Nebraska On-Farm Research Network

Years:	2011-2013
Title:	Cover Crop Profitability
Crop:	Corn/Soybeans
County:	Lancaster
Study ID:	119109201101M3
Objective:	Determine the effectiveness of cover crops in improving yield and profitability in a corn and soybean rotation.
Treatments:	Check vs. Rye vs CoverCrop Mix

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OFRN Operator:

Results: 2011

(Fontanelle 9789)

Variable	No Cover	Rye	Smart Mix
Yield, bu/ac	62	59	61
Moisture, %	9.7	10.2	9.6
Cost/ac	---	$19.30	$27.81

Yield Prob >/T/	No Cover	Rye
Rye	0.1545 ns	---
Smart Mix	0.5591 ns	0.3637 ns

Moisture Prob >/T/	No Cover	Rye
Rye	0.1585 ns	---
Smart Mix	0.7208 ns	0.0903*

Cover Planted: 10/16/10 Planted: 5/3/2011 Harvested: 10/16/11

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OFRN Operator:
Information: 2012

Winter Mix Formulation	**54.5 lbs**
Winter Wheat	30 lbs
Frostmaster Peas	10 lbs
Hairy Vetch	5 lbs
Common Vetch	3.75 lbs
Morton Lentil	3.75 lbs
D.E. Rape	1 lbs
Winifred Pea	1 lbs

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OFRN Operator:

Results: 2012

	Corn Cover Crop		
Variable	No Cover	Rye	WinterMix
Yield, bu/ac	92.7	86.0	90.8
Prob>/T/ 0.4356 ns	A	A	A
Moisture, % (ns)	11.7	11.7	11.6
TW (ns)	58.3	58.6	58.2
Harvest Population	29.3k	26.5k	29.6k
Prob>/T/ 0.0967*	A	A	A
Cost/ac	---	$22	$46

Hybrid Fontanelle H907/GT Wymore Silty Clay Loam

Cover Planted: 10/25/11 Planted: 4/24/12 Harvested: 9/10/12

NOTE: March 22 12,000 gal hog manure injected, April 20 field cultivated and applied nitrogen. Cost per acre does not include drilling costs of approximately $17/ac.

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OFRN Operator:

Information: 2013

Wymore Silty Clay Loam - Upland
Corn Soybean Rotation - Prior Crop Corn
Wymore Silty Clay Loam Upland
Winter M Winter Pea = 10 #/ac#
Hairy Vetch= 5#/ac
Common Vetch = 4#/ac
Lentis = 4#
Winter wheat= 30#/ac
Rape seed = 1# /ac
Winfred hybrid= 1/ac
Rye = 1bu/ac
Planting soybeans no-till 5/1/2013
cover crops no-till 9-19-12 $70/ac
rye no-till " $14.5/AC

Preplant/burndown 2,4-D - 6# A.I. 5.4oz 4/13/2013 Roundup Power Max*** 36 oz 4/13/2013 Authority XL 2.8 oz 4/13/2013 Authority Elite 9.6 oz 13-Apr Adjuvants 4/13/2013 Post-soybean Roundup Power Max 40oz 7/3/2013 Cadet 0.9 oz 3-Jul Adjuvants *** The check treatment used less RU at 24 oz per acre vs. the 36oz rate. Cost per acre does not include drilling costs of approximately $17/ac.

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OFRN Operator:

Results: 2013

Cover Crop

Soybean Yield

	bu/ac	Moisture	TW	HPop
Check	56.3 A	11.9 A	57.6 A	103.8k A
Rye	54.0 A	11.9 A	58.0 A	95.6k A
WinterMax	56.3 A	11.7 A	58.0 A	101.4k A
Prob>/T/	ns	ns	ns	ns

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Summary:

Cover Crop

After three years of research in the same field, cover crops did not provide an economic advantage to no cover crop in the production of corn and soybeans.
(2013) The two cover crop treatments did not result in an increase in grain yield as compared to no cover crop.
(2012) The two cover crop treatments did not result in an increase in grain yield as compared to no cover crop.
(2011) Yield difference was not statistically significant among the three treatments. No portion of cost of the cover crop was recouped by either cover crop treatment, relative to the check treatment. Note: Cover crop was killed off later than preferred.

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Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska–Lincoln cooperating with the Counties and the United States Department of Agriculture.