USDA Rattler is a high yielding pinto bean with resistance to potyvirus (BCMV, BCMNV) and bean rust, that performs well under abiotic stress (drought, low soil fertility) conditions. The high yield potential exhibited across trials conducted in the Pacific Northwest, Intermountain Region, and Northern Plains will contribute to broad adaptation of this cultivar. It has upright architecture and resistance to lodging which promote harvestability. Seed has acceptable canning quality, size, color and appearance, which favor marketability.

2021 Top yielder in the Nebraska Variety Trials Scottsbluff (PREC):
5210 lbs. per acre, (86.8 bushels/acre)

2021 Top yielder in the KB strip trial in the Gering Valley:
3447 lbs. per acre, (57.7 bushels/acre)

PVPC# 202000255
THE USDA/ARS HAS APPLIED FOR PLANT VARIETY PROTECTION FOR USDA RATTLER. USDA RATTLER IS LICENSED TO KELLEY BEAN CO. INC. UNAUTHORIZED PROPAGATION OF THIS VARIETY IS PROHIBITED.
Spilling the Beans!

By Dan Hinman
NDBGA Board President

Planting is wrapping up and soon irrigation will be going full speed. It has been quite a different start, one of the rainiest that we have had for many years. While the rain may have slowed progress and provided some other challenges to us, the moisture was a welcome change from the recent dry springs.

As we get into summer I hope everyone can find some time to enjoy some of the great bean dishes at local barbecues, cook outs, and contest events coming up.

I would also like to invite everyone to mark your calendars for August 23rd for the University of Nebraska's annual PARTT event. It will feature many topics concerning dry bean production and the trials that the University researchers are conducting to help us be successful in the industry. Further details are included in this production of The Bean Bag, check it out.

Lastly, I wish everyone the best for a successful growing season! Remember to take the time to be safe, and stay cool this summer.
As I’m putting together the Bean Bag this time, I’m looking outside and admiring and enjoying just how beautiful and lucky we are to live in such a wonderful place! With all the spring/summer rains, our crops and rangelands are green and growing, the flowers are blooming, and the livestock is thriving. I’m thankful to live in the Nebraska Panhandle with mother nature’s miracles.

Please plan on joining us for PARTT on August 23rd, 2023. There will be lots of very beneficial information to share as well as a good chance to visit with friends and neighbors. And lunch is provided! Part of your bean checkoff dollars go to help sponsor this event for the growers, so take the opportunity to attend.

Prayers and blessings for the upcoming farming season! With all the things that need to be accomplished in order to raise a crop and/or livestock, agriculture involves some dangerous activities. Take the time to be safe around all the heavy equipment, farm chemicals, water, and mother nature!
Nebraska Dry Bean Growers Association (NDBGA) is offering a college scholarship opportunity for children and grandchildren of a NDBGA member.

These scholarships are for students pursuing a degree related to agriculture and are available for any college class level, and for non-traditional students.

Applications must be received in the NDBGA office, 4502 Avenue I, Scottsbluff, NE 69361 by mail, email or dropped off before 5:00 pm, January 1st, 2024.

The scholarships awards will be presented during our 2024 Bean Day and you will be invited to attend.

PDF version can be downloaded from http://www.beangrower.com/latest-newsadditional-resources.html

Date: ___________________________________________________________________________________________________

Name: __________________________________________________________________________________________________

Address: __________________________________________________________________________________________________

Telephone: ________________________ Date of Birth: ________________________ Email: __________________________

Name and address of Parents or Grandparents:
________________________________________________________________________________________________________

Name and Address of College/University attending or planning to attend:
________________________________________________________________________________________________________

Course of Study: _________________________________________________________________________________________

Expected Graduation date: ________________________________________________________________________________

Please type responses to the following questions on a separate piece of paper and keep each response to 200 words or less.

1. List your scholastic achievements (GPA, academic awards, scholarships, etc.) Include a copy of your current transcript and an up to date resume of your work history.

2. List offices held in high school or college, projects directed, athletic involvement, band, choir, FFA, student council, boys/girls state, etc.

3. Include community service, theatre groups, coaching and any other volunteer activities which have contributed to the betterment of your community.

4. Personal statement that addresses your experience with agriculture and future plans or career goals regarding agriculture.

5. Two letters of reference addressing your potential for success: one from a teacher, counselor or principal and another from a non family member.

6. Recent photo of yourself to be used in media if you are selected to receive one of the two scholarships.

**Scholarship winners will be contacted prior to February 1st and invited to attend the 2024 Bean Day February 13th, at Gering Civic Center. Please be prepared to give a short acceptance speech.

**By signing this application you agree that Nebraska Dry Bean Growers Association may use your name and photo in media announcements and their Spring 2024 edition of “The Bean Bag”.

SIGNATURE: _____________________________________________________________
The Not So Humble Beginnings of Cowboy Caviar

First served at the Houston Country Club on New Year’s Eve in the early 1940’s, this bean salad was dubbed “Texas Caviar” in a humorous comparison to true caviar. Today, it’s more commonly known as Cowboy Caviar and it’s a popular dish to serve with tortilla chips. And the recipe is so forgiving that you can pull this together for a party with whatever you have on hand. To make Cowboy Caviar, combine one can each of drained black beans, pinto beans, and corn, add chopped tomatoes, sweet onions, and avocado cubes. Dress with oil and vinegar or bottled Italian dressing.
2023 Panhandle Ag Research Technology Tour

