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Form **990**

Department of the Treasury
Internal Revenue Service

Return of Organization Exempt From Income Tax

Under section 501(c), 527, or 4947(a)(1) of the Internal Revenue Code (except private foundations)

▶ Do not enter social security numbers on this form as it may be made public
▶ Information about Form 990 and its instructions is at www IRS gov/form990

OMB No 1545-0047

2015

Open to Public Inspection

A For the 2015 calendar year, or tax year beginning 10-01-2015 , and ending 09-30-2016

B Check if applicable
- Address change
- Name change
- Initial return
- Final return/terminated
- Amended return
- Application pending

C Name of organization
NORTH CENTRAL SOYBEAN RESEARCH PROGRAM

Doing business as

Number and street (or P O box if mail is not delivered to street address) | Room/suite
1255 Prairie Trail Parkway

City or town, state or province, country, and ZIP or foreign postal code
Ankeny, IA 50023

D Employer identification number
42-1394799

E Telephone number
(515) 251-8640

G Gross receipts $ 3,634,684

F Name and address of principal officer

H(a) Is this a group return for subordinates? ☐ Yes ☑ No

H(b) Are all subordinates included? ☐ Yes ☑ No
If "No," attach a list (see instructions)

H(c) Group exemption number ▶

I Tax-exempt status ☑ 501(c)(3) ☐ 501(c) ( ) ◀ (insert no) ☐ 4947(a)(1) or ☐ 527

J Website: ▶ N/A

K Form of organization ☑ Corporation ☐ Trust ☐ Association ☐ Other ▶

L Year of formation 1992 **M** State of legal domicile IA

Part I Summary

Activities & Governance

1 Briefly describe the organization's mission or most significant activities
COORDINATE SOYBEAN RESEARCH

2 Check this box ▶ ☐ if the organization discontinued its operations or disposed of more than 25% of its net assets

3	Number of voting members of the governing body (Part VI, line 1a)	3	12
4	Number of independent voting members of the governing body (Part VI, line 1b)	4	12
5	Total number of individuals employed in calendar year 2015 (Part V, line 2a)	5	0
6	Total number of volunteers (estimate if necessary)	6	12
7a	Total unrelated business revenue from Part VIII, column (C), line 12	7a	0
b	Net unrelated business taxable income from Form 990-T, line 34	7b	

			Prior Year	Current Year
Revenue	8	Contributions and grants (Part VIII, line 1h)	3,172,734	3,622,308
	9	Program service revenue (Part VIII, line 2g)		0
	10	Investment income (Part VIII, column (A), lines 3, 4, and 7d)	6,812	12,376
	11	Other revenue (Part VIII, column (A), lines 5, 6d, 8c, 9c, 10c, and 11e)		0
	12	Total revenue—add lines 8 through 11 (must equal Part VIII, column (A), line 12)	3,179,546	3,634,684
Expenses	13	Grants and similar amounts paid (Part IX, column (A), lines 1–3)		0
	14	Benefits paid to or for members (Part IX, column (A), line 4)		0
	15	Salaries, other compensation, employee benefits (Part IX, column (A), lines 5–10)		0
	16a	Professional fundraising fees (Part IX, column (A), line 11e)		0
	b	Total fundraising expenses (Part IX, column (D), line 25) ▶0		
	17	Other expenses (Part IX, column (A), lines 11a–11d, 11f–24e)	208,208	4,798,710
	18	Total expenses Add lines 13–17 (must equal Part IX, column (A), line 25)	208,208	4,798,710
	19	Revenue less expenses Subtract line 18 from line 12	2,971,338	-1,164,026

			Beginning of Current Year	End of Year
Net Assets or Fund Balances	20	Total assets (Part X, line 16)	4,605,452	4,021,013
	21	Total liabilities (Part X, line 26)	1,149,884	1,729,471
	22	Net assets or fund balances Subtract line 21 from line 20	3,455,568	2,291,542

Part II Signature Block

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, and complete Declaration of preparer (other than officer) is based on all information of which preparer has any knowledge

Sign Here

****** 2016-12-15
Signature of officer Date

Kirk Leeds Executive Director
Type or print name and title

Paid Preparer Use Only

Print/Type preparer's name	Preparer's signature	Date	Check ☐ if self-employed	PTIN
Michael F Schnoes	Michael F Schnoes			P00324972

Firm's name ▶ SCHNOES & COMPANY | Firm's EIN ▶

Firm's address ▶ 520 Walnut Street
WAUKEE, IA 502639518 | Phone no (515) 987-9598

May the IRS discuss this return with the preparer shown above? (see instructions) ☑ Yes ☐ No

Part III Statement of Program Service Accomplishments

Check if Schedule O contains a response or note to any line in this Part III . . . . ☐

1 Briefly describe the organization's mission

COORDINATE SOYBEAN RESEARCH

2 Did the organization undertake any significant program services during the year which were not listed on the prior Form 990 or 990-EZ? . . . . ☐ **Yes** ☑ **No**

If "Yes," describe these new services on Schedule O

3 Did the organization cease conducting, or make significant changes in how it conducts, any program services? . . . . ☐ **Yes** ☑ **No**

If "Yes," describe these changes on Schedule O

4 Describe the organization's program service accomplishments for each of its three largest program services, as measured by expenses Section 501(c)(3) and 501(c)(4) organizations are required to report the amount of grants and allocations to others, the total expenses, and revenue, if any, for each program service reported

4a (Code) (Expenses $ 4,655,256 including grants of $) (Revenue $)

SEE ATTACHED STATEMENT OF PROGRAM SERVICES

4b (Code) (Expenses $ including grants of $) (Revenue $)

4c (Code) (Expenses $ including grants of $) (Revenue $)

4d Other program services (Describe in Schedule O)

(Expenses $ including grants of $) (Revenue $)

4e **Total program service expenses** ▶ 4,655,256

Part IV Checklist of Required Schedules

#	Question	Line	Yes	No
1	Is the organization described in section 501(c)(3) or 4947(a)(1) (other than a private foundation)? *If "Yes," complete Schedule A*	1	Yes	
2	Is the organization required to complete *Schedule B, Schedule of Contributors* (see instructions)?	2		No
3	Did the organization engage in direct or indirect political campaign activities on behalf of or in opposition to candidates for public office? *If "Yes," complete Schedule C, Part I*	3		No
4	**Section 501(c)(3) organizations.** Did the organization engage in lobbying activities, or have a section 501(h) election in effect during the tax year? *If "Yes," complete Schedule C, Part II*	4		No
5	Is the organization a section 501(c)(4), 501(c)(5), or 501(c)(6) organization that receives membership dues, assessments, or similar amounts as defined in Revenue Procedure 98-19? *If "Yes," complete Schedule C, Part III*	5		No
6	Did the organization maintain any donor advised funds or any similar funds or accounts for which donors have the right to provide advice on the distribution or investment of amounts in such funds or accounts? *If "Yes," complete Schedule D, Part I*	6		No
7	Did the organization receive or hold a conservation easement, including easements to preserve open space, the environment, historic land areas, or historic structures? *If "Yes," complete Schedule D, Part II*	7		No
8	Did the organization maintain collections of works of art, historical treasures, or other similar assets? *If "Yes," complete Schedule D, Part III*	8		No
9	Did the organization report an amount in Part X, line 21 for escrow or custodial account liability, serve as a custodian for amounts not listed in Part X, or provide credit counseling, debt management, credit repair, or debt negotiation services? *If "Yes," complete Schedule D, Part IV*	9		No
10	Did the organization, directly or through a related organization, hold assets in temporarily restricted endowments, permanent endowments, or quasi-endowments? *If "Yes," complete Schedule D, Part V*	10		No
11	If the organization's answer to any of the following questions is "Yes," then complete Schedule D, Parts VI, VII, VIII, IX, or X as applicable			
a	Did the organization report an amount for land, buildings, and equipment in Part X, line 10? *If "Yes," complete Schedule D, Part VI*	11a		No
b	Did the organization report an amount for investments—other securities in Part X, line 12 that is 5% or more of its total assets reported in Part X, line 16? *If "Yes," complete Schedule D, Part VII*	11b		No
c	Did the organization report an amount for investments—program related in Part X, line 13 that is 5% or more of its total assets reported in Part X, line 16? *If "Yes," complete Schedule D, Part VIII*	11c		No
d	Did the organization report an amount for other assets in Part X, line 15 that is 5% or more of its total assets reported in Part X, line 16? *If "Yes," complete Schedule D, Part IX*	11d		No
e	Did the organization report an amount for other liabilities in Part X, line 25? *If "Yes," complete Schedule D, Part X*	11e		No
f	Did the organization's separate or consolidated financial statements for the tax year include a footnote that addresses the organization's liability for uncertain tax positions under FIN 48 (ASC 740)? *If "Yes," complete Schedule D, Part X*	11f		No
12a	Did the organization obtain separate, independent audited financial statements for the tax year? *If "Yes," complete Schedule D, Parts XI and XII*	12a		No
b	Was the organization included in consolidated, independent audited financial statements for the tax year? *If "Yes," and if the organization answered "No" to line 12a, then completing Schedule D, Parts XI and XII is optional*	12b		No
13	Is the organization a school described in section 170(b)(1)(A)(ii)? *If "Yes," complete Schedule E*	13		No
14a	Did the organization maintain an office, employees, or agents outside of the United States?	14a		No
b	Did the organization have aggregate revenues or expenses of more than $10,000 from grantmaking, fundraising, business, investment, and program service activities outside the United States, or aggregate foreign investments valued at $100,000 or more? *If "Yes," complete Schedule F, Parts I and IV*	14b		No
15	Did the organization report on Part IX, column (A), line 3, more than $5,000 of grants or other assistance to or for any foreign organization? *If "Yes," complete Schedule F, Parts II and IV*	15		No
16	Did the organization report on Part IX, column (A), line 3, more than $5,000 of aggregate grants or other assistance to or for foreign individuals? *If "Yes," complete Schedule F, Parts III and IV*	16		No
17	Did the organization report a total of more than $15,000 of expenses for professional fundraising services on Part IX, column (A), lines 6 and 11e? *If "Yes," complete Schedule G, Part I* (see instructions)	17		No
18	Did the organization report more than $15,000 total of fundraising event gross income and contributions on Part VIII, lines 1c and 8a? *If "Yes," complete Schedule G, Part II*	18		No
19	Did the organization report more than $15,000 of gross income from gaming activities on Part VIII, line 9a? *If "Yes," complete Schedule G, Part III*	19		No
20a	Did the organization operate one or more hospital facilities? *If "Yes," complete Schedule H*	20a		No
b	If "Yes" to line 20a, did the organization attach a copy of its audited financial statements to this return?	20b		

