If you're not using a Sund to pick up your crop, you may think shatter, field losses and dockage are just normal conditions of harvesting. But they don't have to be.

With the Sund Raking pickup you'll be able to gently pick up swaths, bean rows or field peas while leaving dirt and rocks on the ground where they belong. The result is cleaner crop in your bin and more of it. Also available is the Sund Pickup and Universal header combination that can't be beat.

Visit our website at Sundmfg.com to view the Sund Raking Pickup in a variety of crops. Then see your nearest Sund dealer or phone Fred Sund at 1-800-334-7863 ext 121. You may also contact Mark Hatloy at Hamilton Systems to learn more about the Universal Header/Sund Pickup combination at 701-454-3875.
Spilling The Beans...

Paul Pieper

In my first article of Spilling The Beans, I asked all those planting beans to plant an acre of “optimism”. As of today, my acre is rather dry in the Dutch Flats area. But on the other side of things, bean prices have risen 4 to 6 dollars a cwt. Corn had a little bit of a rally.

The bean growers of Western Nebraska lost a true promoter of beans this past spring when Larry Birdsall passed away. We at the Nebraska Dry Bean Growers Association want to extend his family our sympathies. Larry served on the NDBGA Board from 1994 to 2002. He will be greatly missed.

Jeff Nichols, at our last meeting, informed the board he will be stepping down from the NDBGA Board in the At-Large position. This leads me to my next question, “which one of you bean growers will pick up the torch to carry on the promotion of Dry Beans for Western Nebraska?” We are looking for a few individuals with a passion and desire to see that the work of the NDBGA gets carried out.

We are also looking for any and all

See “Spilling” on page 17

About The Bean Bag

The Bean Bag is a regional publication for the dry bean industry targeted to growers and decision-makers involved in the production and sales of Nebraska-grown dry edible beans. It is published four times a year as Spring, Summer, Harvest, and Bean Day issues by the Nebraska Dry Bean Growers Association, a nonprofit organization of dry edible bean growers in Nebraska.

Publishing articles or advertisements in The Bean Bag does not constitute an endorsement of the views or products by the Nebraska Dry Bean Growers Association.

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Editorial, advertising, and mailing materials may be emailed to nebeangrower@allophone.com or mailed to The Bean Bag, 4502 Avenue I, Scottsbluff, Nebraska 69361.

Subscriptions to The Bean Bag for Nebraska dry bean producers are provided compliments of the Nebraska Dry Bean Commission. Others may purchase subscriptions for $10 a year by sending a check and subscription information to the Nebraska Dry Bean Growers Association, 4502 Avenue I, Scottsbluff, NE. 69361.
Great northern common bean cultivar ‘Panhandle Pride’ was developed by the dry bean breeding program at the University of Nebraska Agricultural Research Division and released in 2015. Panhandle Pride was bred specifically for adaptation to the common bean growing conditions of Nebraska and for enhanced resistance to common bacterial blight (CBB), and for improved resistance to common bean rust.

Disease package:
Inoculation of Panhandle Pride with the Bean common rust races 41, 44, 47, 49, 53, 67, 73, and 108 under greenhouse conditions at Lincoln, NE in 2016, provided evidence for the presence of Ur-3, Ur-6, and Ur-11 genes for resistance to common bean rust.

The CBB reaction of Panhandle Pride was consistent across three years at the WCREC in North Platte, NE where field disease ratings of 5.2, 4.3, and 6.0 recorded in 2014, 2013, and 2011, respectively. On average, Panhandle Pride had similar CBB reaction than Coyne. Conversely, the susceptible great northern, Orion, scored 8.3, 7.5, and 8.0 in 2014, 2013, and 2011.

Based on top necrosis reaction to NL-3 strain of Bean Common Mosaic Necrotic Virus, it was determined that Panhandle Pride carries the single dominant hypersensitive I gene that provides resistance to all non-necrotic strains of BCMV.

Panhandle Pride has the same partial avoidance to white mold due to its semi-upright and porous plant architecture in field nurseries.

Agronomic characteristics:
Panhandle Pride exhibits a semi-upright Type 2b indeterminate growth habit. Panhandle Pride has white flowers and blooms 44 d after planting. Panhandle Pride is a midseason bean maturing 87 d after planting (range 80-91 d). The seed coat of Panhandle Pride is bright white.

Panhandle Pride (2875 lbs acre⁻¹) had a slightly lower yield than Marquis and Orion (2965 and 2896 lbs acre⁻¹) for the on-farm and on-station trials from 2011 to 2015 (Table 1). For the regional Western Regional Bean Trial (WRBT) grown in 2015 in Colorado, Idaho, Nebraska, and Washington, Panhandle Pride had a significant higher yield than Orion, but significant lower yield than Matterhorn for the regional Mid-West Performance Nursery (MRPN) grown in Colorado, Michigan, Nebraska, and North Dakota in 2015 (Table 2).

Average seed size for Panhandle Pride (34.8 g 100 seeds⁻¹) is similar to Aries, slightly larger than Coyne (34.7 g 100 seeds⁻¹) and larger than Marquis, Beryl and Orion (31.1, 29.4, and 33.3 g 100 seeds⁻¹, respectively) in the intermediate, advanced, and growers’ field trials grown from 2011 to 2015 (Table 1). For the regional Western Regional Bean Trail (WRBT) grown in 2015 in Colorado, Idaho, Nebraska, and Washington, Panhandle Pride had a significant higher 100-seed weight (Table 2).