August 23
8:30 a.m. - registration
9:15 a.m. - programs begin

- Management of Palmer amaranth - Nevin Lawrence
- Soil Nutrient Management for Sustainable Sugar Beet Production - Bijesh Maharjan
- Ag Economics Update - Jessica Groskopf
- Is the International Year of Millets 2023 Important to Nebraska? - Dipak Santra
- Use of Geophysics in Environmental and Engineering Problems - Mohamed Aboushanab
- Irrigation Research Update - Xin Qiao (with Gary Stone)
- Managing Multiple Diseases of Specialty Crops in Nebraska - Bob Harveson
- Update on Dry Bean Breeding Program - Carlos Urrea
- Precision technology on white mold disease in dry beans - Weizhen Liang
- Dry Edible Bean Direct Harvest, Where are We - John Thomas
- How are Cattle good for the Environment? - Karla Wilke
- Feedlot management - Pablo Loza

Free Entry

UNL Panhandle Research Extension and Education Center
4502 Ave I, Scottsbluff, NE

Scan QR code to register and for more information

Nebraska Dry Bean Growers Association
As the saying goes, there’s a “new kid in town” in regards to marketing dry edible beans to the end consumer. **JJT Beans** is a small, entrepreneurial business that’s making a creative and innovative product utilizing dehydrated refried beans. Currently there are a handful of companies in the US that manufacture dehydrated beans, but JJT is unique with their added ingredients that makes the end product delicious and so good that you could eat it right out of the bag like granola. They have definitely hit upon a niche market for several reasons. First, you just add water to a product that normally takes several hours to prepare. Second, it’s a dry product that can be stored on the shelf or in the freezer and has a long shelf life. And finally, it’s a light and easily transportable protein source, ideal for situations like camping or last minute meal preparation.

JJT was founded in 2022 by three friends, Jamie Schmier, Joshua Corral, and Tim Morado, and is located in Evans, Colorado. It started with a family recipe developed by Tim Morado’s father in 2001. The business idea / recipe was shuffled around by several family members before JJT finally decided that the current environment was ripe for a product of this nature.

So “why” dehydrated refried beans? Jamie Schmier says to think about the following scenario. “A can of refried beans is basically 60% added ingredients like water and tomato sauce, whereas a dehydrated bag of refried beans is almost 100% beans with a few added spices. A 32 oz can of a popular brand of refried beans costs between $4 - $5 per can depending upon where it’s purchased. A fully hydrated JJT 12 oz. bag of refried beans (equivalent to 3 cans) costs anywhere from $6.49 to $9.99 per bag, again depending on where it’s purchased. In today’s inflation, dehydrated bags are a better source
for consumer savings. Not to mention they are a healthy alternative and with the added spices, don’t need any extra ingredients to make them taste better.”

To date, JJT has sold over 10,000 bags and have expanded to the following states: Colorado, Wyoming, Nebraska, Kansas, North Dakota and Texas, and with ongoing negotiations in South Dakota. Something that they are really excited about and are definitely pursuing is the school nutritional lunch program. Four school districts in northern Colorado have started implementing their product in their school menus and the interest and feedback has been very positive. At the most recent 2023 Colorado Dry Bean Summit, Jamie Schmier had the opportunity to meet and discuss potential programs with a representative from the Nebraska educational department and is hoping that these initial discussions will lead to future business as well.

Through a lot of trial and error and experimentation, JJT has also developed a chocolate product from the dehydrated beans. “It was getting close to Valentine’s Day and we wanted something to draw the crowd at the local farmers market”, sited Jamie. “The milk chocolate bars have been a huge success and people really love them!” So successful that they have applied for a non-formal patent which gives them a year to develop and improve the end product before applying and investing in an official patent. Per Jamie, the next experiment will evolve around granola bars; which has been suggested by several of their customers.

Promoting local business and local agriculture, JJT purchases the majority of their beans from Northern Feed and Bean located in northern Colorado. Their business is expanding rapidly and they have also received several awards and accreditations for only being in business a short time. Additionally, they provide military discounts for veterans and donate regularly to their local “families in need” organizations.

For more information on where and how to purchase their product, please see their website at https://www.jjtbeans.com/. Jamie emphasized that, “if you don’t find what you need or can’t locate a local supplier, please don’t hesitate to call us. We are growing rapidly and the website doesn’t always keep up with and/or reflect our expanding sales”.

Editor Note: JJT Products can currently be found at Fresh Foods, in Gering, NE.

###
Palmer amaranth has been in the Panhandle for at least the past ten years, however, only in the past few years has the population surged throughout the region. If you are an irrigated crop producer and you are not currently dealing with Palmer amaranth, you will be soon. Palmer amaranth is a pigweed similar to redroot pigweed. However, it grows faster, produces more seeds, and has a larger germination window. More importantly, Palmer is resistant to group 9 (Roundup™) and group 2 (Raptor®/Beyond® and Pursuit®) herbicides that control other pigweed species.

When we consider the irrigated crops grown in the Panhandle of Nebraska, some crops are highly impacted by herbicide-resistant Palmer — sugarbeet and dry edible bean — as there are few, or in some cases no, alternative herbicides available. Sugarbeet and dry bean are also extremely susceptible to yield loss from Palmer amaranth. In studies conducted at the Panhandle Research Extension and Education Center, season-long Palmer amaranth interference at densities of one plant every five yards of row caused a 30 percent reduction in dry bean and sugarbeet yield. At one plant every yard, yield reduction in dry edible bean and sugarbeet was as high as 60 percent and 90 percent, respectively. This compares to 60-90 percent yield losses in corn and soybean only observed from densities as high as eight to ten plants per yard.

Small grains, corn, and alfalfa are not as impacted by Palmer amaranth competition and also have more herbicide options available to control herbicide-resistant Palmer. However, Palmer management is almost certainly going to get worse for those crops. Outside of western Nebraska, Palmer is resistant to group 27, 14, 5, 3, 15, 10, 2, and 9 herbicide modes-of-action, and these herbicide-resistant biotypes will continue to spread throughout the United States.