Part IV **Checklist of Required Schedules** *(continued)*

21	Did the organization report more than $5,000 of grants or other assistance to any domestic organization or domestic government on Part IX, column (A), line 1? *If "Yes," complete Schedule I, Parts I and II*	21		No
22	Did the organization report more than $5,000 of grants or other assistance to or for domestic individuals on Part IX, column (A), line 2? *If "Yes," complete Schedule I, Parts I and III*	22		No
23	Did the organization answer "Yes" to Part VII, Section A, line 3, 4, or 5 about compensation of the organization's current and former officers, directors, trustees, key employees, and highest compensated employees? *If "Yes," complete Schedule J*	23		No
24a	Did the organization have a tax-exempt bond issue with an outstanding principal amount of more than $100,000 as of the last day of the year, that was issued after December 31, 2002? *If "Yes," answer lines 24b through 24d and complete Schedule K If "No," go to line 25a*	24a		No
b	Did the organization invest any proceeds of tax-exempt bonds beyond a temporary period exception?	24b		No
c	Did the organization maintain an escrow account other than a refunding escrow at any time during the year to defease any tax-exempt bonds?	24c		No
d	Did the organization act as an "on behalf of" issuer for bonds outstanding at any time during the year?	24d		No
25a	**Section 501(c)(3), 501(c)(4), and 501(c)(29) organizations.** Did the organization engage in an excess benefit transaction with a disqualified person during the year? *If "Yes," complete Schedule L, Part I*	25a		No
b	Is the organization aware that it engaged in an excess benefit transaction with a disqualified person in a prior year, and that the transaction has not been reported on any of the organization's prior Forms 990 or 990-EZ? *If "Yes," complete Schedule L, Part I*	25b		No
26	Did the organization report any amount on Part X, line 5, 6, or 22 for receivables from or payables to any current or former officers, directors, trustees, key employees, highest compensated employees, or disqualified persons? *If "Yes," complete Schedule L, Part II*	26		No
27	Did the organization provide a grant or other assistance to an officer, director, trustee, key employee, substantial contributor or employee thereof, a grant selection committee member, or to a 35% controlled entity or family member of any of these persons? *If "Yes," complete Schedule L, Part III*	27		No
28	Was the organization a party to a business transaction with one of the following parties (see Schedule L, Part IV instructions for applicable filing thresholds, conditions, and exceptions)			
a	A current or former officer, director, trustee, or key employee? *If "Yes," complete Schedule L, Part IV*	28a		No
b	A family member of a current or former officer, director, trustee, or key employee? *If "Yes," complete Schedule L, Part IV*	28b		No
c	An entity of which a current or former officer, director, trustee, or key employee (or a family member thereof) was an officer, director, trustee, or direct or indirect owner? *If "Yes," complete Schedule L, Part IV*	28c		No
29	Did the organization receive more than $25,000 in non-cash contributions? *If "Yes," complete Schedule M*	29		No
30	Did the organization receive contributions of art, historical treasures, or other similar assets, or qualified conservation contributions? *If "Yes," complete Schedule M*	30		No
31	Did the organization liquidate, terminate, or dissolve and cease operations? *If "Yes," complete Schedule N, Part I*	31		No
32	Did the organization sell, exchange, dispose of, or transfer more than 25% of its net assets? *If "Yes," complete Schedule N, Part II*	32		No
33	Did the organization own 100% of an entity disregarded as separate from the organization under Regulations sections 301 7701-2 and 301 7701-3? *If "Yes," complete Schedule R, Part I*	33		No
34	Was the organization related to any tax-exempt or taxable entity? *If "Yes," complete Schedule R, Part II, III, or IV, and Part V, line 1*	34		No
35a	Did the organization have a controlled entity within the meaning of section 512(b)(13)?	35a		No
b	If 'Yes' to line 35a, did the organization receive any payment from or engage in any transaction with a controlled entity within the meaning of section 512(b)(13)? *If "Yes," complete Schedule R, Part V, line 2*	35b		No
36	**Section 501(c)(3) organizations.** Did the organization make any transfers to an exempt non-charitable related organization? *If "Yes," complete Schedule R, Part V, line 2*	36		No
37	Did the organization conduct more than 5% of its activities through an entity that is not a related organization and that is treated as a partnership for federal income tax purposes? *If "Yes," complete Schedule R, Part VI*	37		No
38	Did the organization complete Schedule O and provide explanations in Schedule O for Part VI, lines 11b and 19? **Note.** All Form 990 filers are required to complete Schedule O	38	Yes	

Part V Statements Regarding Other IRS Filings and Tax Compliance

Check if Schedule O contains a response or note to any line in this Part V . . . . ☐

					Yes	No
1a	Enter the number reported in Box 3 of Form 1096 Enter -0- if not applicable . .	1a	0			
b	Enter the number of Forms W-2G included in line 1a Enter -0- if not applicable	1b	0			
c	Did the organization comply with backup withholding rules for reportable payments to vendors and reportable gaming (gambling) winnings to prize winners?			1c		No
2a	Enter the number of employees reported on Form W-3, Transmittal of Wage and Tax Statements, filed for the calendar year ending with or within the year covered by this return	2a	0			
b	If at least one is reported on line 2a, did the organization file all required federal employment tax returns? **Note.** If the sum of lines 1a and 2a is greater than 250, you may be required to e-file (see instructions)			2b		No
3a	Did the organization have unrelated business gross income of $1,000 or more during the year? . . .			3a		No
b	If "Yes," has it filed a Form 990-T for this year? *If "No" to line 3b, provide an explanation in Schedule O* . . .			3b		No
4a	At any time during the calendar year, did the organization have an interest in, or a signature or other authority over, a financial account in a foreign country (such as a bank account, securities account, or other financial account)? . .			4a		No
b	If "Yes," enter the name of the foreign country ▶__________ See instructions for filing requirements for FinCEN Form 114, Report of Foreign Bank and Financial Accounts (FBAR)					
5a	Was the organization a party to a prohibited tax shelter transaction at any time during the tax year? . .			5a		No
b	Did any taxable party notify the organization that it was or is a party to a prohibited tax shelter transaction?			5b		No
c	If "Yes," to line 5a or 5b, did the organization file Form 8886-T?			5c		
6a	Does the organization have annual gross receipts that are normally greater than $100,000, and did the organization solicit any contributions that were not tax deductible as charitable contributions? . . .			6a		No
b	If "Yes," did the organization include with every solicitation an express statement that such contributions or gifts were not tax deductible?			6b		
7	**Organizations that may receive deductible contributions under section 170(c).**					
a	Did the organization receive a payment in excess of $75 made partly as a contribution and partly for goods and services provided to the payor?			7a		No
b	If "Yes," did the organization notify the donor of the value of the goods or services provided?			7b		
c	Did the organization sell, exchange, or otherwise dispose of tangible personal property for which it was required to file Form 8282?			7c		No
d	If "Yes," indicate the number of Forms 8282 filed during the year	7d	0			
e	Did the organization receive any funds, directly or indirectly, to pay premiums on a personal benefit contract?			7e		No
f	Did the organization, during the year, pay premiums, directly or indirectly, on a personal benefit contract? . .			7f		No
g	If the organization received a contribution of qualified intellectual property, did the organization file Form 8899 as required?			7g		No
h	If the organization received a contribution of cars, boats, airplanes, or other vehicles, did the organization file a Form 1098-C?			7h		No
8	**Sponsoring organizations maintaining donor advised funds.** Did a donor advised fund maintained by the sponsoring organization have excess business holdings at any time during the year?			8		No
9a	Did the sponsoring organization make any taxable distributions under section 4966? . . .			9a		No
b	Did the sponsoring organization make a distribution to a donor, donor advisor, or related person? . . .			9b		No
10	**Section 501(c)(7) organizations.** Enter					
a	Initiation fees and capital contributions included on Part VIII, line 12 . . .	10a				
b	Gross receipts, included on Form 990, Part VIII, line 12, for public use of club facilities	10b				
11	**Section 501(c)(12) organizations.** Enter					
a	Gross income from members or shareholders	11a				
b	Gross income from other sources (Do not net amounts due or paid to other sources against amounts due or received from them)	11b				
12a	**Section 4947(a)(1) non-exempt charitable trusts.** Is the organization filing Form 990 in lieu of Form 1041?			12a		No
b	If "Yes," enter the amount of tax-exempt interest received or accrued during the year	12b				
13	**Section 501(c)(29) qualified nonprofit health insurance issuers.**					
a	Is the organization licensed to issue qualified health plans in more than one state? **Note.** See the instructions for additional information the organization must report on Schedule O			13a		No
b	Enter the amount of reserves the organization is required to maintain by the states in which the organization is licensed to issue qualified health plans	13b				
c	Enter the amount of reserves on hand	13c				
14a	Did the organization receive any payments for indoor tanning services during the tax year?			14a		No
b	If "Yes," has it filed a Form 720 to report these payments? *If "No," provide an explanation in Schedule O* . .			14b		

Part VI Governance, Management, and Disclosure
For each "Yes" response to lines 2 through 7b below, and for a "No" response to lines 8a, 8b, or 10b below, describe the circumstances, processes, or changes in Schedule O. See instructions.

Check if Schedule O contains a response or note to any line in this Part VI . . . ☑

Section A. Governing Body and Management

					Yes	No
1a	Enter the number of voting members of the governing body at the end of the tax year	1a	12			
	If there are material differences in voting rights among members of the governing body, or if the governing body delegated broad authority to an executive committee or similar committee, explain in Schedule O					
b	Enter the number of voting members included in line 1a, above, who are independent	1b	12			
2	Did any officer, director, trustee, or key employee have a family relationship or a business relationship with any other officer, director, trustee, or key employee?			2		No
3	Did the organization delegate control over management duties customarily performed by or under the direct supervision of officers, directors or trustees, or key employees to a management company or other person?			3		No
4	Did the organization make any significant changes to its governing documents since the prior Form 990 was filed?			4		No
5	Did the organization become aware during the year of a significant diversion of the organization's assets?			5		No
6	Did the organization have members or stockholders?			6		No
7a	Did the organization have members, stockholders, or other persons who had the power to elect or appoint one or more members of the governing body?			7a		No
b	Are any governance decisions of the organization reserved to (or subject to approval by) members, stockholders, or persons other than the governing body?			7b		No
8	Did the organization contemporaneously document the meetings held or written actions undertaken during the year by the following					
a	The governing body?			8a	Yes	
b	Each committee with authority to act on behalf of the governing body?			8b	Yes	
9	Is there any officer, director, trustee, or key employee listed in Part VII, Section A, who cannot be reached at the organization's mailing address? *If "Yes," provide the names and addresses in Schedule O*			9		No

Section B. Policies (*This Section B requests information about policies not required by the Internal Revenue Code.*)

			Yes	No
10a	Did the organization have local chapters, branches, or affiliates?	10a		No
b	If "Yes," did the organization have written policies and procedures governing the activities of such chapters, affiliates, and branches to ensure their operations are consistent with the organization's exempt purposes?	10b		
11a	Has the organization provided a complete copy of this Form 990 to all members of its governing body before filing the form?	11a	Yes	
b	Describe in Schedule O the process, if any, used by the organization to review this Form 990			
12a	Did the organization have a written conflict of interest policy? *If "No," go to line 13*	12a	Yes	
b	Were officers, directors, or trustees, and key employees required to disclose annually interests that could give rise to conflicts?	12b	Yes	
c	Did the organization regularly and consistently monitor and enforce compliance with the policy? *If "Yes," describe in Schedule O how this was done*	12c	Yes	
13	Did the organization have a written whistleblower policy?	13	Yes	
14	Did the organization have a written document retention and destruction policy?	14	Yes	
15	Did the process for determining compensation of the following persons include a review and approval by independent persons, comparability data, and contemporaneous substantiation of the deliberation and decision?			
a	The organization's CEO, Executive Director, or top management official	15a		No
b	Other officers or key employees of the organization	15b		No
	If "Yes" to line 15a or 15b, describe the process in Schedule O (see instructions)			
16a	Did the organization invest in, contribute assets to, or participate in a joint venture or similar arrangement with a taxable entity during the year?	16a		No
b	If "Yes," did the organization follow a written policy or procedure requiring the organization to evaluate its participation in joint venture arrangements under applicable federal tax law, and take steps to safeguard the organization's exempt status with respect to such arrangements?	16b		

Section C. Disclosure

17 List the States with which a copy of this Form 990 is required to be filed ▶

18 Section 6104 requires an organization to make its Form 1023 (or 1024 if applicable), 990, and 990-T (501(c)(3)s only) available for public inspection Indicate how you made these available Check all that apply

☐ Own website ☐ Another's website ☑ Upon request ☐ Other (explain in Schedule O)

19 Describe in Schedule O whether (and if so, how) the organization made its governing documents, conflict of interest policy, and financial statements available to the public during the tax year

20 State the name, address, and telephone number of the person who possesses the organization's books and records
▶NORTH CENTRAL SOYBEAN RESEARCH 1255 SW Prairie Trail Parkway Ankeny, IA 50023 (515) 334-1060

Part VII **Compensation of Officers, Directors,Trustees, Key Employees, Highest Compensated Employees, and Independent Contractors**

Check if Schedule O contains a response or note to any line in this Part VII . . . . ☐

Section A. Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees

1a Complete this table for all persons required to be listed Report compensation for the calendar year ending with or within the organization's tax year

- List all of the organization's **current** officers, directors, trustees (whether individuals or organizations), regardless of amount of compensation Enter -0- in columns (D), (E), and (F) if no compensation was paid
- List all of the organization's **current** key employees, if any See instructions for definition of "key employee "
- List the organization's five **current** highest compensated employees (other than an officer, director, trustee or key employee) who received reportable compensation (Box 5 of Form W-2 and/or Box 7 of Form 1099-MISC) of more than $100,000 from the organization and any related organizations
- List all of the organization's **former** officers, key employees, or highest compensated employees who received more than $100,000 of reportable compensation from the organization and any related organizations
- List all of the organization's **former directors or trustees** that received, in the capacity as a former director or trustee of the organization, more than $10,000 of reportable compensation from the organization and any related organizations

