

2017

# Armstrong and Neely-Kinyon Research Farms Summary

Wallace Foundation for Rural Resarech and Development

Dallas Maxwell  
*Iowa State University*, [dallasm@iastate.edu](mailto:dallasm@iastate.edu)

Follow this and additional works at: <https://lib.dr.iastate.edu/farmprogressreports>



Part of the [Agriculture Commons](#), and the [Plant Sciences Commons](#)

---

## Recommended Citation

Wallace Foundation for Rural Resarech and Development and Maxwell, Dallas (2017) "Armstrong and Neely-Kinyon Research Farms Summary," *Farm Progress Reports*: Vol. 2016 : Iss. 1 , Article 2.

DOI: <https://doi.org/10.31274/farmprogressreports-180814-2028>

Available at: <https://lib.dr.iastate.edu/farmprogressreports/vol2016/iss1/2>

This Armstrong Research and Demonstration Farm is brought to you for free and open access by the Extension and Experiment Station Publications at Iowa State University Digital Repository. It has been accepted for inclusion in Farm Progress Reports by an authorized editor of Iowa State University Digital Repository. For more information, please contact [digirep@iastate.edu](mailto:digirep@iastate.edu).

# Armstrong and Neely-Kinyon Research Farms Summary

**RFR-A16114**

## Wallace Foundation for Rural Research and Development

President.....Brent Bierbaum, Griswold, Cass County\*  
 President Elect ..... Mark Schnepel, Carson, East Pottawattamie County\*  
 Treasurer ..... Dan Rossell, Griswold, Cass County\*  
 Secretary ..... Allen Tiarks, Council Bluffs, West Pottawattamie County\*

### Directors

Vacant .....Adair County  
 Dan Morgan, Corning ..... Adams County  
 Joe/Brittany Elmquist, Audubon..... Audubon County  
 Vacant ..... Carroll County  
 Dan Rossell, Griswold ..... Cass County\*  
 Brent Bierbaum, Griswold ..... Cass County\*  
 Vacant ..... Clarke County  
 Rod Backhaus, Manilla..... Crawford County  
 Vacant ..... Decatur County  
 David Trowbridge, Tabor ..... Fremont County  
 Vacant ..... Madison County  
 Tom Pollock, Malvern ..... Mills County  
 Alan Spencer, Stanton..... Montgomery County  
 Vacant ..... Page County  
 Allen Tiarks, Council Bluffs..... West Pottawattamie County\*  
 Darrell Stamp, Walnut ..... East Pottawattamie County\*  
 Don Hummel, Atlantic .....Shelby County  
 Kevin Barker, Lenox..... Taylor County\*  
 Jim Hanson, New Market ..... Taylor County\*  
 Vacant ..... Union County

\*Co-directors

Bookkeeper ..... Paulette Cambridge  
 At-Large ..... Darrell Busby, Gil/Ardyth Gillespie  
 Advisors ..... Alan Ladd, Mark Honeyman  
 Ex Officio..... Varel Bailey, Dave Williams, Steve Hansen, Mark Bentley,  
 Garry Pellett, Clark BreDahl

### Staff

Farm Superintendent ..... Dallas Maxwell      Crops Specialist ..... Dan Schaben  
 Administrative Specialist..... Paulette Cambridge      Iowa On-Farm Ag Specialist ... Jim Rogers  
 Agricultural Specialist .....Randy Breach      Mark Honeyman ..... Farms Coordinator  
 Tim Goode ..... Farms Manager  
 103 Curtiss Hall  
 513 Farm House Lane, ISU

## Farm and Weather Summary

Dallas Maxwell, superintendent

### Farm Comments

*Developments.* The farm acquired a new weigh wagon for On-Farm studies and had extensive tiling work done at the Neely-Kinyon Farm. Donations received totaled more than \$28,500 for both farms.

*Field days and tours.* The farms held four events with a total of 931 people attending the various field days, conferences, classes, and group tours. Among the farm events were the Wyffels Ag Career Day, IWCC and FFA soil judging contest, and a Weed Field Day led by Aaron Saeugling, extension crop specialist.

*New projects.* Standability trial, A. Robertson; FACTS (yield forecasting), S. Archontoulis; Soybean breeding, D. Singh; True Army Worm Moth monitoring, A. Sisson; STRIPS bowl study (N/K), M. Helmers; Monarch habitat, R. Hellmich; Monarch Habitat (NK), R. Hellmich; Herbicide rates trial, A. Saeugling and J. Rogers; Cover crop demonstration, A. Saeugling and J. Rogers.

*Livestock.* Winter snowfall was below normal. Temperatures were moderate with rain in December and January instead of snow. Muddy lots and ice were challenges in the feedlots.

### Crop Season Comments

Corn planting was slightly delayed due to weather, but ended up being completed by early May. Harvest started late September with soybean struggling to dry due to the August precipitation and high humidity.

Yields were good with corn averaging 198 bushels/acre and soybean averaging 64 bushels/acre.