Palmer amaranth management is currently the most critical issue facing irrigated crop
production within the Panhandle and the major focus of the Panhandle Weed Science Program. In past years, research projects focused on Palmer amaranth management focused on dry bean, sugarbeet, alfalfa, potato, sunflower, soybean, and corn. In 2023 research will be conducted looking at four potential new herbicides in sugarbeet and two potential new herbicides for dry edible bean; comparisons of best herbicide programs in corn and potato; the use of directed-spray applicators and wick wipers to control Palmer amaranth escapes; and the use of cover crops, the timing of crop planting, and other cultural strategies to manage Palmer amaranth.

For 2023, sixteen separate field trials are planned for Palmer amaranth management. Most of these trials will be taking place at the Panhandle REEC, but several will also be taking place on cooperator's fields. These trials are also mostly funded by grower-directed groups such as Western Sugar Cooperative, the Nebraska Dry Bean Commission, and the Nebraska Potato Board, along with funding from the Nebraska Department of Agriculture and industry partners.

While much of this research may not have an impact this year, these projects are focused on benefiting Panhandle agriculture in the short-term; local, publicly available research focused on immediate needs. If you have questions about managing Palmer amaranth or would like to know more about this year’s ongoing research, or if you would like more information on upcoming field research tours, reach out to Dr. Nevin Lawrence at the PHREEC.

The Panhandle Agriculture Research and Technology Tour will be held in August and will focus heavily on dry edible bean research.

###

New Alliance processes Great Northern and Pinto dry edible beans in Alliance, Bridgeport and Gering, Nebraska. We specialize in providing canning quality beans to food companies around the world. The finished product is milled to customer specifications and packed in a variety of ways, including bulk totes and paper or poly bags from 20 lbs. to 50 kilos.

(308) 762-8014 • P.O. Box 619 • 2371 Hwy. 2 • Alliance, NE 69301
The great northern common bean line, NE1-17-36, was developed by the Dry Bean Breeding Program at the University of Nebraska Agricultural Research Division. NE1-17-36 was bred specifically for adaptation to western Nebraska growing conditions, upright plant architecture, and enhanced resistance to bean rust and common bacterial blight (CBB). NE-17-36 has high yield potential, broad adaptation to Nebraska, upright plant architecture, good seed quality, and resistance to the CBB, rust, and bean common mosaic virus (BCMV) pathogens. NE1-17-36 is a single cross of GN9-4 /// NE2-06-8 /// BelDakMi 22 / ABCP17) // 2630.

**Disease Reaction:** In 2022, at the Scottsbluff Ag lab, NE1-17-36 had an intermediate CBB reaction (disease rating = 5.5). NE1-17-36 had slightly higher CBB resistance than Aries, Hydra, Draco, Andromeda, and Lyra (Table 3). NE1-17-36 carries the SAP6 SCAR markers linked to the major QTLs for CBB resistance. Inoculation of NE1-17-36 with bean rust races 15-3 (47), 22-6 (49), 31-1 (53), 31-22 (67), 6-15 (73), and 22-52 (108) under greenhouse conditions (Beltsville, MD; 2019-2020) provided evidence for the presence of the Ur-3 and Ur-6 genes for resistance to common bean rust. Based on the top necrosis reaction to the NL-3 strain of bean common mosaic necrosis virus (BCMV), it was determined that NE1-17-36 carries the single dominant hypersensitive I gene that provides resistance to all non-necrotic strains of BCMV. However, it is hypersensitive to the temperature-dependent necrosis-inducing strains of BCMV and the temperature-independent necrosis-inducing strains of BCMNV. NE1-17-36 also carries the SW13 SCAR marker linked to the QTL for the hypersensitive I gene for BCMV resistance.