We are grateful for financial support from the Nebraska Dry Bean Commission and the University of Nebraska Hatch Project.
Rollins A. Emerson – Nebraska’s First Dry Bean Researcher

Robert M. Harveson, Extension Plant Pathologist and
Carlos A. Urrea, Dry Bean Breeder, University of Nebraska, Panhandle REC, Scottsbluff

Introduction
Although Rollins Emerson is a world renowned geneticist, he is little known in his home state and should be recognized as a catalyst for beginning the dry bean industry in Nebraska. Rollins Adams Emerson was born in upstate New York, but his family moved to Kearney, NE when he was seven to homestead new farmland on the prairies. After completing high school, he enrolled in the Agricultural College at University of Nebraska, graduating in 1895 before joining the department as assistant horticulturalist. After working two years as an assistant editor with the Office of Experiment Stations of the USDA in Washington DC, he returned to Nebraska in 1899 accepting a position with the Nebraska Experiment Station as Horticulturalist and Professor and Head of the Horticulture Department.

Emerson Begins Genetic Investigation in Dry Beans
Emerson then began a career of research in plant breeding and genetics, concentrating first on the common bean, thereby becoming one of the early dry bean researchers in the U.S. In fact this work occurred more than 20 years prior to a dry bean industry even beginning in the state. His first experiments resulted in a paper published in 1902 entitled: “Preliminary Account of Variation in Bean Hybrids” with a second paper on bean hybrids appearing in 1904. He additionally published a number of papers later pertaining to the inheritance of seed color, seed size and other character traits of the common bean.

He was one of the first American scientists to understand and embrace the ideas of Gregor Mendel (also referred to as Mendelian genetics). These principles state that certain genetic traits are inherited or passed on to progeny from their parents. Mendel discovered and documented these characteristics after conducting experiments with garden peas. Emerson’s early landmark papers on dry bean breeding illustrated his firm grasp of the newly discovered laws of inheritance and highlighted his interest in testing the validity of Mendel’s laws using the genus Phaseolus (common bean) as his experimental model.

Cornell Years
Emerson took leave from the University of Nebraska in 1910-1911 to pursue the Ph.D. at Harvard. After completing the degree in 1912, he returned to Lincoln, but soon after accepted an offer to become head of Cornell’s Department of Plant Breeding. It was here over the next three decades that he achieved his reputation and fame as a pioneer corn geneticist, eventually building a corn breeding and genetics dynasty. He mentored dozens of graduate students, many that went on to become famous geneticists in their own rights, including another Nebraska native, George Wells Beadle. George Beadle, from Wahoo NE, was jointly awarded the Nobel Prize in 1958 for discovering the role of certain genes in producing enzymes that regulate biochemical pathways in cells.

Although Emerson utilized corn as his model crop while at Cornell, research in his later years included additional breeding studies with dry beans. At that time, New York was the number one

See “Emerson” on page 20
The Dry Bean Industry in the United States Begins in New York

Robert M. Harveson, Extension Plant Pathologist and Carlos A. Urrea, Dry Bean Breeder, University of Nebraska, PREC, Scottsbluff

Introduction
Recent genomic evidence suggests that the common bean, *Phaseolus vulgaris*, L. originated from a common ancestral wild population in Central America. It diverged into two populations resulting in two geographically isolated and genetically distinct gene pools (now referred to as Mesoamerican and Andean) with well-defined races within each gene pool. The consumption of this crop has since played a critical role in the diets and nutritional health of numerous cultures wherever they have traveled. Other bean species have been known throughout the Old World since ancient times, however, the usage and development of common bean in North America as an agricultural industry has been relatively recent. It was not until well into the 19th century that the crop began to be produced commercially.

Beginnings in New York
In 1836 Stephen Coe obtained a single pint of small white beans (also known as “pea”, “navy”, or “yankee” beans) from eastern New York and planted them on his farm near Yates, Orleans County in the western part of the state. He planted them that year and after 3 successive crops produced enough beans to then sell. His son, Tunis H. Coe, sold a load of 33 bushels to H. V. Prentiss from Albion, NY who was apparently the only man in Orleans County who could be convinced to buy that many. This is thought to be the first consignment of beans commercially sold in the U.S. Obviously there were other instances where beans were produced (the Native American Indians had been growing and consuming beans for centuries prior to this), but until that point, no organized industry for the commercial retail of the crop had existed anywhere before.

The further production of beans was limited to this area of western New York for a number of years afterward, but gradually expanded to other counties and eventually outside of New York State westward into Ontario Canada, and Michigan. This single quantity of 33 bushels sold in 1839 grew to more than 500,000 bushels of beans from New York by the late 1890s. Initially, New England was the sole purchaser and consumer of these beans for many years, but markets (both domestic and foreign) and demand for beans also grew substantially by the turn of the century. There were a number of factors that were instrumental in increasing the interest and demand for bean consumption in the U.S., including the decline of other crops such as wheat, economics, politics, several environmental disasters, and perhaps most significantly, the Civil War.

The arrival of the wheat weevil and its effects on the wheat crops forced growers to diversify their programs to include other crops, including dry beans. Beans became more attractive by the 1860s due to increased prices as a result of the government buying beans for use in the military during the Civil War. After the war was over, production continued to expand as retuning soldiers had developed a habit for eating beans during the war and they passed this fondness on to others. Production continued to increase in states such as Michigan, California, Idaho, and Nebraska in the 20th century with new plant breeding programs becoming more common in these production areas. The dry bean industry has grown substantially from these humble beginnings in New York State with the U.S. now a major producer of the crop globally.

