

Armstrong and Neely-Kinyon Research Farms Summary

RFR-A1882

Wallace Foundation for Rural Research and Development

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 Crops Specialist John Beckman
 Iowa On-Farm Ag Specialist ... Jim Rogers
 Associate Dean..... Mark Honeyman
 Farms Manager Tim Goode

103 Curtiss Hall
 513 Farm House Lane, ISU

Farm and Weather Summary

Dallas Maxwell, superintendent

Farm Comments

Developments. There was a cool, dry start to the growing season, then a warm, wet finish. A windstorm in early July caused the corn to lodge. Construction of a new cattle hoop started. Still making plans for taking down barn and granary to make room for new shop and machine shed.

Field days and tours. The farms held three events with a total of 1,099 people attending the various field days, conferences, classes, and group tours. Among the farm events were the Neely-Kinyon Field Day, Demonstration Garden Field Day, IWCC and FFA soil judging contest, STRIPS meeting, Ag 4 All Field Day, and gall midge meeting.

New projects. Bayer soybean trial, M. Licht; Seven rate nitrogen trial, M. Castellano; Irrigating FACTS soybeans, S. Archontoulis; High quality beef project, D. Loy/E. Lundy; numerous on-farm trials.

Livestock. Winter snowfall was below normal and temperatures were moderate. Moisture and heat were issues during summer and fall, creating muddy feedlots.

Crop Season Comments

Corn planting was slightly delayed due to cool weather, but was completed in early May. Harvest started mid-September, but dealt with

above-normal rainfall and lodged corn. Harvest was completed in early November and fall tillage and fertilization was completed before the ground completely froze. Yields averaged 169 bushels/acre for corn and 45 bushels/acre for soybeans.

Weather Comments

Winter 2017-2018. Winter was fairly mild with little snow accumulation and above-normal temps.

Spring 2018. Spring operations started in early April, but due to cooler temperatures, planting was slowed. Moisture was a little below average.

Summer 2018. Summer ended warmer than average and with above-normal precipitation. June brought a lot of rain, and July was dry. A windstorm in early July lodged some corn. Pastures and hay were affected by the dry weather, but able to rebound the rest of the season.

Fall 2018. Harvest season was challenging due to above-normal rainfall in August, September, and October. Soybeans dried down early, but wet weather slowed harvest. Corn was slow to dry down, plus there were issues with lodged corn. Harvest was completed in early November and fall tillage and fertilization were finished just before the ground froze.

Table 1. Armstrong Research and Demonstration Farm, Lewis, monthly rainfall and average temperatures for 2018.

Month	Rainfall (in.)		Temperature (°F)		Days 90° or above
	2018	Deviation from normal*	2018	Deviation from normal	
March	1.69	-0.01	36.5	-0.26	0
April	.74	-1.96	42.8	-6.31	0
May	3.56	-0.34	69.6	+8.66	7
June	9.63	+4.63	74.6	+4.07	8
July	.63	-2.77	73.9	-0.39	5
August	9.38	+5.38	73.2	+1.36	5
September	6.53	+3.03	67.0	+0.30	3
October	<u>3.77</u>	<u>+1.37</u>	50.2	-1.43	<u>0</u>
Totals	35.93	+9.33			28

*Normal rainfall hand recorded at the Armstrong Research Farm every day at 8 a.m.

Research Farm Projects

Research Project

Bayer soybean DOP Trial
 Black cutworm moth monitoring
 Corn fungicide “Cardinal” trial
 Corn hybrid x date of planting study
 Corn rootworm research
 Cover crops seeding into standing corn and soybeans
 Ecological study–University of Maryland
 FACTS (yield forecasting) study, corn
 FACTS (yield forecasting) study, soybean
 Herbicide trial
 High quality beef study FIMS
 Home demonstration garden
 ISU bull development project FIMS
 K-fertility x placement study
 Long-term organic rotation study
 Long-term tillage/crop rotation study
 Milkweed species demo
 Monarch habitat (ARF and N-K)
 Neonic trial
 Nitrogen rates x nitrogen application timing study
 Nitrogen rates/crop rotation study
 On-farm corn and soybean management studies
 Organic grape study
 Organic corn breeding
 Organic vegetable production with cover crops
 Phosphorous x placement study
 Potassium x corn hybrid (old K) study
 Sorghum as a biomass crop
 7-N rate trial
 Soybean cultivar x date of planting study
 Soybean fungicide evaluations
 Stine corn and soybean variety trial
 STRIPS bowl (ARF and N-K)
 True armyworm moth monitoring
 Weather station
 Wyffels variety trial