### Table 1
**Great Northern Varieties/lines tested at the Scottsbluff and Mitchell, Ag Lab in 2022.**

<table>
<thead>
<tr>
<th>Pedigree</th>
<th>Yield</th>
<th>Flowering</th>
<th>Harvest Maturity</th>
<th>Test Weight</th>
<th>Moisture</th>
<th>Seed Size</th>
<th>No. Trials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pounds/acre</td>
<td>days</td>
<td>days</td>
<td>pounds/bu</td>
<td>%</td>
<td>Seeds/pound</td>
<td></td>
</tr>
<tr>
<td>Aries</td>
<td>3349</td>
<td>44</td>
<td>88</td>
<td>61.9</td>
<td>10.5</td>
<td>1303</td>
<td>9</td>
</tr>
<tr>
<td>Hydra</td>
<td>3472</td>
<td>45</td>
<td>92</td>
<td>62.3</td>
<td>10.8</td>
<td>1052</td>
<td>9</td>
</tr>
<tr>
<td>Draco</td>
<td>3245</td>
<td>47</td>
<td>93</td>
<td>61.3</td>
<td>10.5</td>
<td>1298</td>
<td>9</td>
</tr>
<tr>
<td>Andromeda (13151)</td>
<td>3492</td>
<td>42</td>
<td>87</td>
<td>60.8</td>
<td>10.8</td>
<td>1081</td>
<td>9</td>
</tr>
<tr>
<td>Virgo (13172)</td>
<td>3528</td>
<td>45</td>
<td>92</td>
<td>60.9</td>
<td>10.4</td>
<td>1274</td>
<td>9</td>
</tr>
<tr>
<td>Lynx (14104)</td>
<td>3302</td>
<td>45</td>
<td>88</td>
<td>61.2</td>
<td>10.5</td>
<td>1194</td>
<td>9</td>
</tr>
<tr>
<td>Panhandle Pride</td>
<td>3205</td>
<td>44</td>
<td>90</td>
<td>62.8</td>
<td>10.7</td>
<td>1280</td>
<td>9</td>
</tr>
<tr>
<td>White Pearl</td>
<td>3678</td>
<td>46</td>
<td>89</td>
<td>60.8</td>
<td>10.3</td>
<td>1280</td>
<td>9</td>
</tr>
<tr>
<td>NE1-17-30</td>
<td>3363</td>
<td>44</td>
<td>89</td>
<td>60.0</td>
<td>10.3</td>
<td>1246</td>
<td>9</td>
</tr>
<tr>
<td>NE1-17-36</td>
<td>3666</td>
<td>45</td>
<td>92</td>
<td>60.9</td>
<td>10.8</td>
<td>1177</td>
<td>9</td>
</tr>
<tr>
<td>NE1-17-41</td>
<td>3560</td>
<td>44</td>
<td>88</td>
<td>61.6</td>
<td>10.1</td>
<td>1159</td>
<td>7</td>
</tr>
<tr>
<td>NE1-20-21</td>
<td>3906</td>
<td>46</td>
<td>92</td>
<td>59.4</td>
<td>10.7</td>
<td>1205</td>
<td>4</td>
</tr>
<tr>
<td>NE1-20-31</td>
<td>4332</td>
<td>44</td>
<td>91</td>
<td>59.5</td>
<td>10.6</td>
<td>1235</td>
<td>4</td>
</tr>
<tr>
<td>NE1-17-9</td>
<td>3487</td>
<td>45</td>
<td>89</td>
<td>59.6</td>
<td>10.3</td>
<td>1263</td>
<td>9</td>
</tr>
<tr>
<td>NE1-17-31</td>
<td>3792</td>
<td>45</td>
<td>90</td>
<td>59.0</td>
<td>10.1</td>
<td>1097</td>
<td>7</td>
</tr>
<tr>
<td>Coyne</td>
<td>3170</td>
<td>42</td>
<td>87</td>
<td>62.8</td>
<td>10.6</td>
<td>1224</td>
<td>4</td>
</tr>
<tr>
<td><strong>MEAN</strong></td>
<td>3536</td>
<td>44</td>
<td>90</td>
<td>60.9</td>
<td>10.5</td>
<td>1206</td>
<td></td>
</tr>
<tr>
<td><strong>LSD 0.05</strong></td>
<td>863</td>
<td>2</td>
<td>7</td>
<td>2.1</td>
<td>0.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CV%</strong></td>
<td>12.3</td>
<td>2.7</td>
<td>3.7</td>
<td>1.7</td>
<td>4.3</td>
<td>3.8</td>
<td></td>
</tr>
</tbody>
</table>
Phenology: NE1-17-36 has an upright Type 2b indeterminate growth habit with an upright plant architecture. It is a midseason bean, blooming 45 d after planting and maturing 92 d after planting (Table 1). NE1-17-36 has white flowers and a bright white seed coat.

Seed yield: During variety trials conducted at the Scottsbluff and Mitchell Ag Labs (2018-2022), the average seed yield of NE-17-36 was 3696 lbs/acre. NE1-17-36 had similar yields to White Pearl and slightly higher yields than Aries, Hydra, Draco, Andromeda, Virgo, Lyra, and Panhandle Pride (Table 1). The average seed yield of NE1-17-36 was 60 bushels/acre (3600 lbs/acre) on a 0.5-acre test plot at the Mitchell Ag Lab (2019-2022) (Table 2).

Seed Size: Average seed size of NE1-17-36 was 1177 seeds/pound. (Table 1).
Slow-darkening common bean line, NE4-17-10, was developed by the Dry Bean Breeding Program at the University of Nebraska Agricultural Research Division. NE4-17-10 was bred specifically for adaptation to western Nebraska growing conditions, upright plant architecture, and enhanced resistance to bean rust and common bacterial blight (CBB). NE4-17-10 has high yield potential, broad adaptation to Nebraska, upright plant architecture, good seed quality, and resistance to the CBB, rust, and bean common mosaic virus ( BCMV) pathogens. NE4-17-10 is a single cross of NE4-13-42/13IDPT54 (SD Rust Variable).

**Disease Reaction:** In 2022 at the Scottsbluff Ag lab, NE4-17-10 had an intermediate CBB reaction (disease rating = 4.5). NE4-17-10 had higher CBB resistance than Vibrant B, Radiant, Lumen, and Mystic (Table 2). NE4-17-10 carries the SAP6 SCAR markers linked to the major QTLs for CBB resistance. Inoculation of NE4-17-10 with bean rust races 15-3 (47), 22-6 (49), 31-1 (53), 31-22 (67), 6-15 (73), and 22-52 (108) under greenhouse conditions (Beltsville, MD; 2019-2020) provided evidence for the presence of the Ur-3 and Ur-11 genes for resistance to common bean rust. Based on the top necrosis reaction to the NL-3 strain of bean common mosaic necrosis virus ( BCMNV), it was determined that NE4-17-10 carries the single dominant hypersensitive I gene that provides resistance to all non-necrotic strains of BCMV. However, it is hypersensitive to the temperature-dependent necrosis-inducing strains of BCMV and the temperature-independent necrosis-inducing strains of BCMNV. NE4-17-10 also carries the SW13 SCAR marker linked to the QTL for the hypersensitive I gene for BCMV resistance.