List persons in the following order individual trustees or directors, institutional trustees, officers, key employees, highest compensated employees, and former such persons

☑ Check this box if neither the organization nor any related organization compensated any current officer, director, or trustee

(A) Name and Title	(B) Average hours per week (list any hours for related organizations below dotted line)	(C) Position: Individual trustee or director	Institutional Trustee	Officer	Key employee	Highest compensated employee	Former	(D) Reportable compensation from the organization (W- 2/1099-MISC)	(E) Reportable compensation from related organizations (W- 2/1099-MISC)	(F) Estimated amount of other compensation from the organization and related organizations
(1) Craig Converse Director	0 00 0 00	X						0	0	0
(2) RON OHLDE Director	0 00 0 00	X						0	0	0
(3) CLIFF MULDER President	0 00 0 00	X		X				0	0	0
(4) Keith Kemp Director	0 00 0 00	X						0	0	0
(5) GENE STOEL Vice President	0 00 0 00	X		X				0	0	0
(6) Larry Tonniges Director	0 00 0 00	X						0	0	0
(7) Dave Rodibaugh Director	0 00 0 00	X						0	0	0
(8) CECIL DEMOTT Director	0 00 0 00	X						0	0	0
(9) ED CAGNEY Director	0 00 0 00	X						0	0	0
(10) Jerod Hooker Director	0 00 0 00	X						0	0	0
(11) Matt Danuser Director	0 00 0 00	X						0	0	0
(12) MIKE CERNY Secretary/Treas	0 00 0 00	X		X				0	0	0

Part VII **Section A. Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees** *(continued)*

(A) Name and Title	(B) Average hours per week (list any hours for related organizations below dotted line)	(C) Position: Individual trustee or director	Institutional Trustee	Officer	Key employee	Highest compensated employee	Former	(D) Reportable compensation from the organization (W-2/1099-MISC)	(E) Reportable compensation from related organizations (W-2/1099-MISC)	(F) Estimated amount of other compensation from the organization and related organizations

1b Sub-Total ▶			
c Total from continuation sheets to Part VII, Section A ▶			
d Total (add lines 1b and 1c) ▶			

2 Total number of individuals (including but not limited to those listed above) who received more than $100,000 of reportable compensation from the organization ▶ 0

		Yes	No
3 Did the organization list any **former** officer, director or trustee, key employee, or highest compensated employee on line 1a? *If "Yes," complete Schedule J for such individual*	**3**		No
4 For any individual listed on line 1a, is the sum of reportable compensation and other compensation from the organization and related organizations greater than $150,000? *If "Yes," complete Schedule J for such individual*	**4**		No
5 Did any person listed on line 1a receive or accrue compensation from any unrelated organization or individual for services rendered to the organization? *If "Yes," complete Schedule J for such person*	**5**		No

Section B. Independent Contractors

1 Complete this table for your five highest compensated independent contractors that received more than $100,000 of compensation from the organization Report compensation for the calendar year ending with or within the organization's tax year

(A) Name and business address	(B) Description of services	(C) Compensation

2 Total number of independent contractors (including but not limited to those listed above) who received more than $100,000 of compensation from the organization ▶ 0

Part VIII **Statement of Revenue**

Check if Schedule O contains a response or note to any line in this Part VIII . . . .

			(A) Total revenue	(B) Related or exempt function revenue	(C) Unrelated business revenue	(D) Revenue excluded from tax under sections 512-514
Contributions, Gifts, Grants and Other Similar Amounts	1a Federated campaigns . .	1a				
	b Membership dues	1b				
	c Fundraising events	1c				
	d Related organizations . . .	1d				
	e Government grants (contributions)	1e				
	f All other contributions, gifts, grants, and similar amounts not included above	1f 3,622,308				
	g Noncash contributions included in lines 1a-1f $					
	h **Total.** Add lines 1a-1f . . . . ▶		3,622,308			
Program Service Revenue		Business Code				
	2a					
	b					
	c					
	d					
	e					
	f All other program service revenue					
	g **Total.** Add lines 2a–2f . . . . ▶		0			
Other Revenue	3 Investment income (including dividends, interest, and other similar amounts) . . . . ▶		12,376			12,376
	4 Income from investment of tax-exempt bond proceeds . . ▶		0			
	5 Royalties . . . . ▶		0			
		(i) Real / (ii) Personal				
	6a Gross rents					
	b Less rental expenses					
	c Rental income or (loss)					
	d Net rental income or (loss) . . . . ▶		0			
		(i) Securities / (ii) Other				
	7a Gross amount from sales of assets other than inventory					
	b Less cost or other basis and sales expenses					
	c Gain or (loss)					
	d Net gain or (loss) . . . . ▶		0			
	8a Gross income from fundraising events (not including $ ________ of contributions reported on line 1c) See Part IV, line 18 . .	a				
	b Less direct expenses	b				
	c Net income or (loss) from fundraising events . . ▶		0			
	9a Gross income from gaming activities See Part IV, line 19 . . .	a				
	b Less direct expenses . . .	b				
	c Net income or (loss) from gaming activities . . . ▶		0			
	10a Gross sales of inventory, less returns and allowances .	a				
	b Less cost of goods sold . .	b				
	c Net income or (loss) from sales of inventory . . ▶		0			
	Miscellaneous Revenue	Business Code				
	11a					
	b					
	c					
	d All other revenue					
	e **Total.** Add lines 11a–11d . . . . . . ▶		0			
	12 **Total revenue.** See Instructions . . . . . ▶		3,634,684			12,376

Part IX Statement of Functional Expenses

Section 501(c)(3) and 501(c)(4) organizations must complete all columns All other organizations must complete column (A)

Check if Schedule O contains a response or note to any line in this Part IX . . . . ☐

	Do not include amounts reported on lines 6b, 7b, 8b, 9b, and 10b of Part VIII.	(A) Total expenses	(B) Program service expenses	(C) Management and general expenses	(D) Fundraising expenses
1	Grants and other assistance to domestic organizations and domestic governments See Part IV, line 21	0			
2	Grants and other assistance to domestic individuals See Part IV, line 22	0			
3	Grants and other assistance to foreign organizations, foreign governments, and foreign individuals See Part IV, lines 15 and 16	0			
4	Benefits paid to or for members	0			
5	Compensation of current officers, directors, trustees, and key employees	0			
6	Compensation not included above, to disqualified persons (as defined under section 4958(f)(1)) and persons described in section 4958(c)(3)(B)	0			
7	Other salaries and wages	0			
8	Pension plan accruals and contributions (include section 401(k) and 403(b) employer contributions)	0			
9	Other employee benefits	0			
10	Payroll taxes	0			
11	Fees for services (non-employees)				
a	Management	0			
b	Legal	0			
c	Accounting	0			
d	Lobbying	0			
e	Professional fundraising services See Part IV, line 17	0			
f	Investment management fees	0			
g	Other (If line 11g amount exceeds 10% of line 25, column (A) amount, list line 11g expenses on Schedule O)	0			
12	Advertising and promotion	0			
13	Office expenses	0			
14	Information technology	0			
15	Royalties . .	0			
16	Occupancy	0			
17	Travel	0			
18	Payments of travel or entertainment expenses for any federal, state, or local public officials	0			
19	Conferences, conventions, and meetings	0			
20	Interest	0			
21	Payments to affiliates	0			
22	Depreciation, depletion, and amortization	0			
23	Insurance	0			
24	Other expenses Itemize expenses not covered above (List miscellaneous expenses in line 24e If line 24e amount exceeds 10% of line 25, column (A) amount, list line 24e expenses on Schedule O)				
a	RESEARCH ACTIVITIES	4,655,256	4,655,256		
b	ADMINISTRATIVE	143,454		143,454	
c					
d					
e	All other expenses	0			
25	**Total functional expenses.** Add lines 1 through 24e	4,798,710	4,655,256	143,454	0
26	**Joint costs.** Complete this line only if the organization reported in column (B) joint costs from a combined educational campaign and fundraising solicitation Check here ▶ ☐ if following SOP 98-2 (ASC 958-720)				

Part X Balance Sheet

Check if Schedule O contains a response or note to any line in this Part X . . . . ☐

			(A) Beginning of year		(B) End of year
Assets	1	Cash-non-interest-bearing	2,157,805	1	1,318,113
	2	Savings and temporary cash investments	2,251,560	2	2,542,046
	3	Pledges and grants receivable, net		3	0
	4	Accounts receivable, net	191,573	4	158,211
	5	Loans and other receivables from current and former officers, directors, trustees, key employees, and highest compensated employees Complete Part II of Schedule L		5	0
	6	Loans and other receivables from other disqualified persons (as defined under section 4958(f)(1)), persons described in section 4958(c)(3)(B), and contributing employers and sponsoring organizations of section 501(c)(9) voluntary employees' beneficiary organizations (see instructions) Complete Part II of Schedule L		6	0
	7	Notes and loans receivable, net		7	0
	8	Inventories for sale or use		8	0
	9	Prepaid expenses and deferred charges		9	0
	10a	Land, buildings, and equipment cost or other basis Complete Part VI of Schedule D — 10a			
	b	Less accumulated depreciation — 10b		10c	0
	11	Investments—publicly traded securities		11	0
	12	Investments—other securities See Part IV, line 11		12	0
	13	Investments—program-related See Part IV, line 11		13	0
	14	Intangible assets		14	0
	15	Other assets See Part IV, line 11	4,514	15	2,643
	16	**Total assets.** Add lines 1 through 15 (must equal line 34)	4,605,452	16	4,021,013
Liabilities	17	Accounts payable and accrued expenses	1,149,884	17	1,729,471
	18	Grants payable		18	
	19	Deferred revenue		19	
	20	Tax-exempt bond liabilities		20	
	21	Escrow or custodial account liability Complete Part IV of Schedule D		21	
	22	Loans and other payables to current and former officers, directors, trustees, key employees, highest compensated employees, and disqualified persons Complete Part II of Schedule L		22	
	23	Secured mortgages and notes payable to unrelated third parties		23	
	24	Unsecured notes and loans payable to unrelated third parties		24	
	25	Other liabilities (including federal income tax, payables to related third parties, and other liabilities not included on lines 17-24) Complete Part X of Schedule D		25	
	26	**Total liabilities.** Add lines 17 through 25	1,149,884	26	1,729,471
Net Assets or Fund Balances		**Organizations that follow SFAS 117 (ASC 958), check here ▶ ☑ and complete lines 27 through 29, and lines 33 and 34.**			
	27	Unrestricted net assets	3,455,568	27	2,291,542
	28	Temporarily restricted net assets		28	
	29	Permanently restricted net assets		29	
		Organizations that do not follow SFAS 117 (ASC 958), check here ▶ ☐ and complete lines 30 through 34.			
	30	Capital stock or trust principal, or current funds		30	
	31	Paid-in or capital surplus, or land, building or equipment fund		31	
	32	Retained earnings, endowment, accumulated income, or other funds		32	
	33	Total net assets or fund balances	3,455,568	33	2,291,542
	34	Total liabilities and net assets/fund balances	4,605,452	34	4,021,013

Part XI Reconcilliation of Net Assets

Check if Schedule O contains a response or note to any line in this Part XI . . . . ☐

1	Total revenue (must equal Part VIII, column (A), line 12)	1	3,634,684
2	Total expenses (must equal Part IX, column (A), line 25)	2	4,798,710
3	Revenue less expenses Subtract line 2 from line 1	3	-1,164,026
4	Net assets or fund balances at beginning of year (must equal Part X, line 33, column (A))	4	3,455,568
5	Net unrealized gains (losses) on investments	5	
6	Donated services and use of facilities	6	
7	Investment expenses	7	
8	Prior period adjustments	8	
9	Other changes in net assets or fund balances (explain in Schedule O)	9	
10	Net assets or fund balances at end of year Combine lines 3 through 9 (must equal Part X, line 33, column (B))	10	2,291,542

Part XII Financial Statements and Reporting

Check if Schedule O contains a response or note to any line in this Part XII . . . . ☐

			Yes	No
1	Accounting method used to prepare the Form 990 ☐ Cash ☑ Accrual ☐ Other ____________ If the organization changed its method of accounting from a prior year or checked "Other," explain in Schedule O			
2a	Were the organization's financial statements compiled or reviewed by an independent accountant?	2a		No
	If 'Yes,' check a box below to indicate whether the financial statements for the year were compiled or reviewed on a separate basis, consolidated basis, or both ☐ Separate basis ☐ Consolidated basis ☐ Both consolidated and separate basis			
b	Were the organization's financial statements audited by an independent accountant?	2b	Yes	
	If 'Yes,' check a box below to indicate whether the financial statements for the year were audited on a separate basis, consolidated basis, or both ☑ Separate basis ☐ Consolidated basis ☐ Both consolidated and separate basis			
c	If "Yes," to line 2a or 2b, does the organization have a committee that assumes responsibility for oversight of the audit, review, or compilation of its financial statements and selection of an independent accountant?	2c	Yes	
	If the organization changed either its oversight process or selection process during the tax year, explain in Schedule O			
3a	As a result of a federal award, was the organization required to undergo an audit or audits as set forth in the Single Audit Act and OMB Circular A-133?	3a		No
b	If "Yes," did the organization undergo the required audit or audits? If the organization did not undergo the required audit or audits, explain why in Schedule O and describe any steps taken to undergo such audits	3b		

SCHEDULE A (Form 990 or 990EZ)

Department of the Treasury
Internal Revenue Service

Public Charity Status and Public Support

Complete if the organization is a section 501(c)(3) organization or a section 4947(a)(1) nonexempt charitable trust.
▶ Attach to Form 990 or Form 990-EZ.
▶ Information about Schedule A (Form 990 or 990-EZ) and its instructions is at *www.irs.gov/form990*.