References


Dry Bean Field Tour—August 16th!

June 8th and 9th found Dr. Carlos Urrea and his crew planting the bean research plots at PREC. This year all the plots for Field Tour are in Scottsbluff so there will be no need to travel to the Mitchell. As always there will be coffee and donuts during registration for growers and landowners, from 9:00 – 9:30 a.m., then everyone will meet in the auditorium. Representatives from the offices of Senators Sasse and Fischer plan to be present and will likely read statements from their respective employers. Jessica Groskoph, Extension Educator in ag economics will present “the current financial situation” and John Thomas, Extension Educator from Box Butte County will present an “update on direct harvest research and field sampling”. When their presentations are complete we will load up the people movers and head for the bean plots. As always, we will be serving our great grilled burgers, delicious beans, salad, drinks, and ice cream! Mark your calendars for Tuesday, August 16th at Panhandle Research and Extension Center!
Bean Day 2017

Bean Day will be undergoing some changes in date and format for 2017. At the last board meeting, the directors voted to move Bean Day to early February and set the date for February 7th. They also voted to start later in the day and go into early evening with a food-and-drink social hour that will give growers and landowners a better opportunity to spend time with our vendors. Watch for full details in the Winter Edition of The Bean Bag!

Oregon Trail Days Chili Cook-Off Winner

Mike Dallas from Wyoming walked off with the $300 first place prize for 2016! Second place winner was Scott Harris from Scottsbluff, who won $200 and third place winner of $100 was Kyle Haberman, also from Scottsbluff. Pictured with Mike is the president of the Nebraska Dry Bean Commission, Courtney Schuler. The commission sponsors the prizes for the cook-off.
ERADICATE WHITE MOLD WITH OXIDATE 2.0 AND SANIDATE 12.0!

Ask about OxiPhos, our new systemic fungicide for downy mildew, pythium, phytophthora and late blight!

OxiDate® 2.0 Bactericide/Fungicide
OxiDate 2.0 suppresses bacterial and fungal pathogens, offering superior protection for your bean crop. It is proven effective in reducing white mold severity on beans in the field and increasing total bean yield, effectively increasing your bottom line.

SaniDate® 12.0 Irrigation Water Treatment
SaniDate 12.0 is a high-strength peroxyacetic acid-based microbiocide that can be used to reduce pathogens in irrigation water and prevent the spread of disease among beans in the field.

Contact Chuck Wilbur at GroBetter Distributors to learn more:
Chuck Wilbur • 806.205.0208 • csw50@hotmail.com
Molecular techniques at UNL help identify primary pathogens causing Root and Crown Rots (RCR) disease of dry beans in Zambia

Chikoti Mukuma¹, James Steadman¹, Graciela Godoy-Lutz¹, and Carlos A. Urrea²
¹University of Nebraska Lincoln, ²University of Nebraska, Panhandle Research and Extension Center, Scottsbluff, NE

Zambia is a landlocked country located in south central Africa with an area of 333,333 square miles (similar to Texas). It has a population of about 14 million people, 70% of who live under $1 a day. The livelihood of most of the rural population depends on subsistence farming, making agriculture the largest occupation of the people. Dry bean is the second most important legume for direct human consumption in Zambia. It is grown by about 200,000 households every year where it is the main source of much needed protein as meat is a scarce commodity in rural areas. The local dry bean varieties grown by the smallholder farmers are low yielding and have low resistance to RCR.

RCR is a disease complex caused by several plant pathogens. It is important to know the primary pathogen causing RCR before control strategies are implemented. One of the most sustainable and effective control measure is breeding for resistance to RCR. Through the USDA - NIFA project ‘Genetic approaches to reducing fungal and Oomycetes soil-borne problems of common beans in eastern and southern Africa’, we identified the primary pathogen responsible for RCR of dry bean in Zambia so that advances can be made towards breeding for resistance.

In order to identify the primary pathogen of RCR diseases of Zambian dry beans, diseased plant tissue and FTA cards, where the sap of the diseased plant was blotted, were collected from RCR symptomatic plants over three years from the RCR nurseries in Zambia consisting of lines from the Nebraska Dry Bean Breeding Program and Andean Diversity Panel (lines from Africa and the US). DNA was extracted from the plant samples as well as from the FTA cards and analyzed by conventional PCR (Polymerase Chain Reaction) and Next Generation sequencing, which is one of the most current sequencing technologies. Fungal and oomycete cultures were also isolated from the tissue, tested for pathogenicity and their DNA sent for Sanger Sequencing to taxonomically identify the cultures. Results from all the three methods were compared to identify the primary pathogen causing RCR of dry beans in Zambia. Species of Fusarium, mainly F.solani and F. oxysporum are the primary pathogens associated with RCR in Zambia (Figure 1).

http://www.zambia-info.org/country

See RCR on page 18

COVER PHOTO: Many thanks to Dan FITTS, NDBGA Secretary, for providing the cover art for this edition of The Bean Bag! Dan farms near Melbeta with his wife and three children. You might recognize him as a storm chaser for KNEB!