**Table 1**

<table>
<thead>
<tr>
<th>Pedigree</th>
<th>Yield</th>
<th>Flowering</th>
<th>Harvest Maturity</th>
<th>Test Weight</th>
<th>Moisture</th>
<th>Seed Size</th>
<th>No. Trials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pounds/acre</td>
<td>days</td>
<td>days</td>
<td>pounds/bu</td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vibrant B</td>
<td>3472</td>
<td>44</td>
<td>88</td>
<td>61.2</td>
<td>10.3</td>
<td>1314</td>
<td>9</td>
</tr>
<tr>
<td>Radiant</td>
<td>3561</td>
<td>45</td>
<td>88</td>
<td>61.4</td>
<td>10.4</td>
<td>1275</td>
<td>9</td>
</tr>
<tr>
<td>Lumen (14451)</td>
<td>3464</td>
<td>47</td>
<td>90</td>
<td>64.5</td>
<td>10.4</td>
<td>1335</td>
<td>7</td>
</tr>
<tr>
<td>Gleam (14455)</td>
<td>3875</td>
<td>47</td>
<td>90</td>
<td>63.1</td>
<td>10.3</td>
<td>1356</td>
<td>7</td>
</tr>
<tr>
<td>Mystic (17454)</td>
<td>4241</td>
<td>47</td>
<td>92</td>
<td>62.5</td>
<td>11.2</td>
<td>1153</td>
<td>4</td>
</tr>
<tr>
<td>Bronco (41767 -15)</td>
<td>3535</td>
<td>43</td>
<td>89</td>
<td>62.9</td>
<td>10.2</td>
<td>1081</td>
<td>7</td>
</tr>
<tr>
<td>Staybright</td>
<td>3112</td>
<td>46</td>
<td>94</td>
<td>61.9</td>
<td>10.9</td>
<td>1253</td>
<td>9</td>
</tr>
<tr>
<td>ND-Palominho</td>
<td>3595</td>
<td>45</td>
<td>92</td>
<td>60.0</td>
<td>10.2</td>
<td>1232</td>
<td>9</td>
</tr>
<tr>
<td>USDA-Diamondback (PT15 -9)</td>
<td>3455</td>
<td>47</td>
<td>93</td>
<td>61.4</td>
<td>10.4</td>
<td>1251</td>
<td>6</td>
</tr>
<tr>
<td>NE4-18-55</td>
<td>3217</td>
<td>45</td>
<td>94</td>
<td>60.2</td>
<td>10.6</td>
<td>942</td>
<td>7</td>
</tr>
<tr>
<td>NE2-17-37</td>
<td>3100</td>
<td>44</td>
<td>93</td>
<td>60.0</td>
<td>10.1</td>
<td>1283</td>
<td>9</td>
</tr>
<tr>
<td>NE4-17-6</td>
<td>3456</td>
<td>43</td>
<td>90</td>
<td>59.2</td>
<td>10.3</td>
<td>1096</td>
<td>9</td>
</tr>
<tr>
<td>NE4-17-10</td>
<td>3456</td>
<td>43</td>
<td>89</td>
<td>57.9</td>
<td>10.3</td>
<td>1141</td>
<td>9</td>
</tr>
<tr>
<td>Wildcat</td>
<td>3453</td>
<td>44</td>
<td>94</td>
<td>61.4</td>
<td>10.2</td>
<td>1036</td>
<td>7</td>
</tr>
<tr>
<td><strong>MEAN</strong></td>
<td>3504</td>
<td>45</td>
<td>91</td>
<td>61.3</td>
<td>10.4</td>
<td>1184</td>
<td></td>
</tr>
<tr>
<td><strong>LSD 0.05</strong></td>
<td>841</td>
<td>3</td>
<td>6</td>
<td>1.9</td>
<td>1.2</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td><strong>CV %</strong></td>
<td>12.1</td>
<td>3.1</td>
<td>3.5</td>
<td>1.6</td>
<td>5.7</td>
<td>2.8</td>
<td></td>
</tr>
</tbody>
</table>
Phenology: NE4-17-10 has an upright Type 2b indeterminate growth habit with an upright plant architecture. It is a midseason bean, blooming 43 d after planting and maturing 89 d after planting (Table 1). NE4-17-10 has white flowers and a bright slow darkening pinto seed coat.

Seed yield: During variety trials conducted at the Scottsbluff and Mitchell Ag Labs (2018-2022) the average seed yield of NE4-17-10 was 3456 lbs/acre. NE4-17-10 had a similar yield to the commercial cultivars Radiant, Lumen, Bronco, ND-Palomino, and USDA-Diamondback (Table 1).

Seed Size: Average seed size of NE4-17-10 was 1141 seeds/pound. (Table 1).