OMB No 1545-0047

2015

Open to Public Inspection

Name of the organization
NORTH CENTRAL SOYBEAN RESEARCH PROGRAM

Employer identification number
42-1394799

Part I Reason for Public Charity Status (All organizations must complete this part.) See instructions.

The organization is not a private foundation because it is (For lines 1 through 11, check only one box)

1 ☐ A church, convention of churches, or association of churches described in **section 170(b)(1)(A)(i).**

2 ☐ A school described in **section 170(b)(1)(A)(ii).**(Attach Schedule E (Form 990 or 990-EZ))

3 ☐ A hospital or a cooperative hospital service organization described in **section 170(b)(1)(A)(iii).**

4 ☐ A medical research organization operated in conjunction with a hospital described in **section 170(b)(1)(A)(iii).** Enter the hospital's name, city, and state ____________

5 ☐ An organization operated for the benefit of a college or university owned or operated by a governmental unit described in **section 170(b)(1)(A)(iv).** (Complete Part II)

6 ☐ A federal, state, or local government or governmental unit described in **section 170(b)(1)(A)(v).**

7 ☑ An organization that normally receives a substantial part of its support from a governmental unit or from the general public described in **section 170(b)(1)(A)(vi).** (Complete Part II)

8 ☐ A community trust described in **section 170(b)(1)(A)(vi)** (Complete Part II)

9 ☐ An organization that normally receives (1) more than 331/3% of its support from contributions, membership fees, and gross receipts from activities related to its exempt functions—subject to certain exceptions, and (2) no more than 331/3% of its support from gross investment income and unrelated business taxable income (less section 511 tax) from businesses acquired by the organization after June 30, 1975 See**section 509(a)(2).** (Complete Part III)

10 ☐ An organization organized and operated exclusively to test for public safety See **section 509(a)(4).**

11 ☐ An organization organized and operated exclusively for the benefit of, to perform the functions of, or to carry out the purposes of one or more publicly supported organizations described in section 509(a)(1) or section 509(a)(2) See **section 509(a)(3).** Check the box in lines 11a through 11d that describes the type of supporting organization and complete lines 11e, 11f, and 11g

a ☐ **Type I.** A supporting organization operated, supervised, or controlled by its supported organization(s), typically by giving the supported organization(s) the power to regularly appoint or elect a majority of the directors or trustees of the supporting organization **You must complete Part IV, Sections A and B.**

b ☐ **Type II.** A supporting organization supervised or controlled in connection with its supported organization(s), by having control or management of the supporting organization vested in the same persons that control or manage the supported organization(s) **You must complete Part IV, Sections A and C.**

c ☐ **Type III functionally integrated.** A supporting organization operated in connection with, and functionally integrated with, its supported organization(s) (see instructions) **You must complete Part IV, Sections A, D, and E.**

d ☐ **Type III non-functionally integrated.** A supporting organization operated in connection with its supported organization(s) that is not functionally integrated The organization generally must satisfy a distribution requirement and an attentiveness requirement (see instructions) **You must complete Part IV, Sections A and D, and Part V.**

e ☐ Check this box if the organization received a written determination from the IRS that it is a Type I, Type II, Type III functionally integrated, or Type III non-functionally integrated supporting organization

f Enter the number of supported organizations . . . . ____________

g Provide the following information about the supported organization(s)

(i) Name of supported organization	(ii) EIN	(iii) Type of organization (described on lines 1- 9 above (see instructions))	(iv) Is the organization listed in your governing document?		(v) Amount of monetary support (see instructions)	(vi) Amount of other support (see instructions)
			Yes	No		
Total						

Part II **Support Schedule for Organizations Described in Sections 170(b)(1)(A)(iv) and 170(b)(1)(A)(vi)**
(Complete only if you checked the box on line 5, 7, or 8 of Part I or if the organization failed to qualify under Part III. If the organization fails to qualify under the tests listed below, please complete Part III.)

Section A. Public Support

Calendar year (or fiscal year beginning in) ▶	(a) 2011	(b) 2012	(c) 2013	(d) 2014	(e) 2015	(f) Total
1 Gifts, grants, contributions, and membership fees received (Do not include any unusual grants)	3,453,345	2,989,502	2,855,813	3,172,734	3,622,308	16,093,702
2 Tax revenues levied for the organization's benefit and either paid to or expended on its behalf						0
3 The value of services or facilities furnished by a governmental unit to the organization without charge						0
4 **Total.** Add lines 1 through 3	3,453,345	2,989,502	2,855,813	3,172,734	3,622,308	16,093,702
5 The portion of total contributions by each person (other than a governmental unit or publicly supported organization) included on line 1 that exceeds 2% of the amount shown on line 11, column (f)						0
6 **Public support.** Subtract line 5 from line 4						16,093,702

Section B. Total Support

Calendar year (or fiscal year beginning in) ▶	(a) 2011	(b) 2012	(c) 2013	(d) 2014	(e) 2015	(f) Total
7 Amounts from line 4	3,453,345	2,989,502	2,855,813	3,172,734	3,622,308	16,093,702
8 Gross income from interest, dividends, payments received on securities loans, rents, royalties and income from similar sources	339	2,452	1,359	6,812	12,376	23,338
9 Net income from unrelated business activities, whether or not the business is regularly carried on						0
10 Other income Do not include gain or loss from the sale of capital assets (Explain in Part VI)						0
11 **Total support.** Add lines 7 through 10						16,117,040

12 Gross receipts from related activities, etc (see instructions) | 12 |

13 **First five years.** If the Form 990 is for the organization's first, second, third, fourth, or fifth tax year as a section 501(c)(3) organization, check this box and **stop here** . . . . ▶ ☐

Section C. Computation of Public Support Percentage

14 Public support percentage for 2015 (line 6, column (f) divided by line 11, column (f))	14	99 860 %
15 Public support percentage for 2014 Schedule A, Part II, line 14	15	99 920 %

16a **33 1/3% support test—2015.** If the organization did not check the box on line 13, and line 14 is 33 1/3% or more, check this box and **stop here.** The organization qualifies as a publicly supported organization ▶ ☑

b **33 1/3% support test—2014.** If the organization did not check a box on line 13 or 16a, and line 15 is 33 1/3% or more, check this box and **stop here.** The organization qualifies as a publicly supported organization ▶ ☐

17a **10%-facts-and-circumstances test—2015.** If the organization did not check a box on line 13, 16a, or 16b, and line 14 is 10% or more, and if the organization meets the facts-and-circumstances test, check this box and **stop here.** Explain in Part VI how the organization meets the "facts-and-circumstances" test The organization qualifies as a publicly supported organization ▶ ☐

b **10%-facts-and-circumstances test—2014.** If the organization did not check a box on line 13, 16a, 16b, or 17a, and line 15 is 10% or more, and if the organization meets the "facts-and-circumstances" test, check this box and **stop here.** Explain in Part VI how the organization meets the "facts-and-circumstances" test The organization qualifies as a publicly supported organization ▶ ☐

18 **Private foundation.** If the organization did not check a box on line 13, 16a, 16b, 17a, or 17b, check this box and see instructions ▶ ☐

Part III **Support Schedule for Organizations Described in Section 509(a)(2)**
(Complete only if you checked the box on line 9 of Part I or if the organization failed to qualify under Part II. If the organization fails to qualify under the tests listed below, please complete Part II.)

Section A. Public Support

Calendar year (or fiscal year beginning in) ▶	(a) 2011	(b) 2012	(c) 2013	(d) 2014	(e) 2015	(f) Total
1 Gifts, grants, contributions, and membership fees received (Do not include any "unusual grants ")						
2 Gross receipts from admissions, merchandise sold or services performed, or facilities furnished in any activity that is related to the organization's tax-exempt purpose						
3 Gross receipts from activities that are not an unrelated trade or business under section 513						
4 Tax revenues levied for the organization's benefit and either paid to or expended on its behalf						
5 The value of services or facilities furnished by a governmental unit to the organization without charge						
6 **Total.** Add lines 1 through 5						
7a Amounts included on lines 1, 2, and 3 received from disqualified persons						
b Amounts included on lines 2 and 3 received from other than disqualified persons that exceed the greater of $5,000 or 1% of the amount on line 13 for the year						
c Add lines 7a and 7b						
8 **Public support.** (Subtract line 7c from line 6)						

Section B. Total Support

Calendar year (or fiscal year beginning in) ▶	(a) 2011	(b) 2012	(c) 2013	(d) 2014	(e) 2015	(f) Total
9 Amounts from line 6						
10a Gross income from interest, dividends, payments received on securities loans, rents, royalties and income from similar sources						
b Unrelated business taxable income (less section 511 taxes) from businesses acquired after June 30, 1975						
c Add lines 10a and 10b						
11 Net income from unrelated business activities not included in line 10b, whether or not the business is regularly carried on						
12 Other income Do not include gain or loss from the sale of capital assets (Explain in Part VI)						
13 **Total support.** (Add lines 9, 10c, 11, and 12)						

14 **First five years.** If the Form 990 is for the organization's first, second, third, fourth, or fifth tax year as a section 501(c)(3) organization, check this box and **stop here** ▶ ☐

Section C. Computation of Public Support Percentage

15	Public support percentage for 2015 (line 8, column (f) divided by line 13, column (f))	15	
16	Public support percentage from 2014 Schedule A, Part III, line 15	16	

Section D. Computation of Investment Income Percentage

17	Investment income percentage for **2015** (line 10c, column (f) divided by line 13, column (f))	17	
18	Investment income percentage from **2014** Schedule A, Part III, line 17	18	

19a **33 1/3% support tests—2015.** If the organization did not check the box on line 14, and line 15 is more than 33 1/3%, and line 17 is not more than 33 1/3%, check this box and **stop here.** The organization qualifies as a publicly supported organization ▶ ☐

b **33 1/3% support tests—2014.** If the organization did not check a box on line 14 or line 19a, and line 16 is more than 33 1/3% and line 18 is not more than 33 1/3%, check this box and **stop here.** The organization qualifies as a publicly supported organization ▶ ☐

20 **Private foundation.** If the organization did not check a box on line 14, 19a, or 19b, check this box and see instructions ▶ ☐

Part IV Supporting Organizations

(Complete only if you checked a box on line 11 of Part I If you checked 11a of Part I, complete Sections A and B If you checked 11b of Part I, complete Sections A and C If you checked 11c of Part I, complete Sections A, D, and E If you checked 11d of Part I, complete Sections A and D, and complete Part V)