If you have a photograph that you would like to see on our cover, please attach it to an email and send it to nebeangrower@allophone.com. Be sure to tell us where the picture was taken, your name, the area you farm in, and any other information you would like to share.
2016 International Year of Pulses for Children

Jackie Cervantes-Guzman, Nebraska Extension Educator

The United Nations has declared 2016 the International Year of Pulses. What are pulses and why are they so important? Pulses that we are most familiar with here in the U.S. are dry beans, dry peas, lentils, and chickpeas to name a few. They are high in protein, fiber, minerals, and vitamins. This movement is an opportunity to raise global awareness in the role that pulses play in feeding the world and it is also something to celebrate. This movement is an occasion to help communities around the world learn about the nutritional value of pulses and the positive impact they can have on your health. Pulses are environmentally friendly and play an important role in our global food security.

As an Extension Educator I found this an opportunity to introduce pulses to children through our summer programming in Scotts Bluff and Morrill Counties. Creating a culinary experience for children and allowing them to assist in the food preparation process and giving the food item a fun name always helps because then they are eager to give it a try and often ask for seconds when they have helped prepare their own food.

In my effort to educate children about introducing healthy snack options, teach culinary skills, and introduce pulses I searched for recipes that might appeal to children. My search lead me to Mango Tango Black Bean Salsa and Roasted Chickpeas (garbanzo beans). In order to make them more kid friendly I altered the recipes by omitting the onions and using a light dusting of spices. Since I may be introducing some spices that may be new to children I only give a light dusting of the seasoning or spices. In the month of June we introduced pulses to approximately 250 children K-5th grade. The children gave our recipes a “thumbs up!”

Some tips to keep in mind when cooking with children:

· Make certain you are aware of all the food allergies that may be present in the children you are working with.
Release of the Chickpea Cultivar ‘New Hope’ with Enhanced Resistance to Ascochyta Blight

Carlos A. Urrea, Dry Bean Breeder, University of Nebraska- PREC
Fred J. Muehlbauer, Chickpea Breeder, Washington State University
Robert M. Harveson, Plant Pathologist, University of Nebraska- PREC

Chickpea cultivar ‘New Hope’, a large cream-colored kabuli type, was selected from a cross made in 2002 by Dr. Fred Muehlbauer while working for the USDA-ARS at Washington State University, Pullman, WA. Selection NE21-11-22 performed well in evaluation trials and was released by the dry bean breeding program at the University of Nebraska Agricultural Research Division in 2016 under the name of New Hope. New Hope is a F_{8:13} line obtained from the cross (CA9990B1895C/CA9890233W). New Hope was selected specifically for adaptation to Nebraska growing conditions and for enhanced resistance to Ascochyta blight, a major disease of chickpea caused by Ascochyta rabiei. Under non-fungicide conditions, New Hope had significantly lower (P < 0.05) incidence of Ascochyta blight compared to CDC Orion, Sierra, and HB 14 in 2012, and compared to CDC Orion, CDC Frontier, Sierra, and HB 14 in 2015. In both 2012 and 2015, incidence of Ascochyta blight in New Hope was similar to that of resistant line, PHREC-Ca-Comp. #1, released in 2011 (Table 1).

Across years (2012 to 2015) and environments (protected, non-protected), New Hope did not differ significantly from the other cultivars (P > 0.05). New Hope exhibits an upright indeterminate growth habit. Plants average 17 inches tall and have excellent lodging resistance. New Hope has a compound leaf structure, white blossoms, and flowers 44 days after planting. It is a midseason chickpea maturing 105 days after planting. Seed size meets commercial standards.

We are grateful for financial support from the Nebraska Dry Bean Commission from 2006 to 2010, the Nebraska Department of Agriculture through the Specialty Crop Block Grant Initiative, and the University of Nebraska Hatch Project. We thank Kathy Nielsen, Gene Kizzire, and Eduardo Valentín Cruzado for technical help.

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Don’t let that bean water go down the drain

One of the new trends in the vegan world is aquafaba. The word aqua-faba is the common name for the cooking liquid of beans and other pulses like chickpeas.

Typically consumers discard the liquid of canned beans or the liquid left over from cooking dry beans — but wait, there can be exciting new recipes using this liquid.

In 2015 U.S. software engineer Goose Wohit discovered that the liquid of garbanzo beans could be whipped and used as a direct egg replacement in meringues. Nowadays the water of chickpeas, white beans, red beans, and pinto beans is used in a variety of recipes. The frothy mixture is very light and fluffy and it takes on the flavors mixed into it. The only difference is that the canned liquid may contain sodium.

Aquafaba contains starches, some proteins, and minerals that leach into the water from whatever bean is used. The combination of these nutrients provides aquafaba with an array of culinary advantages: its uses include gelatinizing, emulsifying, and thickening recipes.

A growing international community has developed around aquafaba to explore its full potential, resulting in many exciting recipes. Food bloggers, food writers, and chefs across America have been actively sharing the new recipes using aquafaba.

Culinary uses for aquafaba include:

For an egg replacer, whisk bean water until it turns white and foamy. Use the foam to make meringues or gently fold into cookies, cakes, muffins, brownies, or breads. 3 tablespoons of aquafaba equals 1 egg.

Create an eggless chocolate mousse using whipped aquafaba, unsweetened cocoa powder, and melted dark chocolate.

Aquafaba can also be used to make soy-free vegan cheese, a dairy-free butter, and even lemon meringue pie.

For aquafaba recipes, see the following websites:

www.seriouseats.com/recipes
www.epicurious.com
Chairman’s Comments

The 2016 production season is full swing. It seems that once the 4th of July is past, bean harvest is here in the blink of an eye! I’m hopeful that the industry will be able to work through the remainder of the surplus we’ve been dealing with for the past two seasons and steadily increase the profitability to our producers.