###

<table>
<thead>
<tr>
<th>Table 2. 2022 Scottsbluff Ag Lab.</th>
<th>SB22</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Common Bacterial Blight (1-9)</td>
</tr>
<tr>
<td>4 Vibrant B</td>
<td>7.0</td>
</tr>
<tr>
<td>5 Radiant</td>
<td>6.5</td>
</tr>
<tr>
<td>7 Lumen (14451)</td>
<td>7.8</td>
</tr>
<tr>
<td>8 Gleam (14455)</td>
<td>5.5</td>
</tr>
<tr>
<td>14 Mystic (17454)</td>
<td>7.0</td>
</tr>
<tr>
<td>17 Bronco (4176715)</td>
<td>5.5</td>
</tr>
<tr>
<td>18 Staybright</td>
<td>5.8</td>
</tr>
<tr>
<td>20 ND-Palomino</td>
<td>6.5</td>
</tr>
<tr>
<td>33 USDA-Diamondback (PT16-9)</td>
<td>7.3</td>
</tr>
<tr>
<td>36 NE4-18-55</td>
<td>5.5</td>
</tr>
<tr>
<td>39 NE2-17-37</td>
<td>4.5</td>
</tr>
<tr>
<td>40 NE4-17-6</td>
<td>4.5</td>
</tr>
<tr>
<td>41 NE4-17-10</td>
<td>4.5</td>
</tr>
<tr>
<td>NE2-17-18</td>
<td></td>
</tr>
</tbody>
</table>
## Grades and grade requirements for the class Pinto Beans.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Moisture $^1$</th>
<th>Total Defects (Total damaged, Total foreign material, Contrasting classes, &amp; Splits)</th>
<th>Total Damaged</th>
<th>Foreign Material (Total including stones)</th>
<th>Classes that Blend $^3$</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. No. 1</td>
<td>18.0</td>
<td>3.0</td>
<td>3.0</td>
<td>0.5</td>
<td>5.0</td>
</tr>
<tr>
<td>U.S. No. 2</td>
<td>18.0</td>
<td>5.0</td>
<td>5.0</td>
<td>1.0</td>
<td>10.0</td>
</tr>
<tr>
<td>U.S. No. 3</td>
<td>18.0</td>
<td>7.0</td>
<td>7.0</td>
<td>1.5</td>
<td>15.0</td>
</tr>
</tbody>
</table>

**U.S. Substandard** shall be beans which do not meet the requirements for the grades U.S. No. 1 through U.S. Sample grade. Beans which are not well screened shall also be U.S. Substandard, except for beans which meet the requirements for U.S. Sample grade.

**U.S. Sample grade** shall be beans which are musty, sour, heating, materially weathered, or weevily; which have any commercially objectionable odor; which contain insect webbing or filth, animal filth, any unknown foreign substance, broken glass, or metal fragments; or which are otherwise of distinctly low quality.

$^1$Beans with more than 18.0 percent moisture are graded High moisture.

$^2$Beans with more than 2.0 percent contrasting classes are graded Mixed beans.

$^3$Beans with more than 15.0 percent classes that blend are graded Mixed beans.

### Grades and grade requirements for the classes Marrow, Great Northern, Small White, Flat Small White, White Kidney, Light Red Kidney, Dark Red Kidney, Small Red, Pink, Black, and Miscellaneous.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Moisture $^1$</th>
<th>Total Defects (Total damaged, Total foreign material, Contrasting classes, &amp; Splits)</th>
<th>Total Damaged</th>
<th>Foreign Material (Total including stones)</th>
<th>Classes that Blend $^3$</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. No. 1</td>
<td>18.0</td>
<td>2.0</td>
<td>2.0</td>
<td>0.5</td>
<td>5.0</td>
</tr>
<tr>
<td>U.S. No. 2</td>
<td>18.0</td>
<td>4.0</td>
<td>4.0</td>
<td>1.0</td>
<td>10.0</td>
</tr>
<tr>
<td>U.S. No. 3</td>
<td>18.0</td>
<td>6.0</td>
<td>6.0</td>
<td>1.5</td>
<td>15.0</td>
</tr>
</tbody>
</table>

**U.S. Substandard** shall be beans which do not meet the requirements for the grades U.S. No. 1 through U.S. Sample grade. Beans which are not well screened shall also be U.S. Substandard, except for beans which meet the requirements for U.S. Sample grade.

**U.S. Sample grade** shall be beans which are musty, sour, heating, materially weathered, or weevily; which have any commercially objectionable odor; which contain insect webbing or filth, animal filth, any unknown foreign substance, broken glass, or metal fragments; or which are otherwise of distinctly low quality.

$^1$Beans with more than 18.0 percent moisture are graded High moisture.

$^2$Beans with more than 2.0 percent contrasting classes are graded Mixed beans.

$^3$Beans with more than 15.0 percent classes that blend are graded Mixed beans.

New England Baked Beans Recipe
Makes 8 servings (about 1 cup each)

Ingredients
• 1 pound dry-packaged navy beans
• 8 ounces bacon, cubed
• 2 cups chopped onions
• 2 teaspoons minced garlic
• 1/3 cup unsulphured molasses
• 1/3 cup packed light brown sugar
• 2 teaspoons prepared mustard
• 1/2 teaspoon dry mustard
• 1/4 teaspoon ground allspice
• 2 bay leaves
• 2 teaspoons salt
• 1 teaspoon pepper

Preparation
1. Place beans in large saucepan with enough water to cover by 2 inches; heat to boiling and boil 2 minutes. Let stand, covered, 1 hour; drain.
2. Return beans to pan with enough water to come to the top of the beans; heat to boiling. Reduce heat and simmer, covered, until tender but not soft, 30 to 40 minutes.
3. Preheat oven at 250 degrees.
4. Transfer beans and liquid into large pot or 3 quart casserole.
5. Stir bacon and remaining ingredients into beans. Bake, covered, for 1 hour. Uncover and bake until desired thickness, 4 – 6 hours, stirring every hour.
The plant pathology program at the Panhandle REC has multiple dry bean and pulse crop projects that are being conducted in 2023. Some are new and some are ongoing. However, one of the more interesting and novel projects is continuing studies with bacterial isolates that were captured from the stratosphere. This is a brief report on the status of that study and what we have learned to date.

We are currently collaborating with a group of microbiologists from Georgia and Florida. This group was studying bacteria and other microbes that they had obtained from the lower part of the stratosphere with weather balloons. They discovered several cultures that were very similar to the bacterial wilt pathogen that we routinely encounter here on dry beans, named Curtobacterium flaccumfaciens pv. flaccumfaciens \((Cff)\). They contacted me to join the group and participate in the characterization of these isolates and comparing them with our known plant pathogenic isolates from Nebraska.

