

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Historical Materials from University of
Nebraska-Lincoln Extension

Extension

1986

EC86-107 Nebraska Proso Variety Tests, 1986

Lenis Alton Nelson

University of Nebraska-Lincoln, lnelson1@unl.edu

Follow this and additional works at: <https://digitalcommons.unl.edu/extensionhist>



Part of the [Agriculture Commons](#), and the [Curriculum and Instruction Commons](#)

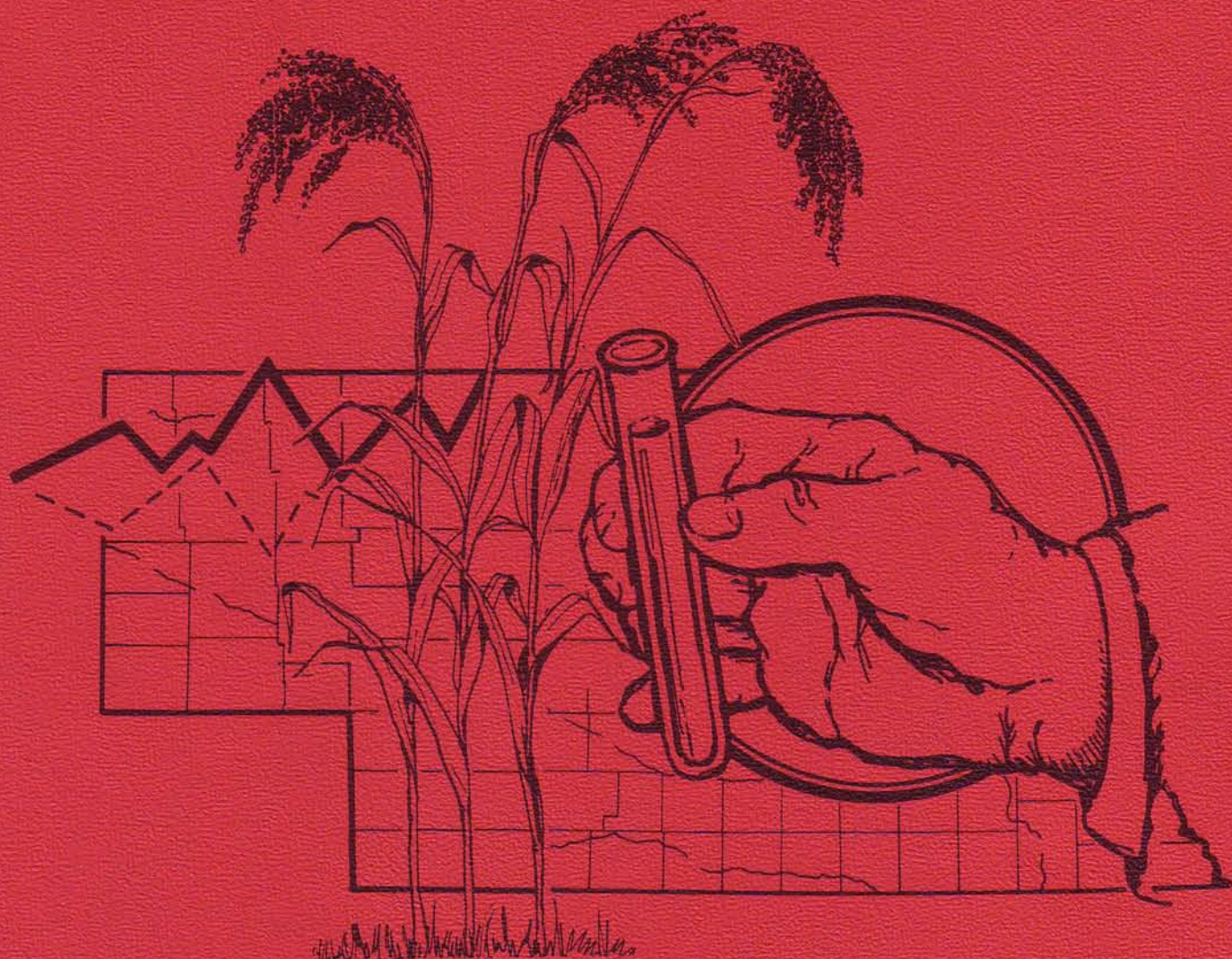
Nelson, Lenis Alton, "EC86-107 Nebraska Proso Variety Tests, 1986" (1986). *Historical Materials from University of Nebraska-Lincoln Extension*. 1556.