In early June, I was able to travel to Lincoln to visit with the recipients of some of our research dollars in the UNL Food Science Department on Innovation Campus and also participate in some promotion activities. Innovation Campus is an impressive facility and the food science and processing students have countless state-of-the-art labs and equipment to utilize. This gives us all of the tools necessary to develop new dry bean products in the future. During this trip I also spoke to the NTENT group (Nebraska Training & Education for Nutrition Teams) about the NE dry bean industry and dry bean utilization. This group is made up of food service managers from schools across the state and we had some excellent discussion on the challenges they face when incorporating beans into school lunch menus. The Commission hopes to sponsor more of these events across the state as part of our education and promotion activities.

The International Year of Pulses is now half over and the Commission greatly appreciates all of the promotion done by so many individuals in Nebraska! Pulses have been featured on Backyard Farmer, discussed in numerous articles and social media posts by various UNL Extension Educators, highlighted on Billy’s Restaurant menu for Lincoln Restaurant Week, and the list goes on! This crop contributes a substantial amount to our state’s economy and we need to share the story. Let’s keep up the momentum for the rest of this year and keep building for the future! This fall, we will be partnering up with local restaurants to host our own pulse appreciation event – more details will be available at Bean Field Day and on our NDBC Facebook page.

I would like to welcome Dave Weber as a processor representative from New Alliance to the Commission. He was appointed along with myself and Cindi Allen for the current term. If you are a dry bean producer in Banner, Morrill, Kimball, Cheyenne, Duel, Garden or any counties east of the Panhandle – We Need You! The Commission’s goal is to fill our At-Large position for District III & IV by Bean Field Day, so please stop by the Commission office for an application.

I hope to see everyone for the Bean Field Tour—August 16th at the Panhandle Research & Extension Center!
The Nebraska Dry Bean Commission is now on Facebook and Pinterest

Now you can follow the Nebraska Dry Bean Commission on Facebook at facebook.com/nebraskadrybeancommission to learn about the latest news in the Bean World and check out some exciting new dry bean recipes on Pinterest at :https://www.pinterest.com/nebeancomm/

The NDBC encourages dry bean growers to share photos of their dry bean fields as the growing season continues. If you would like to share your families “bean” story, please send it to us on Facebook or via e-mail.

NDBC continues promotional program with Omaha Storm Chaser’s

Nebraska Dry Beans will continue to be a sponsor of the Omaha Storm Chasers at Werner Park in Papillion, Nebraska for the remainder of 2016 and for the beginning of the 2017 season.

Since 1969, the Omaha Storm Chasers have been a Triple-A affiliate of the Kansas City Royals.

During the 2015 season over 386,141 fans attended games at Werner Park and learned about Nebraska grown dry bean throughout the games.

The NDBC looks forward to expanding consumer awareness about Nebraska grown dry edible beans by continuing to use the “Beans for Health” message during the pre-game announcements and the digital game board advertisements during the home games.

Nebraska Dry Beans Featured at Billy’s Restaurant during Lincoln’s Restaurant Week.

Lincoln Restaurant Week is a seven-day celebration of the culinary scene in Lincoln. During the week of June 24th through June 30th, consumers have the opportunity to experience a limited-time specialty menu featuring a variety of three-course meals from some to the finest dining establishments in Lincoln.

The Nebraska Dry Bean Commission worked with Chef Nader Farahbod at Billy’s Restaurant. Chef Nader created an appetizer featuring crab cakes with a five bean salad.

A First Bite Event was held on June 23rd at the Lincoln Marriott Cornhusker Hotel with proceeds from the event going to support the Food Bank of Lincoln.


The exciting news was that five of the featured restaurants featured a bean appetizer during this event.

Nebraska Dry Bean Commission Welcomes Dave Weber as a new processor representative.

NDBC would like to welcome, Dave Weber as a new processor representative.

Dave and his wife Jana have 4 children, Brady-19, Payton-14, Addison-8, and Parker-8. Dave is starting his sixth year at New Alliance Bean in Alliance, NE, where he currently serves as the Mill Manager. Dave and his family enjoy camping and boating during the summer. Dave and Jana also stay very busy following their daughter Payton around the Panhandle to her various sporting events.
Long Time USDBC Staff Member Randy Duckworth is Moving On.

After over a decade dedicated to expanding global markets for U. S. dry beans, Randy Duckworth will step down from the US Dry Bean Council at the end of the year to begin his new tenure as Executive Director of the Global Pulse Confederation (GPC). Randy was stepped in the world of global agricultural trade and export expansion before he began his time with USDBC. At USDBC he further honed his agricultural trade expertise by serving in a number of different roles including Executive Director, Director of Emerging Markets, and finally directing USDBC’s worldwide, Mercosur, CAFTA/DR, and food assistance programs.

UDBC Submits Annual Funding Application

The U. S. Dry Bean Council (USDBC) has submitted its annual application for funding or the Unified Export Strategy (UES) to USDA’s Foreign Agricultural Service (FAS) for the 2017 program year. USDBC once again requested funding to support export development for U.S. dry beans around the world through the Market Access Program (MAP), the Foreign Market Development Program (FMD) and the Emerging Markets Program (EMP). USDBC’s total funding request for 2017 is $2.8 million between the three programs up from $2.2 in 2016.