Section A. All Supporting Organizations

			Yes	No
1	Are all of the organization's supported organizations listed by name in the organization's governing documents? *If "No," describe in* ***Part VI*** *how the supported organizations are designated If designated by class or purpose, describe the designation If historic and continuing relationship, explain*	**1**		
2	Did the organization have any supported organization that does not have an IRS determination of status under section 509(a)(1) or (2)? *If "Yes," explain in* ***Part VI*** *how the organization determined that the supported organization was described in section 509(a)(1) or (2)*	**2**		
3a	Did the organization have a supported organization described in section 501(c)(4), (5), or (6)? *If "Yes," answer (b) and (c) below*	**3a**		
b	Did the organization confirm that each supported organization qualified under section 501(c)(4), (5), or (6) and satisfied the public support tests under section 509(a)(2)? *If "Yes," describe in* ***Part VI*** *when and how the organization made the determination*	**3b**		
c	Did the organization ensure that all support to such organizations was used exclusively for section 170(c)(2)(B) purposes? *If "Yes," explain in* ***Part VI*** *what controls the organization put in place to ensure such use*	**3c**		
4a	Was any supported organization not organized in the United States ("foreign supported organization")? *If "Yes" and if you checked 11a or 11b in Part I, answer (b) and (c) below*	**4a**		
b	Did the organization have ultimate control and discretion in deciding whether to make grants to the foreign supported organization? *If "Yes," describe in Part VI how the organization had such control and discretion despite being controlled or supervised by or in connection with its supported organizations*	**4b**		
c	Did the organization support any foreign supported organization that does not have an IRS determination under sections 501(c)(3) and 509(a)(1) or (2)? *If "Yes," explain in Part VI what controls the organization used to ensure that all support to the foreign supported organization was used exclusively for section 170(c)(2)(B) purposes*	**4c**		
5a	Did the organization add, substitute, or remove any supported organizations during the tax year? *If "Yes," answer (b) and (c) below (if applicable) Also, provide detail in Part VI, including (i) the names and EIN numbers of the supported organizations added, substituted, or removed, (ii) the reasons for each such action, (iii) the authority under the organization's organizing document authorizing such action, and (iv) how the action was accomplished (such as by amendment to the organizing document)*	**5a**		
b	**Type I or Type II only.** Was any added or substituted supported organization part of a class already designated in the organization's organizing document?	**5b**		
c	**Substitutions only.** Was the substitution the result of an event beyond the organization's control?	**5c**		
6	Did the organization provide support (whether in the form of grants or the provision of services or facilities) to anyone other than (a) its supported organizations, (b) individuals that are part of the charitable class benefited by one or more of its supported organizations, or (c) other supporting organizations that also support or benefit one or more of the filing organization's supported organizations? *If "Yes," provide detail in* ***Part VI.***	**6**		
7	Did the organization provide a grant, loan, compensation, or other similar payment to a substantial contributor (defined in IRC 4958(c)(3)(C)), a family member of a substantial contributor, or a 35-percent controlled entity with regard to a substantial contributor? *If "Yes," complete Part I of Schedule L (Form 990)*	**7**		
8	Did the organization make a loan to a disqualified person (as defined in section 4958) not described in line 7? *If "Yes," complete Part II of Schedule L (Form 990)*	**8**		
9a	Was the organization controlled directly or indirectly at any time during the tax year by one or more disqualified persons as defined in section 4946 (other than foundation managers and organizations described in section 509 (a)(1) or (2))? *If "Yes," provide detail in* ***Part VI.***	**9a**		
b	Did one or more disqualified persons (as defined in line 9(a)) hold a controlling interest in any entity in which the supporting organization had an interest? *If "Yes," provide detail in* ***Part VI.***	**9b**		
c	Did a disqualified person (as defined in line 9(a)) have an ownership interest in, or derive any personal benefit from, assets in which the supporting organization also had an interest? *If "Yes," provide detail in* ***Part VI.***	**9c**		
10a	Was the organization subject to the excess business holdings rules of IRC 4943 because of IRC 4943(f) (regarding certain Type II supporting organizations, and all Type III non-functionally integrated supporting organizations)? *If "Yes," answer b below*	**10a**		
b	Did the organization have any excess business holdings in the tax year? *(Use Schedule C, Form 4720, to determine whether the organization had excess business holdings)*	**10b**		
11	Has the organization accepted a gift or contribution from any of the following persons?			
a	A person who directly or indirectly controls, either alone or together with persons described in (b) and (c) below, the governing body of a supported organization?	**11a**		
b	A family member of a person described in (a) above?	**11b**		
c	A 35% controlled entity of a person described in (a) or (b) above? *If "Yes" to a, b, or c, provide detail in Part VI*	**11c**		

Part IV **Supporting Organizations** (continued)

Section B. Type I Supporting Organizations

		Yes	No
1 Did the directors, trustees, or membership of one or more supported organizations have the power to regularly appoint or elect at least a majority of the organization's directors or trustees at all times during the tax year? *If "No," describe in **Part VI** how the supported organization(s) effectively operated, supervised, or controlled the organization's activities If the organization had more than one supported organization, describe how the powers to appoint and/or remove directors or trustees were allocated among the supported organizations and what conditions or restrictions, if any, applied to such powers during the tax year*	1		
2 Did the organization operate for the benefit of any supported organization other than the supported organization(s) that operated, supervised, or controlled the supporting organization? *If "Yes," explain in **Part VI** how providing such benefit carried out the purposes of the supported organization(s) that operated, supervised or controlled the supporting organization*	2		

Section C. Type II Supporting Organizations

		Yes	No
1 Were a majority of the organization's directors or trustees during the tax year also a majority of the directors or trustees of each of the organization's supported organization(s)? *If "No," describe in **Part VI** how control or management of the supporting organization was vested in the same persons that controlled or managed the supported organization(s)*	1		

Section D. All Type III Supporting Organizations

		Yes	No
1 Did the organization provide to each of its supported organizations, by the last day of the fifth month of the organization's tax year, (1) a written notice describing the type and amount of support provided during the prior tax year, (2) a copy of the Form 990 that was most recently filed as of the date of notification, and (3) copies of the organization's governing documents in effect on the date of notification, to the extent not previously provided?	1		
2 Were any of the organization's officers, directors, or trustees either (i) appointed or elected by the supported organization(s) or (ii) serving on the governing body of a supported organization? *If "No," explain in **Part VI** how the organization maintained a close and continuous working relationship with the supported organization(s)*	2		
3 By reason of the relationship described in (2), did the organization's supported organizations have a significant voice in the organization's investment policies and in directing the use of the organization's income or assets at all times during the tax year? *If "Yes," describe in **Part VI** the role the organization's supported organizations played in this regard*	3		

Section E. Type III Functionally-Integrated Supporting Organizations

1 Check the box next to the method that the organization used to satisfy the Integral Part Test during the year **(see instructions)**

a ☐ The organization satisfied the Activities Test Complete **line 2** below

b ☐ The organization is the parent of each of its supported organizations Complete **line 3** below

c ☐ The organization supported a governmental entity Describe in Part VI how you supported a government entity (see instructions)

		Yes	No
2 Activities Test **Answer (a) and (b) below.**			
a Did substantially all of the organization's activities during the tax year directly further the exempt purposes of the supported organization(s) to which the organization was responsive? *If "Yes," then in **Part VI identify those supported organizations and explain** how these activities directly furthered their exempt purposes, how the organization was responsive to those supported organizations, and how the organization determined that these activities constituted substantially all of its activities*	2a		
b Did the activities described in (a) constitute activities that, but for the organization's involvement, one or more of the organization's supported organization(s) would have been engaged in? *If "Yes," explain in **Part VI** the reasons for the organization's position that its supported organization(s) would have engaged in these activities but for the organization's involvement*	2b		
3 Parent of Supported Organizations **Answer (a) and (b) below.**			
a Did the organization have the power to regularly appoint or elect a majority of the officers, directors, or trustees of each of the supported organizations? *Provide details in Part VI*	3a		
b Did the organization exercise a substantial degree of direction over the policies, programs and activities of each of its supported organizations? *If "Yes," describe in Part VI the role played by the organization in this regard*	3b		

Part V **Type III Non-Functionally Integrated 509(a)(3) Supporting Organizations**

1 Check here if the organization satisfied the Integral Part Test as a qualifying trust on Nov 20, 1970 **See instructions.** All other Type III non-functionally integrated supporting organizations must complete Sections A through E ☐

	Section A - Adjusted Net Income		(A) Prior Year	(B) Current Year (optional)
1	Net short-term capital gain	1		
2	Recoveries of prior-year distributions	2		
3	Other gross income (see instructions)	3		
4	Add lines 1 through 3	4		
5	Depreciation and depletion	5		
6	Portion of operating expenses paid or incurred for production or collection of gross income or for management, conservation, or maintenance of property held for production of income (see instructions)	6		
7	Other expenses (see instructions)	7		
8	**Adjusted Net Income** (subtract lines 5, 6 and 7 from line 4)	8		

	Section B - Minimum Asset Amount		(A) Prior Year	(B) Current Year (optional)
1	Aggregate fair market value of all non-exempt-use assets (see instructions for short tax year or assets held for part of year)	1		
a	Average monthly value of securities	1a		
b	Average monthly cash balances	1b		
c	Fair market value of other non-exempt-use assets	1c		
d	**Total** (add lines 1a, 1b, and 1c)	1d		
e	**Discount** claimed for blockage or other factors (explain in detail in Part VI) ______			
2	Acquisition indebtedness applicable to non-exempt use assets	2		
3	Subtract line 2 from line 1d	3		
4	Cash deemed held for exempt use Enter 1-1/2% of line 3 (for greater amount, see instructions)	4		
5	Net value of non-exempt-use assets (subtract line 4 from line 3)	5		
6	Multiply line 5 by 035	6		
7	Recoveries of prior-year distributions	7		
8	**Minimum Asset Amount** (add line 7 to line 6)	8		

	Section C - Distributable Amount			Current Year
1	Adjusted net income for prior year (from Section A, line 8, Column A)	1		
2	Enter 85% of line 1	2		
3	Minimum asset amount for prior year (from Section B, line 8, Column A)	3		
4	Enter greater of line 2 or line 3	4		
5	Income tax imposed in prior year	5		
6	**Distributable Amount.** Subtract line 5 from line 4, unless subject to emergency temporary reduction (see instructions)	6		

7 Check here if the current year is the organization's first as a non-functionally-integrated Type III supporting organization (see instructions) ☐

Part V Type III Non-Functionally Integrated 509(a)(3) Supporting Organizations (continued)

Section D - Distributions	Current Year
1 Amounts paid to supported organizations to accomplish exempt purposes	
2 Amounts paid to perform activity that directly furthers exempt purposes of supported organizations, in excess of income from activity	
3 Administrative expenses paid to accomplish exempt purposes of supported organizations	
4 Amounts paid to acquire exempt-use assets	
5 Qualified set-aside amounts (prior IRS approval required)	
6 Other distributions (describe in Part VI) See instructions	
7 **Total annual distributions.** Add lines 1 through 6	
8 Distributions to attentive supported organizations to which the organization is responsive (provide details in Part VI) See instructions	
9 Distributable amount for 2015 from Section C, line 6	
10 Line 8 amount divided by Line 9 amount	

Section E - Distribution Allocations (see instructions)	(i) Excess Distributions	(ii) Underdistributions Pre-2015	(iii) Distributable Amount for 2015
1 Distributable amount for 2015 from Section C, line 6			
2 Underdistributions, if any, for years prior to 2015 (reasonable cause required--see instructions)			
3 Excess distributions carryover, if any, to 2015			
a			
b			
c			
d From 2013. . . . . ____________			
e From 2014. . . . . ____________			
f **Total** of lines 3a through e			
g Applied to underdistributions of prior years			
h Applied to 2015 distributable amount			
i Carryover from 2010 not applied (see instructions)			
j Remainder Subtract lines 3g, 3h, and 3i from 3f			
4 Distributions for 2015 from Section D, line 7 $ ____________________			
a Applied to underdistributions of prior years			
b Applied to 2015 distributable amount			
c Remainder Subtract lines 4a and 4b from 4			
5 Remaining underdistributions for years prior to 2015, if any Subtract lines 3g and 4a from line 2 (if amount greater than zero, see instructions)			
6 Remaining underdistributions for 2015 Subtract lines 3h and 4b from line 1 (if amount greater than zero, see instructions)			
7 **Excess distributions carryover to 2016.** Add lines 3j and 4c			
8 Breakdown of line 7			
a			
b			
c Excess from 2013. . . . . ____________			
d From 2014. . . . . ____________			
e From 2015. . . . . ____________			

Part VI **Supplemental Information.**

Provide the explanations required by Part II, line 10; Part II, line 17a or 17b; Part III, line 12; Part IV, Section A, lines 1, 2, 3b, 3c, 4b, 4c, 5a, 6, 9a, 9b, 9c, 11a, 11b, and 11c; Part IV, Section B, lines 1 and 2; Part IV, Section C, line 1; Part IV, Section D, lines 2 and 3; Part IV, Section E, lines 1c, 2a, 2b, 3a and 3b; Part V, line 1; Part V, Section B, line 1e; Part V Section D, lines 5, 6, and 8; and Part V, Section E, lines 2, 5, and 6. Also complete this part for any additional information. (See instructions).