<https://digitalcommons.unl.edu/extensionhist/1556>

This Article is brought to you for free and open access by the Extension at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Historical Materials from University of Nebraska-Lincoln Extension by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

NEBRASKA PROSO VARIETY TESTS

1986



University of Nebraska-Lincoln
Institute of Agriculture and Natural Resources
Agricultural Research Division
Cooperative Extension Service



Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Leo E. Lucas, Director of Cooperative Extension Service, University of Nebraska, Institute of Agriculture and Natural Resources.



EXTENSION CIRCULAR 86-107

NEBRASKA PROSO VARIETY TESTS

FEBRUARY 1987

AUTHOR

Lenis A. Nelson, Panhandle Research and Extension Center, Scottsbluff, Nebraska.

ACKNOWLEDGMENT

This circular is a progress report of proso variety trials conducted by the Panhandle Research and Extension Center, High Plains Agricultural Laboratory, and Northwest Agricultural Laboratory. Conduct of experiments and publications of results is a joint effort of the Agricultural Research Division and the Cooperative Extension Service. Special acknowledgment is made to Doug Griffith who furnished land for the experiment in Kimball County and to the Extension Agents in the Panhandle.

CONTENTS

Introduction	3
List of locations & conditions	5
Five-year yield data 1982-1986	5
Grain yield and other data, 1986	
Proso yields, 6 locations	6
Heading date, test weight, and seed weight	7
Variety characteristics	8

THE METRIC SYSTEM

Metric equivalents and conversions are as follows:

1 centimeter (cm) = 0.394 inches	cm = inches x 2.54
1 hectare (ha) = 2.471	ha = acres x 0.405
1 kilogram (kg) = 2.205 pounds	kg = pounds x 0.454
1 kilogram/hectare (kg/ha) = 0.892 pounds per acre	kg/ha = lb/A x 1.121
1 kilogram/hectare (kg/ha) = 0.892 pounds per acre	kg/ha = cwt/A x 112.1
1 hectoliter(hl) = 2.838 bushels	hl = bushels x 0.35
Kilogram/hectoliter = lb/bu x 1.287	
Kilogram/hectare = bu/A x 53.81 (48 #/bu)	
Kilogram/hectare = bu/A x 67.26 (60 #/bu)	

PROSO VARIETY TRIALS

1986

The 1986 proso test contained 22 entries of which seven were named varieties used as check varieties. The other 15 entries were selections and crosses from the proso breeding program at the Panhandle Research and Extension Center. All of these selections and crosses involve the variety Dawn and the primary purpose of this trial is to identify a tall, improved "Dawn type" plant. Rise is the first release from the Dawn crosses and has demonstrated improved height and yield over other varieties.

The following is a description of the seven varieties included as check varieties. All are available from their states of origin if they are not available locally.

Abarr is a 1974 release from Colorado. It is a white seeded variety with good yield potential. It is similar to Panhandle with improved seed type.

Cope is a 1978 Colorado release. It is much later maturing than the other varieties. It has yielded well in Nebraska, especially when planted early.

Dawn is a 1976 Nebraska release. It is shatter resistant and ripens uniformly to make it suitable for direct combining. It has a large seed with good white color and has been well accepted in the bird seed trade. Its early maturity and short stature have made it less suitable under environmental stress conditions. Its yield potential is good when fertilizer and moisture are favorable.

Minco is a joint Minnesota-Colorado release. It is slightly taller and later than Panhandle. It has a good white seed color and good yield potential.

Minsum is a 1980 release from Minnesota. It is quite early and medium in height. Its most noticeable characteristic is an extremely loose panicle (effusum). It has a good yield potential and may have some potential in Nebraska.

Panhandle is a 1968 Nebraska release. It is the first variety selected from the common white proso grown in western Nebraska. It has a good yield record and has white seeded grain. It has set the yield standard for many years.