Our role in this project has been to test a selection of these isolates for pathogenicity and virulence on dry beans under greenhouse conditions. We have received and tested now approximately 15 stratospheric isolates to date. This project is still ongoing, but we have determined that most of them were viable and able to grow in culture. Several
more were definitely pathogenic and capable of infecting, inducing symptoms, and causing disease on dry bean plants in the greenhouse. Interestingly, we also noted that those isolates were less virulent. They grow and cause symptoms, but much slower than some of our highly virulent Nebraska isolates.

After several additional molecular tests, it has been established that at least one of the isolates we were working with is actually not Cff, but thought now to be a new species of Curtobacterium. We are additionally proposing to name that stratospheric isolate (L6-1) as Curtobacterium aetheraea. It is remarkable to me to think that any organism could survive the conditions that are present so high in the atmosphere (uv light and extremely low temperatures). Nevertheless, I will continue to share more information and results as the project proceeds, so stay tuned.

###

**MacDon**

**BIGGER. FASTER. FLEXIER.**

More Capacity. More Speed. More Flex. The all-new FD2 gives you more of everything you need from the company that brought you the Original FlexDraper®.

*Compared to previous model.

![QR Code](https://via.placeholder.com/150)

*Scan Here for More! Find your dealer at MacDon.com*
USDBC UES Application for 2024

In late May, the U.S. Dry Bean Council (USDBC) submitted its application for international market development funding for 2024 to the Foreign Agricultural Services, USDA. The application exceeded 200 pages and included sections on the administration of the USDBC, current U.S. and world market situation and future outlook for dry beans, the competition, and the results of marketing activities in 2022. The main focus of the application, however, was proposed 2024 market development strategies, goals, and proposed activities for all key USDBC regions including Mexico; MERCOSUR; DR-CAFTA; EU, Middle East, and North Africa (EMENA); Southeast Asia; China; Japan; and Worldwide. The application additionally covered food aid programming for 2024.

The application encompassed on-going USDBC initiatives, including participation in key international trade shows and missions, crop reporting, and worldwide social media campaigns. The USDBC additionally proposed to step up its efforts on dry bean consumption, BeanCon24, the use of a Global Food Technologist/Nutritionist in USDBC training activities, a new public relations campaign and marketing activities in the U.K., and new representation in the EMENA region. All of the USDBC’s international representatives were encouraged to capitalize on the growing plant-forward food movement by developing new buyer and influencer contacts as well as initiating innovative marketing activities that appeal to this segment.

It is anticipated that the Market Access (MAP) and Foreign Market Development (FMD) Programs will remain the main sources of USDBC’s international funding. However, funding for the following projects was also requested under USDA’s Global Broad-based initiative (GBI) and Emerging Markets (EMP) Programs.

- A multi-cooperator GBO to monitor and address increasing global MRL issues;
- An initiative in the EU to promote the sustainability of U.S. dry beans and other pulse crops;
- The promotion of the health benefits of dry beans in Mexico, MERCOSUR, and DR-CAFTA through the formation of a Pulse Health Alliance involving U.S. exporters and key importers, academics, and health professionals in these regions;

Announcements concerning the amount of funding awarded to the USDBC and proposal approvals are anticipated in late 2023.

Article contributors Rebecca Bratter, USDBC Executive Director and Dee Richmond, USDBC Program Advisor.
Chair’s Comments  
By Courtney Schuler

The 2023 production season is in full swing. Bean planting has tested our patience, but for the past month, I feel like we are living in a parallel universe to the last several years. The cool, wet weather makes it look and feel more like Ireland than Western Nebraska and gives us anxiety about everything at the other extreme. But the positives are, we actually had a spring season this year, the crops will be able to do a whole lot of growing before ever needing a drop of irrigation water, and the herbicides should work significantly better with moisture in the ground and the weeds actively growing and germinating earlier in the season.

By the time you read this article, the June 30th Acreage report will likely have been released by USDA, giving us a better grasp on the size of this year’s dry bean crop and competing crops. Volatility makes it especially challenging to market crops like dry beans where there isn’t a futures market to hedge against – both for producers and processors. So we depend on these reports, regardless of how right or wrong they are, to make business decisions in all of our operations.

The March Planting Intentions Report indicated that the US would be down 2% in overall dry bean acres from 2022. North Dakota is projected to increase by 4%, Michigan be equal to 2022, Minnesota decrease by 12%, & Nebraska the largest decrease at 26%. Colorado acres showed an increase of 9% and Wyoming reported a decrease of 6%. The surveys for this data were likely completed prior to the fluctuation in some of the commodity futures prices, so the Acreage report should give a better indication of actual dry bean acres planted. Even though we have had more precipitation than normal, many areas of the country are much drier than normal, causing delayed planting and emergence in some dry bean regions.

Your NDBC Representatives continue to advocate for the Nebraska and US dry bean industry at both the domestic and international level. We are exploring new and existing avenues for food aid and export and are promoting whole beans and bean ingredients at trade shows locally and abroad. Locally, we are working with the Nebraska Farm to School program and Nebraska Farm Bureau Foundation on both educational and promotional activities.

If you have questions about what it takes to serve on the NDBC – please call or email me at 308-225-1775, eschuler@trinidadbenham.com. I hope to see everyone for the PARTT Field Tour – August 23rd at the UNL Panhandle Research & Extension Center!