### Weather Comments

*Winter 2015-2016.* Last winter seemed to get off to a slow start with an unusually warm December that included over 4.5 in. of rain. Temperatures returned to normal January-February, with approximately 14 in. of snowfall.

*Spring 2016.* Spring operations started mid-March thanks to favorable weather conditions. April-May conditions caused planting challenges as field working days were reduced due to rainfall events. The staff worked together efficiently and all corn was planted by May 7 and soybean by May 20.

*Summer 2016.* Except for a “mini” drought experienced June 1-19, rainfall was very favorable for the growing season. The growing season average temperature was 62.8°F. 2016 recorded 17 days over 90°F, which was more than double the amount of days over 90°F in 2015. The Armstrong Farm recorded 11 in. more rain than the Neely-Kinyon Farm.

*Fall 2016.* October was tricky for harvest. The farm recorded almost 3 in. of rain in October. The soybean struggled to dry down due to late summer rainfall and high humidity during October. The favorable weather in November led to fall field work getting done in a timely fashion.

**Table 1. Armstrong Research and Demonstration Farm, Lewis, monthly rainfall and average temperature for 2016.**

| <b>Month</b> | <b>Rainfall<br/>(in.)</b> |                                   | <b>Temperature<br/>(°F)</b> |                                   | <b>Days 90° or<br/>above</b> |
|--------------|---------------------------|-----------------------------------|-----------------------------|-----------------------------------|------------------------------|
|              | <b>2016</b>               | <b>Deviation from<br/>normal*</b> | <b>2016</b>                 | <b>Deviation from<br/>normal*</b> |                              |
| March        | 1.37                      | -0.33                             | 44.3                        | +7.5                              | 0                            |
| April        | 6.66                      | +3.96                             | 51.2                        | +2.1                              | 0                            |
| May          | 7.84                      | +3.94                             | 60.6                        | -0.3                              | 0                            |
| June         | 2.84                      | -2.16                             | 75.3                        | +4.8                              | 9                            |
| July         | 6.89                      | +3.49                             | 73.5                        | -0.8                              | 1                            |
| August       | 5.39                      | +1.39                             | 72.4                        | +0.6                              | 4                            |
| September    | 5.19                      | +1.69                             | 68.3                        | +1.6                              | 3                            |
| October      | <u>2.96</u>               | <u>+0.56</u>                      | 56.9                        | +5.3                              | <u>0</u>                     |
| Totals       | 39.14                     | +12.54                            |                             |                                   | 17                           |

\*Normal rainfall hand recorded at the Armstrong Research Farm every day at 8:00 A.M.

### Research Farm Projects

|   |                                    |
|---|------------------------------------|
| Bio char biomass study on marginal soils            | D. Laird                           |
| Black cutworm moth monitoring                       | A. Sisson                          |
| Blackberry trellising study                         | G. Nonnecke                        |
| Corn fungicide “Cardinal” trial                     | A. Robertson                       |
| Corn hybrid x date of planting study                | M. Licht                           |
| Corn rootworm research                              | P. Weber                           |
| Cover crop demonstration                            | A. Saeugling/J. Rogers             |
| Cover crop x tillage & N starter                    | J. Sawyer                          |
| Cover crops seeding into standing corn and soybeans | E. Juchems                         |
| Crop residue removal research                       | M. Al-Kaisi/A. Mallarino/J. Sawyer |
| Evaluation of farm energy usage for drying corn     | M. Hanna                           |
| FACTS (yield forecasting) study                     | S. Archontoulis                    |
| Feedlot runoff study                                | S. Shouse                          |
| Herbicide rate trial                                | A. Saeugling/J. Rogers             |
| Home demonstration garden                           | C. Haynes                          |
| ISU bull development project                        | J. Williams/J. Reecy               |
| K-fertility x placement study                       | A. Mallarino                       |
| Lime study  | A. Mallarino                       |
| Long term organic rotation study                    | K. Delate                          |
| Long-term tillage/crop rotation study (3)           | M. Al-Kaisi                        |
| Miscanthus grass establishment study-Armstrong      | E. Heaton                          |
| Monarch habitat (ARF and N-K)                       | R. Hellmich                        |
| Neonicotinoid trial                                 | D. Mueller                         |
| Nitrogen rates x nitrogen application timing study  | J. Sawyer                          |
| Nitrogen rates/crop rotation study                  | J. Sawyer                          |
| On-farm corn and soybean management studies (6)     | J. Rogers/A. Saeugling             |
| Organic grape study                                 | K. Delate                          |
| Organic soybean disease control study               | K. Delate                          |
| Organic vegetable production with cover crops       | K. Delate                          |
| Phosphorous x placement study                       | A. Mallarino                       |
| Potassium x corn hybrid (old k) study               | A. Mallarino                       |
| Sorghum as a biomass crop                           | M. Fernandez                       |
| Soybean breeding study (4)                          | D. Singh                           |
| Soybean cultivar x date of planting study           | M. Licht                           |
| Soybean fungicide evaluations                       | D. Mueller                         |
| Standability study                                  | A. Robertson                       |
| Starter application study                           | M. Licht                           |
| STRIPS bowl (ARF and N-K)                           | M. Helmers                         |
| True armyworm moth monitoring                       | A. Sisson                          |
| Weather station                                     | E. Taylor                          |