USDBC continues to request support for market exploration in Brazil and Southeast Asia along with new activities in Europe, developing markets and throughout the Americas. This year’s funding application reflects the rapidly changing nature of global export markets and how best to capture new market share and stay competitive.

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<td>12.9</td>
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<td>(X)</td>
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<tr>
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<td>630.0</td>
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<td>590.0</td>
<td>90</td>
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<td>NA</td>
<td>(X)</td>
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<td>South Dakota</td>
<td>14.0</td>
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<td>(X)</td>
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<td>Washington</td>
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<td>106</td>
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<td>Wisconsin 4</td>
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<tr>
<td>Wyoming</td>
<td>42.0</td>
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<td>United States</td>
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<td>1,794.4</td>
<td>1,559.0</td>
<td>88</td>
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(NA) Not available.

(X) Not applicable.

1 Intended plantings in 2016 as indicated by reports from farmers.


---

## Dry Edible Bean Area Planted and Harvested – States and United States: 2015 and 2016

<table>
<thead>
<tr>
<th>State</th>
<th>2015 Area planted</th>
<th>2016 Area planted</th>
<th>2015 Area harvested</th>
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<tr>
<td></td>
<td>(1,000 acres)</td>
<td>(1,000 acres)</td>
<td>(1,000 acres)</td>
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<tr>
<td>Arizona 2</td>
<td>9.1</td>
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<td>(NA)</td>
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<tr>
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<td>45.0</td>
<td>45.0</td>
<td>44.5</td>
<td>44.5</td>
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<tr>
<td>Colorado</td>
<td>50.0</td>
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<td>45.5</td>
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<tr>
<td>Idaho</td>
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<td>140.0</td>
<td>119.0</td>
<td>139.0</td>
</tr>
<tr>
<td>Kansas 2</td>
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<tr>
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<td>220.0</td>
<td>272.0</td>
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<td>(NA)</td>
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<td>125.0</td>
<td>109.0</td>
<td>124.0</td>
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<td>Wisconsin 3</td>
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<td>NA</td>
<td>7.9</td>
<td>(NA)</td>
</tr>
<tr>
<td>Wyoming</td>
<td>32.0</td>
<td>31.0</td>
<td>31.0</td>
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<td>1,711.4</td>
<td>1,029.5</td>
</tr>
</tbody>
</table>

(NA) Not available.

1 Forecasted.

2 Estimates discontinued in 2016.
ARGENTINA/BRAZIL TRADE MISSION CONFIRMS CROP SHORTFALLS

A recently concluded USDBC trade mission and crop tour to Argentina and Brazil confirms crop shortfalls in both countries. Argentine dry bean plantings are down from 2015 but still above historical averages. Yields are significantly lower than last year, color is good but caliber is smaller than average. At the same time, Brazil, the largest bean growing and consuming nation in the world, is also facing a dry bean crop shortfall due to poor weather conditions in growing regions.

HUNGARY LOOKING TO US FOR DRY BEAN SUPPLY

USDBC just completed a market visit to Hungary to assess opportunities for exports of U.S. dry beans. The trip was scheduled to follow up on multiple inquiries made to USDBC’s European representative. A relatively small market, US dry bean exports to Hungary totaled 3,000 MT in 2015, giving the U.S. a 39% market share (source: Global Trade Atlas/Eurostat). This is largely due to the fact that the leading canning company in Hungary, Bonduelle, uses exclusively US dark red kidney beans. U.S. dry beans currently enter the market duty free but it is still a very price sensitive market. Things are beginning to change with a greater emphasis on high quality sourcing as hypermarkets, supermarkets, and specialty stores have become more prominent. The Hungarian market is principally looking for dark red kidney beans and navy beans, and has now started substituting cranberry-type beans with pinto beans. There is also demand for Great Northern beans and garbanzos. Like many countries in Eastern Europe, Hungary has long relied on Ethiopian navy beans, as well as Chinese light speckled beans. However, the market is now aware that Ethiopian prices are not the bargain that they once were and Chinese production is in gradual decline. This means that means that Hungarian companies are now hoping to have better and more frequent communication with U.S. suppliers and would like to receive samples and quotes. We will send out trade leads as we receive them and continue to cultivate opportunities in this market. The full trip report will be sent under separate cover.

“USDA” continued from page 13

USDA Planted Acreage Report
June 30, 2016

U.S. dry bean acres are 130,000 above the March planting intentions, an eight percent increase; however, planted acres are four percent below last year, at 1.689 million acres. Minnesota farmers planted 15,000 more dry bean acres than they intended, while North Dakota farmers increased dry bean acreage 70,000 from March. USDA’s Planted Acreage report puts North Dakota’s dry bean acreage at 660,000 acres, 5000 acres above last year. Nebraska’s dry bean acreage is up 30,000 from March, and Michigan growers planted 5000 more acres than intended. In addition to North Dakota, Idaho, Nebraska, and Washington all have more dry bean acres than last year.
NEWS RELEASE – FOR IMMEDIATE RELEASE, June 7, 2016

Contact: Dave Ostdiek, communications specialist, 308-632-1252

New Extension publication on direct harvest of dry edible beans

Nebraska Extension has issued a new publication that provides a comprehensive look at direct harvest of dry edible beans for Nebraska producers.

Direct harvest is relatively new to Nebraska bean growers, but has gained rapid acceptance over the past several years. It describes the practice of harvesting beans by a single pass through the field with a combine, in contrast with the conventional undercutting and windrowing process, followed by combining after the beans have dried in the windrow.

