903	Tenths
b	o. Tomatoes in the open		0910	0915	Tenths	0914	Tenths	0916	Tenths	0912	Tenths	0913	Tenths
c	c. Lettuce and romaine		0920	0925	Tenths	0924	Tenths	0926	Tenths	0922	Tenths	0923	Tenths
C	d. Potatoes – Exclude sweet potatoes		0390	0395	Tenths	0394	Tenths	0396	Tenths	0392	Tenths	0393	Tenths
15. <i>A</i>	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	
5	Specify: 1119												
f	and in bearing and non-bearing ruit orchards, citrus or other groves, vineyards, and nut trees		0410	0415	Tenths	0414	Tenths	0416	Tenths	0412	Tenths	0413	Tenths
<u>g</u> <u>g</u>	Nursery and other horticultural crops grown in the open (Note: Nursery, greenhouse, and other horticultural crops grown under protection will be reported in a later section.)		1110	1115	Tenths	1114	Tenths	1116	Tenths	1112	Tenths	1113	Tenths
19. l	rrigated pastureland, all types		0430	0435	•	0434	•	0436	•	0432	•	0433	•
f	All other irrigated land types such as failed cropland, idle land, and land in summer fallow		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.	oth pla	ere any irrigated nursery or greenhouse crops, floriculture, muser horticultural crops grown under protection on this operationstic, plastic film, shade cloth, fiberglass, "tunnel" protection, a rly germination, frost protection, etc. Report crops grown under	n in 202 and hoop	 Include crops gro houses. Exclude cro 	wn under glass, rigid ops temporarily covered for
	0627	7 ₁ Yes – Continue ₃ No – Go to Section 14	ļ		
				Square Fe	et Under Protection
			None	Total Area	Irrigated Area
2.		port total area and irrigated area for nursery, greenhouse, d other horticultural crops grown under protection	. 🗆	0628	0629
3.	ho	r nursery or greenhouse crops, floriculture, mushrooms, vege rticultural crops grown under protection, enter the total area a eration in 2023.			
		IRSERY, GREENHOUSE, AND OTHER HORTICULTURAL COPS UNDER PROTECTION	None	Total Area (Square Feet)	Irrigated Area (Square Feet)
	a.	Floriculture and bedding crops		0630	0631
		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		0632	0633
		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	. 🔲		
	C.	Propagative materials		0636	0637
		Bulbs, corms, rhizomes, tubers, cuttings, seedlings, liners, plugs, flower seeds, tobacco plants, vegetable seeds, vegetable transplants to farm fields.			
	d.	Food crops grown under protection		0638	0639
		Tomatoes, other vegetables and fresh cut herbs, fruits and berries			
	e.	Mushrooms	. 🔲	0640	0641
			_	0642	0643
	f.	Other horticultural crops – Specify: 1011	_		

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.

			· · · · · · · · · · · · · · · · · · ·	í	ł			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 Source									
	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.	olid any of the following prevent you from implementing improvements that would have reduced energy and/or onserved 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	in the nast five years?									
Ο.	0209 1 \square Yes – Continue 3 \square No – Go to Section 15	in the past live years:									
	3 No - Go to Section 15										
_											
7.		ovements?									
	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 –	nese 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										
	(x) Drivete hypiracese evel as a guipment declare hankers and landers	0239									
	(v) Private businesses such as equipment dealers, bankers, and lenders										
SE	ECTION 15 LABOR USED FOR IRRIGATION										
	EABOR GOLD I OK MANOATION										
	Total Hours of Paid	Average Hourly Wage									
1.	– None Irrigation Labor Per Yea	ar Cents									
•	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
GEG HON 10	NO INTROCED EXTEND ON EXTEND THE OTHER PROPERTY.

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.	Was there any land on this operation with access to irrigation systems or equipment in 2022, regardless of water rights 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							
5.	Has this operation ceased irrigation permanently?							
SE	CCTION 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 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							
	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?								
3.	. What percent of total sales were from non-irrigated crop sales and livestock sales?							
	100%							
SE	PERSON COMPLETING THIS FORM – Please Print							
1092								
Nar	me: Phone: (Date:							
109	5							
E-m	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													