Rise is a 1983 Nebraska release. It the result of a Dawn X Minn. 402 cross made in 1975. It is later and taller than Dawn with many of the same characteristics in head type and lodging resistance. It has had a good yield record in the time it has been tested. It does not have the large seed size of Dawn. In comparison to Panhandle, it is slightly shorter and earlier.

Table 3. Yields of proso lines and varieties at all locations in 1986.
(cwt/A)

Variety	High Plains Ag Lab						Average 6 locat.
	Early Plant		Late Plant		NWAL	Kimball	
	Black	Eco	Black	Eco	Eco	Black	
Abarr	9	19	10	15	9	7	12
Cope	13	19	11	14	18	10	14
Dawn	9	6	6	11	1	4	6
Minco Sel	11	20	14	18	17	11	15
Minsum	4	12	8	13	9	8	9
Panhandle	8	16	12	16	13	7	12
Rise	11	18	15	21	14	11	15
Rise Sel #1	9	16	14	17	12	11	13
Rise Sel #2	11	18	15	22	15	11	15
76010-10-8S	12	20	16	21	19	10	16
79012-9-B-8	10	18	14	20	17	12	15
79012-9-1	7	13	12	18	14	10	12
79017-4-8	10	18	14	20	18	9	15
82003-2-4	13	19	13	19	20	13	16
82006-2-1	9	17	11	16	16	9	13
82007-1-4	10	20	13	20	7	10	13
82008-8-B	15	21	17	20	18	10	17
83007-15-B	11	22	18	21	19	11	17
83011-4-B	13	20	16	22	23	10	17
83014-4-B	10	20	13	21	19	13	16
83014-10-B	10	21	14	21	20	9	16
83019-1-B	13	22	17	25	21	13	19
Average	10	18	13	19	15	10	14
L.S.D. .05	2	2	3	4	3	1	1

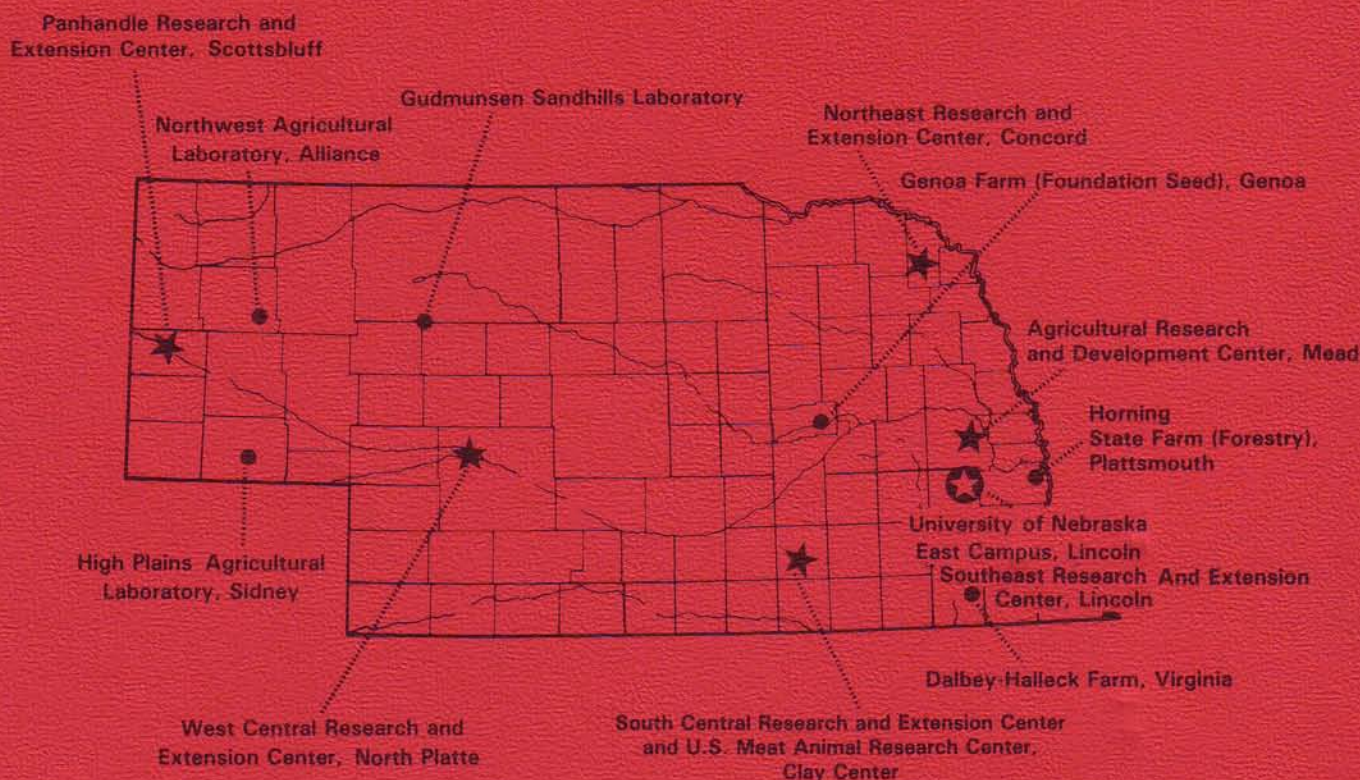
Table 4. Agronomic characteristics of lines and varieties tested in the 1986 yield trial.