Extension Circular 309, Direct Harvest of Dry Edible Beans, is available at the Nebraska Extension Publications website, http://extensionpubs.unl.edu. The direct link to the publication is http://extensionpublications.unl.edu/assets/pdf/ec309.pdf

Authors include Extension Educator John Thomas; Professor Emeritus John A. Smith, retired machinery systems specialist; and Professor Emeritus Robert G. Wilson, retired weed specialist at the Panhandle Research and Extension Center.

Thomas, who is based in Box Butte County, said the new circular represents about 30 years of work on direct harvest, primarily by John Smith, retired machinery systems engineer, but also including several other specialists and educators.

The circular examines why some bean growers have started using direct harvest and why other growers are not. Its 19 pages provide a detailed discussion of cropping practices that will lead to a successful direct harvest. According to Thomas, direct harvest must be considered as a total cropping system, not just a change in combine header.

Some of the topics include row spacing, plant population, variety selection, type of planter, weed control, irrigation, diseases, timing of harvest, combine header selection, and monitoring seed quality and harvest loss.

According to the publication, the difference between a successful direct harvest crop and disappointment is “almost always attention to, and proper execution of, details of the entire cropping system.” It says harvest is the most important field operation in terms of risk and cost.

In 2010, only about 5 percent of Nebraska dry bean acreage was direct harvested, according to Thomas. Since then, some growers in western Nebraska and adjoining areas of Colorado and Wyoming have begun to direct harvest pinto and great northern beans and by 2014, an estimated 20 percent of the Nebraska crop was direct harvested. Thomas said he expects the trend to continue.

Direct harvest is not a new practice for dry edible beans. Some growers in Michigan and North Dakota have used it for navy beans for over 30 years, and more recently for pinto beans. For example, direct harvest of pinto beans in North Dakota in 2012 was estimated to be at least 70 percent.
Nebraska Commodity Groups Collectively Sponsor NASDA Annual Meeting

The National Association of State Departments of Agriculture (NASDA) will be celebrating its 100th Anniversary in the State of Nebraska on September 21-24, 2016 in Lincoln, Nebraska. Greg Ibach, Director of the Nebraska Department of Agriculture, is currently serving as the President of NASDA.

Commodity groups across Nebraska joined together to support the NASDA annual meeting to sponsor funding for a Diamond Level Sponsorship. Commodity groups include:

Nebraska Beef Council
Nebraska Association of Resources District
Nebraska Corn Board
Nebraska State Grange
Midwest Dairy Association
Nebraska Grain Sorghum Board and Nebraska Grain Sorghum Producers
Nebraska Cattlemen
Nebraska Grain and Feed Association
Nebraska Winery and Grape Growers Association
Nebraska Wheat Board
Nebraska Pork Producers Association
Nebraska Ethanol Board
ICON
Nebraska Agri-Business Association
Nebraska Cooperative Council
Nebraska Farm Bureau
Association of Nebraska Ethanol Producers
Nebraska Nursery and Landscape Association
NIFA
**Nebraska Dry Bean Commission**
Nebraska Craft Brewery Association

The National Association of State Departments of Agriculture was founded in 1916. NASDA grows and enhances agriculture by forging partnerships and creating consensus to achieve sound policy outcomes between state departments of agriculture, the federal government, and stakeholders.

NASDA is governed by a ten-member Board of Directors consisting of a five member Executive Committee; one At-Large member; and the presidents of the four NASDA regions. Executive Committee members are the officers of the association and serve a five-year term (each region has at least one member serving on the Executive Committee.) The regional presidents serve a one year term. The At-Large member is selected by the Executive Committee.
ideas on how to make the NDBGA Field Day, Dry Bean Day, and The Bean Bag better. We would greatly appreciate your input on what you see needs to happen to advance the use of dry beans in any shape or form. Please drop us a line, email, or phone call. We are living in the age of communication.

Keep cultivating your acre of optimism in your neighborhood and “weather” rain or shine, wind, hail or deluge, we will all make it to harvest. Happy Irrigating!! 🌾
“RCR” continued from page 10

Having identified the primary pathogen associated with RCR in Zambia, we will now be able to start screening material for resistance to *Fusarium* and, through Dr. Carlos Urrea’s breeding program in Nebraska, genetic markers can be found for resistance which may speed up the breeding process. Resistant lines will then be used as parent material in the Zambian national bean breeding program.

---

**Pathfinder Dam Spill**

Pathfinder Dam, about fifty miles southwest of Casper, Wyoming, was completed in 1909. In those hundred-plus years, there have only been four spills, 1984, 2010, 2011, and 2016. Though not so rare recently, it’s well worth the drive to experience the thundering sound and to watch rainbows appearing and disappearing in the cool mist that rises to envelope spectators. Pathfinder Dam is built of quarried stone as there was no railroad close by when construction began in 1905 and cement could not be transported by horse-drawn wagons.
“Panhandle Pride” continued from page 4

Table 1. Overall yield, 100 seed weight, and days to maturity of Panhandle Pride compared to the standard great northern cultivars grown from 2011 to 2015 in on-station and on-farm trials.