Facts And Circumstances Test

Return Reference	Explanation

efile GRAPHIC print - DO NOT PROCESS | As Filed Data - | DLN: 93493350003256

SCHEDULE O (Form 990 or 990-EZ)

Department of the Treasury
Internal Revenue Service

Supplemental Information to Form 990 or 990-EZ

Complete to provide information for responses to specific questions on Form 990 or 990-EZ or to provide any additional information.
▶ Attach to Form 990 or 990-EZ.
▶ Information about Schedule O (Form 990 or 990-EZ) and its instructions is at www.irs.gov/form990.

OMB No 1545-0047

2015

Open to Public Inspection

Name of the organization
NORTH CENTRAL SOYBEAN RESEARCH PROGRAM

Employer identification number
42-1394799

Return Reference	Explanation
Form 990, Part VI, Line 11b Form 990 Review Process	PRESENTED TO THE BOARD AT THE MEETING HELD ON DECEMBER 6, 2016

Return Reference	Explanation
Form 990, Part VI, Line 12c Explanation of Monitoring and Enforcement of Conflicts	ANNUALLY THE BOARD IS REQUIRED TO DISCLOSE CONFLICTING INTERESTS BOARD MEMBERS ARE REQUIRED TO RECUSE THEMSELVES FROM ANY VOTE IF THERE IS A CONFLICT

Return Reference	Explanation
Form 990, Part VI, Line 19 Other Organization Documents Publicly Available	Governing documents, conflict of interest policy and financial statements are available to the public upon request

Return Reference	Explanation
Program Descriptions (1) through (5)	(1) Project Title Breeding to improve resistance to SDS in soybean as a means to protect yield Delivering resistant varieties and linesPrincipal Investigador Silvia R Cianzio, Co-PIs B Diers, J Orf D Wang, P Chen, S Kantartzi, G Hartmann, J Bond Budget Amount $171,312 Year 2015-2016Brief Statement of Objectives Breeding high yield SDS-resistant soybean cultivars in Maturity Groups I to VI for farmers, and seed industry Objectives that support Objective 1 1) Identify new sources of resistance to SDS, 2) Evaluation of SDS-field resistance of public experimental linesBackground information An ideal production approach for managing sudden death syndrome (SDS) is the planting of resistant cultivars Development of soybean resistant cultivars is difficult and time consuming, since SDS genetic resistance is determined by numerous genes, each and every one interacting with the production environment The number of SDS-resistant cultivars is presently limited A group of soybean breeders already working on developing SDS resistant germplasm at different institutions was brought together to this project (2)Project Title Acceleration of Soybean Yield and Composition Improvement through Genomic SelectionPrinciple Investigator and Co-PIs Brian Diers, Matt Hudson, Pat Brown, Randall Nelson, Katy Martin Rainey, Bill Beavis, Asheesh Singh, George Graef, Jim Specht, and Aaron LorenzBudget Amount and Project Year Year , $315,642Brief Statement of Objectives The overall objective of this project is to use results from the large, USB funded SoyNAM project to predict the performance of new experimental lines and to test whether these predictions result in the selection of better lines than traditional breeding methods If these new methods are successful, this will increase the rate of genetic gain in breeding programs Below are the specific project objectives The first objective is to test genomic selection in breeding populations This first step is to use the dataset from the SoyNAM project to optimize methods for using genetic markers to predict yield, protein concentration, and maturity of soybean lines (this is called genomic prediction and when plants or lines are selected with this method, it is call genomic selection) In this objective, predictions for the traits can be made and compared to trait data that is available The second step is to conduct a breeding experiment using the optimized genomic selection approaches in populations of breeding lines developed by each cooperating breeder Within each population, lines selected using genomic selection and traditional approaches will be compared to determine which method was the most successful The second objective is to use of genomic data to decide what cross combinations should be made by breeders We will develop methods for selecting specific combinations of parents for crossing in soybean breeding nurseries Once these methods are developed, they will be used by breeders to help them decide what cross combinations to make(3)Project Title Increasing profits through genetic resistance to SDSPrinciple Investigator and Co-PIs Brian Diers, Osman Radwan, Glen Hartman, Jason Bond, James Orf, Dechun Wang Budget Amount and Project Year Year 3 Total budget $162,545Brief Statement of Objectives The overall objective of this research is to increase profits through improving yields with genetic resistance to SDS The specific objectives of the project are Objective 1 Map locations on chromosomes of genes that confer resistance to SDS This mapping is being done in Minnesota and Michigan using two genetic populations in each state Objective 2 Confirm and deploy SDS resistance genes This is being done to determine if previously mapped genes are useful in different genetic backgrounds and environments Objective 3 Identify genes involved in SDS resistance by gene expression profiling soybean roots and leaves To complete this work, the level of gene expression was estimated for soybean roots and leaves using pairs of soybean lines that differ for SDS resistance genes but are otherwise almost completely identical (these are called near isogenic lines or NILs) (4)Project Title Exploiting Potential Bio-control Agents to Manage Seedling Diseases of SoybeanLead PI Ahmad Fakhoury, Budget Amount and Project Year $139,991 Year 2 Issue and Objectives The long-term objective of the proposed research is to characterize the bio-control activity of a collection of fungal species isolated from soybean production fields The ultimate goal is to use potential bio-control agents to improve the management of soybean diseases caused by pathogens present in the soil such as Fusarium spp , Phytophthora sojae, and Pythium spp This could be achieved either by introducing these bio-control agents to soybean production fields, and/or by fine-tuning existing management practices to enhance the prevalence and activity of bio-control agents native to production fields Our specific objectives are Objective 1 Test the effect of a set of recently identified potential bio-control agents on soil-inhabiting fungal, oomycete, and nematode pathogens of soybeanObjective 2 Assess potential roles of these agents in eliciting defense mechanisms in soybean plants Objective 3 Test the effect of fungicidal seed treatments on these organismsObjective 4 Follow the effect of commonly used management practices on the distribution and activity of these organisms in the soil (activity planned for years 2&3 of the project)(5) Project Title Identifying High-yield Genotypes in the USDA Soybean Germplasm Collection Principle Investigator and Co-PIs George Graef, University of Nebraska, Kent Eskridge (Statistics, UNL), Randy Nelson (USDA, ARS, Illinois), Brian Diers (University of Illinois), Danny Singh (Iowa State University), Aaron Lorenz and Jim Orf (University of Minnesota), Andrew Scaboo (University of Missouri) Budget Amount and Project Year $198,601, Year 2Brief Statement of Objectives The overall objective is to identify the best soybean lines in the USDA collection that will increase soybean yields in the north central region This research will develop ways to efficiently and effectively sample the over 17,000 introduced soybean accessions and identify the best ones to improve yield and quality in US commercial soybean varieties Less than 20 PIs make up more than 86% of the parentage of modern US soybean cultivars Effective use of the other 16,980 accessions becomes a sampling issue So our approach makes use of the 50K SNP genotype information available on all accessions in the collection to evaluate differences among sampling methods related to genetic diversity, yield, and ability to identify genomic regions related to yield in this vast resource that we have available We used three sampling methods a super saturated design (SSD), cluster method (CLU) and random selection (RAN) -- to choose PI accessions based on the 50K SNP genotype information The SSD maximizes differences among all entries in the group, so our expectation is that the lines in the SSD group will have greater genetic variation, and a larger variance for yield and other traits that we measure in our evaluations The ultimate end goal is to facilitate development of high-yielding soybean cultivars for producers by making efficient use of these genetic resources

Return Reference	Explanation
Program Descriptions (11) through (15)	(11)Project Title Engineered resistance to soybean cyst nematode via induced gene silencing (RNAi)Principle Investigator and Co-PIs Harold Trick (Project Leader), Tim Todd and Jiarui Li (Kansas State University), John Finer (The Ohio State University), Wayne Parrott (University of Georgia) and Lila Vodkin and Jack Widholm (University of Illinois), Budget Amount and Project Year $136,177 Year 4Brief Statement of Objectives The primary goal of this research project is to establish a new set of biotech traits that have durable resistance to soybean cyst nematode (SCN) Turning off genes by a process known as RNA interference (RNAi) has tremendous potential as a new strategy to increase nematode resistance Past research with other nematode species has demonstrated the scientific merit of the technique This project will investigate the opportunities to insert target gene sequences in the SCN that will provide durable genetic materials that will be lethal to SCN populations The specific objectives of this project are to Complete the production of stable transgenic soybean plants with traits that can silence specific nematode genes Perform bioassays with the engineered plants to confirm effectiveness of the SCN resistance, and Examine the durability of traits on single and diverse populations of SCN Brief Statement of Expected Deliverables It is anticipated this research will result in stable transgenic soybean lines expressing the RNAi constructions and that events with increased levels of SCN resistance will be identified By the end of the funding cycle we intend to identify specific lines that have broad levels of resistance to several populations or HG types of soybean cyst nematodes (12)Project Title Disease Study Group Focus on New and Emerging Soybean DiseasesPrinciple Investigator and Co-PIs Kiersten Wise, Purdue University and Daren Mueller, Iowa State University, Loren Giesler, University of Nebraska, Carl Bradley, University of Illinois, Martin Chilvers, Michigan State University, Albert Tenuta, OMAFRA, Project contributor (no-cost) Damon Smith, University of WisconsinBudget Amount and Project Year Project period 03/01/13 to 02/28/16, Year 2 of 3Total funding $42,250 Year 3Brief Statement of Objectives This project directly benefits soybean farmers in the North Central region by providing current and timely Extension material to aid in the identification and management of emerging diseases, and diseases lacking Extension information The project improves awareness and stakeholder knowledge of emerging diseases using traditional mechanisms such as fact sheets and bulletins, as well as new technologies such as web-based videos and web content that are downloadable and viewable through new technology such as smartphones and tablet devices Project objectives 1 Provide information on emerging soybean diseases at multiple levels of Extension interface (print, web, video, etc) to reach diverse groups of stakeholders 2 Create a platform to host and brand Extension material developed in conjunction with the North Central Soybean Research Program to facilitate updates and allow users to identify trusted sources of material through this branding partnership 3 Provide current research summaries on emerging diseases to direct and coordinate future research priorities thereby minimizing duplication, maximizing resources and increasing response time (13)Project Title Understanding the role of fungicide programs on soybean health and charcoal rot developmentPrinciple Investigator and Co-PIs Kiersten Wise, Purdue University and Daren Mueller, Iowa State University, Emmanuel Byamukama, South Dakota State University, Martin Chilvers, Michigan State University, Chris Little and Doug Jardine, Kansas State University, Damon Smith, University of WisconsinBudget Amount and Project Year $62,000 Year 2Brief Statement of Objectives Charcoal rot, caused by Macrophomina phaseolina, is a disease of growing importance in the North Central Region, yet current management options are limited In addition, this disease is more severe when plants are stressed by heat and dry conditions New fungicide programs and fungicide products are marketed to reduce plant stress, but these products and programs have not been evaluated to determine their impact on charcoal rot development and yield The goal of this research is to understand under what conditions fungicides may reduce plant stress and yield loss due to charcoal rot so that we may improve our recommendations to farmers interested in using fungicides to mitigate plant stress and/or to manage charcoal rot Research objectives 1 Determine efficacy of pre-emergence fungicide applications on M phaseolinacolonization and soybean yield 2 Evaluate various foliar fungicides applied at different times for efficacy against M phaseolina to determine optimum foliar fungicide use for charcoal rot management 3 Integrate research findings into NCSRP charcoal rot Extension materials(14)Project Title Evaluation and Development of a Biological Control Product to Control Soybean Sudden Death Syndrome and White MoldPrinciple Investigator and Co-PIs X B Yang, Iowa State UniversityShrishail Navi, Iowa State University Carl Alan Bradley, University of Illinois Youfu Zhao, University of IllinoisJames Kurle, University of MinnesotaBudget Amount and Project Year $163,845, Year 3Brief Statement of Objectives Sudden death syndrome (SDS) and white mold are two of the most important fungal diseases in soybean production in the US, affecting 40 - 50 million acres in the North Central Region These two diseases threaten the sustainable production of soybean in the North Central Region Biological control products are the future for disease management in row crops and private industry has made significant progress in development of biological fungicides for row crops The goal of this proposal is to evaluate their effectiveness of potential biological control agent in other states of the North Central Region and develop the agent into a product for commercial use, which will provide reliable and cost-effective control of SDS and white mold of soybean Project Objectives oTo conduct multi-state field evaluation for fungal biological control agents that are found effective in reducing soybean sudden death syndrome and white mold oTo investigate a wide-host-range bacterial bio-control agent that is effective in killing SDS and white mold pathogens for management of SDS and white mold in Illinois oTo collect data of prototype product of the biological control agent for commercializationoTo determine if application of the biocontrol agent to crop residues of corn, alfalfa, or soybean can reduce inoculums production, infection, and disease caused by F virguliforme and Sclerotinia (15)Project Title An integrated approach to enhance durability of SCN resistance for long-term, strategic SCN managementPrinciple Investigator and Co-PIs Dr Thomas Baum, Professor and ChairCo-PIs Dr Greg Tylka, ProfessorDr Andrew Severin, Scientist IDr Melissa Mitchum, Associate Professor Dr Henry Nguyen, MSMC Endowed ProfessorDr Andrew Scaboo, Assistant Research ProfessorDr Matthew Hudson, Associate ProfessorDr Brian Diers, Associate Head, ProfessorBudget Amount and Project Year $593,260 Year 1Objective 1 Diversify the genetic base of SCN resistance in soybean oObjective 1 1 Develop and evaluate germplasm with new combinations of resistance genes in high yielding backgrounds (Diers, Nguyen, Scaboo) oObjective 1 2 Determine resistance gene copy number in the experimental lines for more effective breeding (Diers, Nguyen, Scaboo) Objective 2 Identify SCN virulence factors and better understand how the nematode adapts to resistance oObjective 2 1 Refine SCN genome assembly and its accessibility ?Objective 2 1 1 Improve genome assembly (Hudson)?Objective 2 1 2 Genome curation and annotation (Baum, Severin) oObjective 2 2 Conduct comparative population studies to identify genes associated with SCN virulence and evaluate utility as novel resistance targets (Mitchum, Baum)oObjective 2 3 Determine unique resistance gene stacks that would be beneficial in rotations to enhance durability of SCN resistance (Diers, Nguyen, Scaboo, Mitchum)Objective 3 Translate the results of objectives 1 and 2 to increase the profitability of soybean for producers (Tylka)oObjective 3 1 Educate growers on how SCN adapts to grow on resistant soybeans oObjective 3 2 Inform growers on effective rotation schemes designed to protect our resistant sources