2022-2023 Nebraska Dry Bean Commission Members

Grower Representatives

David Howell, Treasurer, District I
Justin Relka, District II
District III– Vacant
District IV—Vacant
Jeff Jenkins, At-Large District I & II
At-Large District III & IV—Vacant

Processor Representatives

Courtney Schuler, Chair
Trinidad Benham Corporation, Bayard, NE

Dave Weber, Vice Chair
New Alliance Bean, Alliance, NE

Chris Kelley
Kelley Bean Company, Scottsbluff, NE

Dr. John Westra
UNL PREC Director
Ex-Officio

Lynn Reuter, Executive Director

Nebraska Dry Bean Commission
4502 Ave I
Scottsbluff, NE 69361
(308) 632-1258
E-mail: dryediblebeans@nebraska.gov
Website: nebraskadrybean.nebraska.gov

Link to 2022 Dry Bean Production Survey—Please Complete & return to dryediblebeans@nebraska.gov
Nebraska Farm Bureau hosted their Making the Connection, an agricultural literacy conference held June 5, 2023 in Kearney, NE.

Due to a donation by the Buffalo County Farm Bureau participation in this event was free for educators to attend.

Today’s students are future consumers of agricultural products and have many questions about agriculture and plenty of misperceptions about where their food comes from. The Making the Connection conference provided over 100 educators and agriculture professionals the option to explore tools to help students and consumers understand how agriculture impacts their everyday life. Breakout sessions included Hosting Community Agricultural Literacy Events, Make and Taste with Nebraska Ag in the Classroom, Making it easy to Make a Connection, Connecting Agriculture and History: Walk to Unlock Nebraska tour, and become an Ag Pen Pal and programs for K-12 ag literacy.

The Nebraska Dry Bean Commission joined Nebraska commodity groups to sponsor the Taste of Nebraska Table Supporter. During lunch commodity leaders had the opportunity to chat with guests and answer many of their questions. “I was surprised by the level of interest educators had in dry bean production” said Lynn Reuter, NDBC Executive Director. Following lunch commodity leaders participated in a panel discussion answering questions from the audience about common misconceptions and how to address them.

NDBC has continued their support (AITC) for NE Farm Bureau’s Agriculture In the Classroom program which is a statewide program that helps K-12 students and teachers develop an awareness and understanding that agriculture is their source of life’s necessities. In 2022-23 school year AITC program interacted with 30,000 students, 600 teachers and 3,500 volunteers.
Beans, beans, they’re good for your heart; the more you eat, the...longer you live? Legumes may be the most important predictor of survival in older people from around the globe. Researchers from different institutions looked at five different cohorts in Japan, Sweden, Greece, and Australia. Of all the food factors they looked at, only one was associated with a longer lifespan across the board: legume intake. Whether it was the Japanese eating their soy, the Swedes eating their brown beans and peas, or those in the Mediterranean eating lentils, chickpeas, and white beans, legume intake was associated with an increased lifespan. In fact, it was the only result that was plausible, consistent, and statistically significant from the data across all the populations combined. We’re talking an 8% reduction in risk of death for every 20 gram increase in daily legume intake. That’s just two tablespoons worth! So if a can of beans is 250 grams, and we get 8% lower mortality for every 20 grams, if we eat a can a day can we live forever?

If, however, one wants to decrease their lifespan, studies suggest eating a bean-free diet may increase our risk of death. Having arrived at the one dietary fountain of youth, why aren’t people clamoring for beans? Fear of flatulence. So is that the choice we’re left with:

Breaking wind or breaking down? Passing gas or passing on? Turns out that people’s concerns about excessive flatulence from eating beans may be exaggerated.

A recent study, profiled in my video Increased Lifespan from Beans, involved adding a half-cup of beans every day to people’s diets for months to see what would happen. The vast majority of people experienced no symptoms at all. However, a few percent did report increased flatulence, so some individuals may be affected. But most aren’t. Even among those that were affected, 70% or more of the participants felt that flatulence dissipated—no pun intended—by the second or third week of bean consumption. So we’ve just got to stick with it.

And a small percentage reported increased flatulence on the control diet without any beans. People have preconceived notions about beans such that just the expectation of flatulence from eating beans may influence their perceptions of having gas. Researchers didn’t actually measure farts in this study, they just asked participants how much gas they had. We know from previous studies that if someone eats a product that’s labeled to have something that may cause intestinal distress, it causes more intestinal distress —whether it actually contains that ingredient or not!

So people thinking beans are going to cause gas may just be more likely to notice the gas they normally have. Either way it tends to go away. After a few weeks of daily bean consumption, people perceive that flatulence occurrence returns to normal levels.

In another study, researchers added more than a half a cup of kidney beans to people’s daily diets, and the research subjects reported that the discomfort they initially felt within the first day or two quickly disappeared. We’ve just got to stick with it.

The bottom line is that an increasing body of research supports the benefits of a plant-based diet, and legumes specifically, in the reduction of chronic disease risks. In some people, increased bean consumption may result in more flatulence initially, but it will decrease over time if we just keep it up. Doctors should recommend a bean-filled, plant-based diet to their patients, as the nutritional attributes of beans far outweigh the potential for transitory discomfort. The long-term health benefits of bean consumption are great.

Eating beans in the long term may make our term on earth even longer.

Find more about the benefits of dry bean consumptions by searching “Beans” at Nutritionfacts.org
PLEASE HELP!
We need to keep our mailing list for “The Bean Bag” up to date so if your mailing address has or will be changed, please give us a call at:

(308) 633-1387 or email to:
nebeangrower@allophone.com

or mail the changes to us at:

4502 Avenue I, Scottsbluff, NE 69361

If you raise beans, are a land owner or a bean processor and want to receive the Bean Bag, please contact us and we will get you added to the list.

If you no longer want to receive the Bean Bag please contact us at any of the above options to remove your name.

Thank you!
The Bean Bag is supported by vendor ads and bean checkoff dollars.