### Acknowledgements

|  |                                 |
|--|---------------------------------|
| Shivvers Manufacturing                     | Atlantic News Telegraph         |
| Atlantic Chamber of Commerce               | KMA Radio, Shenandoah           |
| KJAN Radio, Atlantic                       | Dennis Jipsen Seeds             |
| 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                   |
| Cyclone Seed and Chemical                  | Spring Meadows Nursery          |
| Tri-County Steer Futurity                  | Farm Credit Services, Red Oak   |
| Lyman Vet Clinic                           | 21 <sup>st</sup> Century Coop   |
| Wyffels Hybrids                            | Mike Muhlbauer                  |
| Marlin Rossell                             | Becks 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                      |                                 |

*The mention of firm names or trade products does not imply that 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

|   |           |
|---|-----------|
| Comparison of Untreated Mature Switchgrass and Cornstalks<br>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 |
| On-Farm Corn, Soybean, and Alfalfa Fertilizer Trial RFR-A1557 .....   | ISRF15-12 |
| Monarch Oviposition and Larval Survival on Nine Native Milkweed Species<br>RFR-A1508 .....  | ISRF15-12 |
| Integrating Strips of Native Prairie into Rowcrop Agricultural Fields RFR-A1572 ....  | ISRF15-12 |
| Soybean Date of Planting and Maturity in Southwest Iowa RFR-A1565 .....   | ISRF15-12 |
| Cover Crop Options and Mixes for the Upper Midwest: Is a Winter Rye Monoculture the<br>Only Option RFR-A1526 .....  | ISRF15-12 |
| Corn Date of Planting and Maturity in Southwest Iowa RFR-A1564 .....  | ISRF15-12 |
| Iowa Soils RFR-A1507 .....  | ISRF15-12 |
| Chronology of the Wallace Foundation for Rural Research and Development,<br>Armstrong Research Farm, and Neely-Kinyon Research farm RFR-A1501 .....   | ISRF15-12 |
| Comparison of Organic and Conventional Crops at the Neely-Kinyon<br>Long-term Agroecological Research Site RFR-A1568 .....  | ISRF15-12 |
| On-Farm Sulfur Fertilization of Corn and Soybean Trials RFR-A1560 .....   | ISRF15-12 |
| Long-term Tillage and Crop Rotation Effects on Soil Carbon<br>and Soil Productivity RFR-A1548 .....   | ISRF15-12 |
| Elite Soybean Test—South RFR-A1376 .....  | ISRF14-12 |
| Effectiveness of Foliar Fungicides by Timing on Northern Leaf Blight<br>on Hybrid Corn in Southwest Iowa RFR-A1465 .....  | ISRF14-12 |
| On-Farm Corn Row Spacing Trials RFR-A1433 .....   | ISRF14-12 |
| Effects of Label Dose Permethrin Use in Yearling Angus Beef Bulls<br>on Reproductive Function and Testicular Histopathology A.S. Leaflet R2958 .....  | ISRF14-12 |
| Corn and Soybean Yield Response to Micronutrients<br>in Southwest Iowa RFR-A1466 .....  | ISRF14-12 |
| Diesel Fuel Consumption During Field Operations RFR-A1374 .....   | ISRF13-12 |
| Phosphorous Availability in Beef Cattle Manure for Corn and<br>Soybean RFR-1386 .....   | ISRF13-12 |
| Attracting Beneficial Insects to Iowa Agricultural Crops Through<br>Floral Provisioning RFR-A1339 .....   | ISRF13-12 |
| Evaluation of Tillage, Residue, and Fungicide on Disease Incidence<br>in Continuous Corn Production Systems RFR-A1371 .....   | ISRF13-12 |
| Comparison of Ivermectin and Extended-release Eprinomectin Deworming Treatment<br>on Stocker and Subsequent Feedlot Performance and Carcass Characteristics<br>of Fall-born Angus Heifers RFR-A1370 ..... | ISRF13-12 |
| Corn and Soybean Production with a Winter Rye Cover Crop-A1280 .....  | ISRF12-12 |
| Potassium Uptake and Recycling to the Soil in Corn and Soybean RFR-A1298 .....  | ISRF12-12 |
| Seasonal and Rotational Influences on Corn Nitrogen Requirements RFR-A1264 .....  | ISRF12-12 |
| Weed Management Programs in No-tillage Soybean RFR-1281 .....   | ISRF12-12 |
| Broadcast and Band Phosphorus and Potassium Placement for Corn<br>and Soybean Managed with Till or No Till RFR-A1197 .....  | ISRF11-12 |