Return Reference	Explanation
Program Descriptions (16) through (19)	(16)PROJECT TITLE Benchmarking soybean production systems in the North-Central Principal Investigators Dr Patricio Grassini (Principal Co-Investigator)Dr Shawn P Conley (Principal Co-InvestigatorBudget Amount and Project Year $433,081 Year 1PROJECT JUSTIFICATION AND RATIONALESoybean production is expected to increase to satisfy the increasing demand for food, biodiesel, and livestock feed, both in the USA and globally Thus, it is crucial to reduce the yield gap, which is the difference between the attainable crop yield, as determined by the interactive effects of weather, soils, and genetics, and the actual crop yield attained by a producer The North Central USA region includes these states Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin The 12 states combined produce 2,719 million bushels annually on 63 million harvested acres during 2010-2014, representing a respective 82 and 81% of total U S soybean production and acreage (USDA-NASS) Average soybean yield in the NC-USA region during 2010-2014 was 43 bushels/acre, yet some producers can consistently attain soybean yields near or greater than 80 bushels/acre (Specht et al , 1999, Grassini et al , 2014, VanRoekel and Purcell, 2014) This large gap between an average state yield and the very high yield obtained by some producers in that state needs to be explored and better understood This project is targeted at identifying the factors - whether these are site-specific soil or weather conditions, or are less than optimal crop management practices - that prevent most producers from attaining yields closer to the high yields attained by other producers Once those factors are identified, both the producer and his/her university research/extension specialist can focus on how to close the yield gap for that individual producer (and others like him or her) The most common approach to identify yield-limiting factors in producer fields involves conducting on-farm trials, in which researchers selectively apply different input levels or management practices in experimental trials conducted in multiple producer fields (e g , Villamil et al , 2012), and then evaluate whether a particular input or management practice is statistically significant in improving yield, and of course, whether the degree of yield improvement justifies the cost of the input An example of this approach is the USB-funded kitchen sink project that was just completed An alternative method is the use of producer self-reported field yield and associated crop management practice data (e g , Grassini et al , 2011, 2015) This approach can be used to (1) evaluate current on-farm management relative to recommended optimal practices, and (2) discern the yield impact of individual factors, and their relative importance, in the context of commercial-scale fields, in contrast to small experimental plots, and within the range of cost-effective management practices that are actually being used by producers Indeed, when hundreds of such producer reports are available, the yield difference between various management practices and the interactions of those practices can be contextualized for a given weather-soil context Such analysis of large-scale producer data can thus complement and maybe provide a focus for what treatments to evaluate in the more costly agronomic field trial evaluations (see FIGURE 1 below for an example of how producer self-reported data was used by Grassini et al relative to soybean planting date in Nebraska) (17)Project Title Biology and control of sclerotinia stem rot of soybeanPrincipal Investigator Mehdi Kabbage, University of Wisconsin-Madison, Co-Investigators Damon Smith, University of Wisconsin-Madison, Daren Mueller, Iowa State University, Martin Chilvers, Michigan State University, Sydney Everhart, University of Nebraska-Lincoln, Budget Amount and Project Year $88,700 Year 1III Brief Project Justification and Rationale Need, state-of-the-art, opportunity for farmers and the soybean industry Sclerotinia sclerotiorum is a fungal pathogen with a worldwide distribution, causing disease on over 400 plant species and up to $252M in losses per year on sunflower, soybeans, dry edible beans, canola, and pulse crops (U S Canola Association, 2014) S sclerotiorum causes considerable damage to soybean and has proven difficult to control (culturally or chemically), with host resistance to this fungus being mostly inadequate In the temperate north central soybean production areas of the United States, Sclerotinia stem rot (SSR) can be a significant yield limiting disease, with reported losses more than 10 million bushels (270 million kg) per year (Peltier et al , 2012) These impacts on yield are significant and make SSR one of the most important diseases of soybean in the North Central U S Although US Congress has appropriations for the National Sclerotinia Initiative, only a small portion of that funding supports research directly related to soybean production in the NC States Thus, the proposed project is designed to address factors affecting fungicide efficacy in the NC States, soybean NADPH oxidases as a novel host resistance mechanism for soybean, fungicide resistance emergence, and to develop new outreach and disease management strategies (18)Project Title Developing an Integrated Management and Communication Plan for Soybean Sudden Death SyndromePrincipal Investigator Dr Daren Mueller, Iowa State UniversityCo-Investigators Dr Leonor Leandro, Iowa State UniversityDr Greg Tylka, Iowa State UniversityDr J Arbuckle, Iowa State UniversityDr Georgeanne Artz, Iowa State UniversityDr Jamal Faghihi, Purdue UniversityDr Kiersten Wise, Purdue UniversityDr Damon Smith, University of WisconsinDr Virginia Ferris, Purdue UniversityDr Martin Chilvers, Michigan State UniversityDr Febina Mathew, South Dakota State UniversityBudget Amount and Project Year $100,000 Year 1Brief Project Justification and Rationale The foundational management strategy for sudden death syndrome (SDS) is using resistant cultivars However, in years such as 2010 when environmental conditions were favorable for disease development, it is evident that resistance alone does not provide adequate control or reduce farmer risk sufficiently, which provides us with an early education awareness opportunity Also, SDS continues to move into new areas Thus, the main goal of this project is to investigate management options that will help ensure resistant cultivars will be as effective as possible thereby reducing risk as well as providing farmers with maximum economic return on their investment even in unusually conducive SDS conditions Objectives for Year)1 Objective 1 Determine how seed treatments in furrow and foliar fungicides will affect SDSObjective 2 Evaluate if soybean cyst nematode reproduction affects SDS developmentObjective 3 Study how cultural practices affect inoculum levels and SDS developmentObjective 4 Determine a Return On Investment (ROI) for SDS management strategiesObjective 5 Communicate research results with farmers, agribusinesses and other soybean stakeholders(19)Project Title Development of soybean genotypes with enhanced capacity of nitrogen fixationPrincipal Investigator Stella K Kantartzi, Ph D , Southern Illinois University CarbondaleBudget Amount and Project Year $26,281 Year 1Brief Project Justification and Rationale Need, state-of-the-art, opportunity for farmers and the soybean industry Soybean yield increase in the United States has been remarkable In the last 30 years the rate has been 31 2 kg ha-1 on annual basis and the genetics has been claimed to be responsible for 80% of this gain (Specht et al , 1999) Despite the recent progress in yield potential of new soybean cultivars, many concerns have been raised regarding the capacity of current and future cultivars to meet their nitrogen (N) demand solely by the biological nitrogen fixation (BNF) and available soil N (Salvagiotti et al , 2008) Although soybean grows relying exclusively on its fixed and available soil N, soybean is one of the most N requiring crops (Sinclair and Wit, 1975) N removal in the harvested seeds is estimated to be 3 5 lb bu-1 for soybean (Salvagiotti et al , 2008), while only 0 78 lb bu-1 for corn Therefore, farmers are more likely to face N shortage due to high N removals either by planting new high-yielding soybean cultivars or by not supplying the required N either with inorganic N fertilizer In order to avoid a shortage of N supply affecting yield potential, the high yielding soybean cultivars grown in high quality environments require a continuous selection of more efficient Bradyrhizobium strains as well as genotypes with a higher capacity of BNF This will allow meeting future soybean N demand without N fertilizer input (Nicols et al , 2002)