Variety	Test weight	Plant stand	Head date (July)	Harvest date (Sept)
Abarr	54	17	14	16
Cope	53	17	20	24
Dawn	55	18	8	11
Minco Sel	54	17	15	22
Minsum	55	15	14	17
Panhandle	55	16	13	17
Rise	55	17	13	17
Rise See #1	55	18	13	17
Rise Sel #2	55	16	13	17
76010-10-8S	54	16	15	20
79012-9-B-8	56	16	15	18
79012-9-1	56	16	14	18
79017-4-8	55	19	14	17
82003-2-4	54	17	18	21
82006-2-1	54	18	16	16
82007-1-4	55	17	16	17
82008-8-B	55	16	15	17
83007-15-B	54	16	16	18
83011-4-B	54	17	19	23
83014-4-B	54	16	19	21
83014-10-B	54	16	20	23
83019-1-B	54	17	20	24
Mean	55	17	15	19
L.S.D. .05	.5	.9	.8	1.4

Table 5. Agronomic characteristics of lines and varieties tested in 1986.

Variety	Height in inches	Seed color	Straw strength	Maturity
Abarr	36	White	Weak	Medium
Cope	38	White	Fair	Late
Dawn	22	White	Good	V. Early
Minco Sel	35	White	Fair	Late
Minsum	33	White	Weak	Medium
Panhandle	35	White	Weak	Medium
Rise	29	White	Good	Medium
Rise Sel #1	29	White	Fair	Medium
Rise Sel #2	29	White	Fair	Medium
76010-10-8S	30	White	Fair	Medium
79012-9-B-8	32	White	Fair	Medium
79012-9-1	31	White	Fair	Medium
79017-4-8	30	White	Good	Medium
82003-2-4	35	White	Fair	Late
82006-2-1	32	White	Fair	Medium
82007-1-4	32	White	Poor	Medium
82008-8-B	29	White	Good	Medium
83007-15-B	29	White	Good	Medium
83011-4-B	33	White	Exc.	Late
83014-4-B	32	White	Good	Late
83014-10-B	32	White	Fair	Late
83019-1-B	30	White	Fair	Late

AGRICULTURAL RESEARCH AND EXTENSION FOR ALL OF NEBRASKA



The Agricultural Research Division of the Institute of Agriculture and Natural Resources is responsible for studies to broaden our basis of knowledge for agricultural production. Research centers and field laboratories provide applied information for development of Nebraska's largest industry — agriculture.

The Cooperative Extension Service transmits data and provides interpretation to users through Extension Agents and Specialists. Extension Agents may be contacted through 85 local Extension offices for additional information and more specific recommendations.

Nebraska is a large state and has great variation due to topography and the continental type of climate. The elevation ranges from 1,000 feet to near a mile high in the northwest portion of the state, rainfall varies from less than 15 to more than 35 inches per year, and the soil types vary from sands to heavy clays. The research and extension programs thus are broad in subject matter and geography, resulting in the need for various centers, satellite locations, and local offices.