Project Leader

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 Wyffels Seed

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Landus Coop, Atlantic	East Pottawattamie SWCD
Practical Farmers of Iowa	Cass County Master Gardeners
Iowa Beef Center	Iowa Farmer Today
Leopold Center for Sustainable Agriculture	Scoular Grain
Farm Bureau	Stine Seed
Tri-County Steer Futurity	Farm Credit Services, Red Oak
Lyman Vet Clinic	21 st Century Coop
Wyffels Hybrids	Mike Muhlbauer
Marlin Rossell	Beck's Hybrids
AgriVision, Massena	Lindeman Ford Tractor, Atlantic
Pioneer Seed Co.	BASF/ASA
Sandbothe Firestone	Cass County NRCS
Iowa Western Community College	Lamb Tiling
Southwest Iowa Tiling	Rick Larsen

The mention of firm names or trade products does not imply they are endorsed over other firms or similar products not mentioned.

Armstrong Research and Demonstration Farm
53020 Hitchcock Avenue
Lewis, IA 51544
712-769-2402

Directions: 11 miles southwest of Atlantic on Highway 6, then ½ mile south on M53 and ¾ mile east on gravel.

Directions to Neely-Kinyon Farm: from Greenfield and the intersection of Highways 92 and 25, go south 2 miles on Highway 25, ½ mile east and ¼ mile north.

Information on Experiments in Previous Annual Progress Reports

Evaluation of Foliar Fungicides on Soybeans in Southwest Iowa RFR-A17100.....	ISRF17-12
Comparison of Organic and Conventional Crops at the Neely-Kinyon Long-Term Agroecological Research Site RFR-A1788.....	ISRF17-12
On-Farm Corn and Soybean Fungicide Demonstration Trials RFR-A1749	ISRF17-12
On-Farm Corn and Soybean Fertilizer Demonstration Trial RFR-A1733	ISRF17-12
Long-term Tillage and Crop Rotation Effects on Soil Carbon and Soil Productivity RFR-A1780.....	ISRF17-12
Effectiveness of Foliar Fungicides by Timing on Gray Leaf Spot on Hybrid Corn in Southwest Iowa RFR-A1792.....	ISRF17-12
Demonstrating Cover Crop Mixtures on Iowa Farmland: Management, Soil Health, and Water Quality Benefits RFR-A1759	ISRF17-12
Effects of Label Dose Permethrin Use in Yearling Angus Beef Bulls In-Season Forecasting of Plant Growth, Soil Water-Nitrogen, And Grain Yield in Southwest Iowa RFR-A1794.....	ISRF17-12
On-Farm Cover Crop Demonstration Trials.....	ISRF17-12
Evaluation of the Efficiency of Aglime and Pelleted Aglime in a Southwest Iowa Acid Soil RFR-A1686	ISRF16-12
Corn Yield Response to Nitrogen Fertilizer Application Timing in Southwest Iowa RFR-A16105	ISRF16-12
Soybean Date of Planting and Maturity in Southwest Iowa RFR-A1675	ISRF16-12
Grain Drying Energy Use RFR-A1676.....	ISRF16-12
Effect of Foliar Fungicides on Standability of Corn RFR-A16113.....	ISRF16-12
Comparison of Untreated Mature Switchgrass and Cornstalks as Roughage in Beef Cattle Feedlot Diets A.S. Leaflet R2953	ISRF15-12
Effect of Calcium Hydroxide Treatment on Switch Grass A.S. Leaflet R2943	ISRF15-12
Monarch Oviposition and Larval Survival on Nine Native Milkweed Species RFR-A1508	ISRF15-12
Integrating Strips of Native Prairie into Rowcrop Agricultural Fields RFR-A1572	ISRF15-12
Cover Crop Options and Mixes for the Upper Midwest: Is a Winter Rye Monoculture the Only Option RFR-A1526.....	ISRF15-12
Iowa Soils RFR-A1507.....	ISRF15-12
Chronology of the Wallace Foundation for Rural Research and Development, Armstrong Research Farm, and Neely-Kinyon Research farm RFR-A1501	ISRF15-12
On-Farm Sulfur Fertilization of Corn and Soybean Trials RFR-A1560	ISRF15-12
on Reproductive Function and Testicular Histopathology A.S. Leaflet R2958	ISRF14-12
Attracting Beneficial Insects to Iowa Agricultural Crops Through Floral Provisioning RFR-A1339.....	ISRF13-12
Evaluation of Tillage, Residue, and Fungicide on Disease Incidence in Continuous Corn Production Systems RFR-A1371	ISRF13-12
Seasonal and Rotational Influences on Corn Nitrogen Requirements RFR-A1264	ISRF12-12
Broadcast and Band Phosphorus and Potassium Placement for Corn and Soybean Managed with Till or No Till RFR-A1197	ISRF11-12