Return Reference	Explanation
Program Descriptions (20) through (23)	(20)Project Title Improving our understanding of stem canker and how to manage it in soybean across the Midw estPrincipal Investigator Damon Smith, University of Wisconsin-MadisonKiersten Wise, Purdue University, Daren Mueller, Iow a State University, Febina Mathew , South Dakota State UniversityBudget Amount and Project Year $50,000 Year 1Brief Project Justification and Rationale Need, state-of-the-art, opportunity for farmers and the soybean industry Objective Several different diseases can cause similar symptoms on soybeans An example of a disease that is easily misdiagnosed as early crop maturity, sudden death syndrome (SDS), Sclerotinia stem rot or charcoal rot in the North Central United States, is soybean stem canker Symptoms of the disease can include main stem w ilting and w idespread plant death in areas of a field (Fig 1) Closer examination of plants often reveals sunken cankers on main stems (Fig 2) In recent years stem canker and other diseases caused by fungi in the same group, such as pod and stem blight, have become increasingly problematic in the North Central region Severe stem canker epidemics can occur in w et springs, and w ith climate experts predicting w etter springs, it is possible that this disease w ill be more prevalent in coming years (Fernandez et al 1999) In 2014, this disease w as frequently observed and mentioned as the second most prevalent disease in the North Central region, behind SDS (NCERA137 reports) (21)Project Title Initiation of a genomic selection pipeline for public soybean breeders in the North Central RegionContact Information Aaron Lorenz (PI), University of MinnesotaBill Beavis, Iow a State University, Patrick Brow n, University of Illinois, Urbana, Brian Diers (PI), University of Illinois, Urbana, George Graef, University of Nebraska, LincolnMatt Hudson, University of Illinois, Urbana, Alex Lipka, University of Illinois, Urbana, Leah McHale, The Ohio State University, Randall Nelson, USDA-ARS and Department of Crop Sciences, University of Illinois, Urbana, Henry Nguyen, University of Missouri, Katy Martin Rainey, Department of Agronomy, Purdue University, West Lafayette, IN 47907, 765-494-1212Andrew Scaboo, University of Missouri, William Schapaugh, Kansas State University, Grover Shannon, University of Missouri, Asheesh Singh, Iow a State University, Dechun Wang, Michigan State University, Budget Amount and Project Year $368,739 Year 1Brief Project Justification and Rationale Increases in soybean yield through breeding are slow er than producers expect There are several possible reasons for the reduced rate of gain in soybean grain yield, including limited genetic variation in the commercially used gene pool, amount of time required for each breeding cycle, size of the breeding populations, and accuracy of evaluations Advances in genomics have made w hole-genome genotyping less expensive than multi-location yield testing A pow erful approach to make use of this genomic information for selective breeding is through a method called genomic prediction and selection Large datasets of genomic and phenotypic information are required to maximize the effectiveness of genomic prediction Fortunately, a w ealth of data already exists w ithin the public soybean community that could be used to initiate a genomic prediction pipeline to assist soybean breeders to more effectively select for yield and introgress diversity into their breeding program This pipeline w ill evolve into a service for soybean breeders that w ill help address all of the major restraints to soybean breeding progress (22) Project Title Seedling Diseases Biology, Management and EducationPrincipal Investigators Jason Bond, Southern IL Univ John Rupe, Univ of ArkansasTony Adesemoye, UNMartin Chilvers, MSUSydney Everhart, UNAhmad Fakhoury, SIUChris Little, KSUDean Malvick, UMNFebina Mathew , SDSUGary Munkvold, ISUAlison Robertson, ISUKiersten Wise, PUUSB CollaboratorsLoren Giesler, UNHeather Kelly, UTLeonor Leandro, ISUBerlin Nelson, NDSUAlbert Tenuta, Ontario Min of Ag Budget Amount and Project Year $269,501 Year 1Brief Project Justification and Rationale Soilborne seedling and root diseases of soybean significantly reduce yields in the North Central region of the United States Seedling diseases rank among the top 4 pathogen threats to soybean, because their insidious nature makes them difficult to diagnose and control It is nearly impossible to predict w hen they w ill take a heavy toll, until it happens The challenges and failures of managing soilborne diseases and pathogens of soybean and other crops are based in part on limitations in know ledge and methods This project w ill address critical limitations in identifying and managing seedling diseases Producers and industry w ill see benefits in the form of rapid diagnostics and management recommendations This benefit w ill also help industry in their assessments in pesticides and germplasm development Producers w ill also see their check-off funding being maximized by the synergy of this team, the USB seedling disease project and the USDA-NIFA oomcyete project This project complements the USB seedling disease project (23) Project Title Soybean Entomology in the North Central Region Management and Outreach for New and Existing PestsPrincipal Investigator Kelley Tilmon, The Ohio State University Brian Diers, University of Illinois, Glen Hartman, USDA-ARS at University of Illinois, Christian Krupke, Purdue University, Punya Nachappa, Indiana University- Purdue University Fort Wayne, Matt ONeal, Iow a State University, Erin Hodgson, Iow a State University, Brian McCormack, Kansas State University, Deborah Finke, University of Missouri, George Heimpel, University of Minnesota, Bruce Potter, University of Minnesota, Robert Koch, University of Minnesota, Tom Hunt, University of Nebraska, Robert Wright, University of Nebraska, Deirdre Prischmann, North Dakota State University, Janet Knodel, North Dakota State University, Andy Michel, Ohio State University, Budget amount and Project Year $427,192 Year 1Brief Description of Proposed Research The Extension and Outreach component of this proposal is to ensure that the research results generated by the other three Program Areas are delivered to soybean producers and other stakeholders in a user-friendly format, in a coordinated fashion In an era of shrinking extension systems and budgets and reduced extension staff, w e believe a coordinated approach to NCSRP content delivery is an efficient use of project resources Our entomology team has a good track record of providing such deliverables For example, in our previous project w e produced the NCSRP Soybean Aphid Field Guide (w ith 17,500 hard copies distributed in the region, and a free dow nload available on NCSRPs Soybean Research and Information Initiative w ebsite), the Visual Guide to Counting Soybean Aphids field scouting card (4000 copies distributed, plus free dow nload), a 3-part w ebinar series on soybean aphid management for the Plant Management Netw ork (open-access presentations available any time), an aw ard-w inning a 3-part animated video series to educate producers on aphid-resistant soybean varieties, a postcard w ith flash drive to distribute multiple NCSRP publications w hile reducing printing costs (2000 copies distributed), an NCSRP multistate research field event in the summer of 2014, and an outreach booth at the 2015 Commodity Classic w here w e distributed outreach material and made approximately 2,000 direct stakeholder contacts

Return Reference	Explanation
Program Descriptions (6) through (10)	(6) Project Title Characterization and Enhancement of Soybean Genetic Resources for Soilborne Disease ResistancePrinciple Investigator and Co-PIs (PIs) James Kurle, Xianjin Ma, (Co-PIs) Jim Orf, Nevin Young, Kate Rainey Amount and Project Year $185,237 Year 2Brief Statement of Objectives Obj 1 Evaluate of soybean germplasm for resistance or partial resistance to Phytophthora sojae, Pythium irregulare, P ultimum, and Fusarium graminearum (Kurle & Orf)Obj 2 Identify of QTLs underlying resistance to P sojae, F graminearum, P irregulare, and P ultimum by association mapping (Kurle & Young)Obj 3 Fine mapping, isolation, and functional verification of two uncharacterized Rps genes conferring resistance to P sojae (Ma&Rainey)Obj 4 Develop highly adapted soybean cultivars or experimental lines with major resistance QTLs and Rps genes by marker-assisted selection (Rainey & Orf)Brief Statement of Expected Deliverables (max 250 words) Obj 1 Relate new QTLs/genes to resistance and partial resistance to P sojae, P ultimum, F graminearum identified in early maturity lines Obj 2 Initial results of statistical analysis and association mapping for P sojae Obj 3 Fine mapping of RpsUN2 to a 64-kb region within 430 kb previously associated with marker for this gene Obj 4 Introgression of RpsUN1 and RpsUN2 to elite breeding lines developed by Purdue (7) Project Title Micronutrients for Soybean Production A Position Paper for the North-Central RegionPrincipal Investigator Antonio P Mallarino, Iowa State UniversityBudget Amount and Project Year Year 2, $15,241Brief Statement of Objectives Soybean growers in the in the North Central region have been asking many questions concerning possible soybean yield loss due to deficiency of micronutrients However, few extension publications address this issue based on recent research results, and often have divergent recommendations not clearly related to soil differences across states Therefore, the goal of this multi-state project is to gather information across key states of the North Central regional and prepare a regional position paper on rational use of micronutrients for soybean production The specific objectives are 1 Find, analyze, and summarize published and unpublished land-grant university field response-based information about soybean need for micronutrients and the value of both soil and plant tissue analyses in the North Central region 2 Prepare and publish a regional position paper addressing the most important issues concerning use of micronutrients for soybean production in the North Central region (8)Project Title Iron Deficiency Chlorosis Getting to the root of the problemInvestigators/institutions Phil McClean (Project Leader and Robert Stupar (University of Minnesota) Budget Amount & Project Year $141 599 Year 6Projects Strategic Goal is to develop useful molecular markers that can identify IDC efficient genotypes and use state of the art genomic technologies to identify genes involved in IDC efficiency or inefficiency The ultimate goal of the research is to isolate candidate genes and develop markers for these genes that will aid the soybean breeder in developing IDC resistant varieties (9)Project Title Developing an Integrated Management and Communication Plan for Soybean Sudden Death SyndromePrinciple Investigator Daren MuellerBudget Amount and Project Year $141,599, Year 3Brief Statement of Objectives The foundational management strategy for sudden death syndrome (SDS) is using resistant cultivars However, in years such as 2010 and 2014, when environmental conditions are favorable for disease development, it is evident that resistance alone does not provide adequate control or reduce farmer risk sufficiently Also, SDS continues to move into new areas Thus, the main goal of this project is to investigate management options that will help ensure resistant cultivars will be as effective as possible thereby reducing risk as well as providing farmers with maximum economic return on their investment even in unusually conducive SDS conditions Objective 1 Evaluate if soybean root health can be improved to reduce SDS or be used as an indicator of SDS risk Objective 2 Determine how shifts in soybean production practices affect the risk of SDS development Objective 3 Communicate research results with farmers, agribusinesses Examined the effect of glyphosate on SDS Study has been published in Plant Disease Study of effect of interaction between herbicide and seed treatment on SDS is ongoing We collected and analyzed the first year data Completed a multi-lab study evaluating performance of six qPCR assays developed for F virguliforme The manuscript was submitted for publication to Phytopathology In this study, we compared the strengths and weakness of all six assays under different research facilities in terms of their specificity, sensitivity, and consistency and also identified an effective protocol for better diagnosis and quantify SDS pathogen To summarize, assays differed in their performances and also the performance of the same assay varied among the laboratories An assay developed in Chilvers lab showed the highest sensitivity and the second highest specificity, and thus is suggested as the most useful qPCR assay for F virguliforme This assay is currently being used for quantifying F virguliforme population in root and soil in other objectives Identified seed treatments to reduce SDS foliar symptoms We completed a study evaluating planting date and seed treatment effect on SDS development Manuscripts are being written to peer-reviewed journals To summarize, ILeVO seed treatment reduced disease severity and increased yield nearly in all plantings and cultivars, with a maximum yield response up to 21% (Roland Iowa) Effect of planting date on foliar SDS symptoms was inconclusive Although Mid-June plantings did not have higher disease than early plantings it yielded lower grain up to 19 bu/A compared to early May plantings Evaluated different fungicide products and application methods to see if any would complement cultivar resistance Manuscript is being written for publication in peer-reviewed journal We are continuing this study in 2015 replacing some products and foliar applications with new chemical and biological products From this study, the main conclusion was that ILeVO seed treatment and Luna Privilege in-furrow were effective at reducing SDS severity in many different environments compared to the control Foliar applications of any chemicals had no effect on SDS Collected SCN, SDS and yield data from all participating states and data analysis is being done We will continue this experiment in 2015 as well However, so far we found varieties with Peking source of resistance for SCN had lowest SDS in many environments and varieties with no resistance to SDS and SCN had the highest disease Presented our preliminary research at professional meetings, on Plant Management Network, gave national and international seminars, media interviews, talk in field days and conferences for farmers and also published in state newsletter articles, 20+ media releases etc To communicate with researchers, we also published or are in the process of publishing in peer-reviewed journals We also had several press releases, including some jointly with NCSRP, based on results from this project (e g , glyphosate study, ILeVO study) (10)Project Title Accelerating soybean yield improvement by utilizing yield genes from soybean wild relativesPrinciple Investigator and Co-PIs Randall Nelson (PI), USDA-ARS, University of Illinois, Jianxin Ma, Purdue University, Matthew Hudson, Patrick Brown and Brian Diers, University of Illinois, Ram Singh, USDA-ARS, Urbana, George Graef, University of Nebraska-Lincoln Budget Amount and Project Year $181,875, Year 2Brief Statement of Objectives Our objective is to identify and genetically characterize high-yielding lines derived from the wild relatives of soybean that can be used to infuse unique and highly productive yield genes into new soybean varieties We have three sub-objectives that will help us achieve this goal First, using the highest yielding experimental lines derived from crossing Dwight by PI 441001 (G tomentella), we will genetically map the location of the genes/chromosomal regions responsible for these large yield increases Secondly, using large populations of the inbred lines derived from crosses of the soybean variety, Williams 82, with the wild soybean accessions PI 483916 and PI 479752, we will precisely map agronomically important genes associated with the major differences between soybean and wild soybean Finally, we will yield test experimental lines derived from up to eight wild soybean accessions and identify chromosomal regions from the wild soybean parent that are adjacent to (but do not contain) the genes that condition the wild soybean plant type This will put a prio