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>On-Station†</th>
<th>On-Farm‡</th>
<th>Average</th>
<th>On-Station</th>
<th>On-Station</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lbs/acre</td>
<td></td>
<td></td>
<td>g</td>
<td>days</td>
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<tr>
<td>Panhandle Pride</td>
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<td>2811</td>
<td>2875</td>
<td>34.8</td>
<td>86.9</td>
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<tr>
<td>Aries</td>
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<td>2571</td>
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<td>86.5</td>
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<td>2896</td>
<td>2896</td>
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<td>87.3</td>
</tr>
<tr>
<td>LSD$_{0.05}$</td>
<td>458</td>
<td></td>
<td></td>
<td>2.3</td>
<td>2.5</td>
</tr>
</tbody>
</table>

†Twelve yield trials grown at Mitchell and Scottsbluff, NE from 2011 to 2015.
‡Mother and Baby trials grown in four growers' fields at Morrill and Scotts Bluff, NE counties from 2011 to 2015.

Table 2. Overall yield and 100-seed weight of Panhandle Pride compared to the standard great northern cultivars tested in the Western Regional Bean Trial (WRBT) and Mid-west Regional Performance Nursery (MRPN) in 2015.

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>WRBT†</th>
<th>MRPN‡</th>
<th>WRBT</th>
<th>MRPN</th>
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</thead>
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<tr>
<td></td>
<td>lbs/acre</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panhandle Pride</td>
<td>2782</td>
<td>2070</td>
<td>35.8</td>
<td>33.9</td>
</tr>
<tr>
<td>Orion</td>
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<tr>
<td>Matterhorn</td>
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<td>31.3</td>
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<tr>
<td>LSD$_{0.05}$</td>
<td>588</td>
<td>390</td>
<td>2.4</td>
<td>2.2</td>
</tr>
</tbody>
</table>

†WRBT, four environments in 2015 in Colorado, Idaho, Nebraska, and Washington.
‡MRPN, four environments in 2015, in Colorado, Michigan, Nebraska, and North Dakota.

Field Tour, August 16th
“Emerson” continued from page 5

producer of beans in the United States, and the industry was being severely threatened by the disease, anthracnose. He has been credited with saving the dry bean industry in New York State from complete disaster and collapse after transferring resistance to the disease into new dry bean cultivars.

Emerson’s Legacy in Nebraska

The name of Rollins Emerson remains alive today in Nebraska agricultural history, although his pioneering investigations during the early years of dry bean research in the U.S. is largely unknown. The bacterial wilt-resistant Great Northern dry bean cultivar, ‘Emerson’, developed by UNL breeder Dermot Coyne in 1971, was named in honor of the eminent Nebraskan geneticist. Although many producers today are familiar with the cultivar (still being used in Nebraska 40+ years later), few know the actual identity of the honored individual or of his early contributions to the state of Nebraska and its agriculture.

References


“Extension” continued from page 15

The new Extension Circular concludes that direct harvest can be successful in Nebraska, based on the growing number of Nebraska dry bean growers who are switching.

“But the practice does not fit every operation at this time. Each producer must carefully examine his or her own operation and weigh the advantages and disadvantages. Observe neighbors’ operations and talk with other producers or extension educators. If you decide direct harvest might fit your operation develop a plan to move carefully into the new production system.”
Mango Tango Black Bean Salsa

**Ingredients**
1 mango  
1 can (15 oz.) black beans  
1 can (7 oz.) Mexicorn  
¼ cup fresh cilantro chopped  
1 tsp. garlic salt  
⅛ tsp. ground cumin  
(Instead of using garlic salt or cumin try using 1-2 tsps. of taco seasoning)

**Instructions**
1. Wash and peel the mango. Cut into cubes.
2. In a medium bowl, combine all ingredients and mix well.
3. Refrigerate until ready to use.
4. Serve with tortilla chips. (You can also make your own tortilla chips by cutting corn tortillas into triangles and bake them in the oven)

---

Fudgy Black Bean/Zucchini Cookies

*It's zucchini season—here's another delicious way to use it!*

1 medium zucchini, grated + water squeezed out  
1-15oz can black beans, drained, rinsed, and patted dry  
2 tbsp almond butter (or nut butter of choice)  
4 Medjool dates, pitted  
⅛ cup cacao or cocoa powder (the only difference is the price!)  
¼ cup old-fashioned oats  
⅛ cup coconut sugar  
2 tsp vanilla extract  
1 tsp baking powder  
⅛ tsp salt  
⅛ cup chocolate chips + more for topping

1. Preheat oven to 350F. Line a baking sheet with parchment paper.
2. Chop ends off and grate zucchini. Place in a sieve or strainer to drain.
3. Add black beans, almond butter, dates, cacao, oats, coconut sugar, vanilla, baking powder, and salt to a food processor. Process until well-combined.
4. Add zucchini and process again for another 30 seconds, or until well-combined. Stir in chocolate chips.
5. Drop spoonfuls of batter onto the baking sheet. The batter will be wet and sticky and that's okay! Wetting your hands may help. You should have about 14-16 cookies.
6. Bake for 15 minutes.
7. Store in an air-tight container in the refrigerator.
Senate Passes A GMO Labeling Bill That The Food Industry Likes

After months of bargaining and backroom arguments, the Senate has voted in favor of a new national standard for labeling food that contains ingredients from genetically modified crops. The essence of the deal: Companies will have to disclose their GMO ingredients, but they won't have to put that information right on the label.

Many food companies are fiercely opposed to such GMO labels because they believe consumers will perceive them — incorrectly — as a warning that those products are nutritionally inferior or even unsafe to eat.

If this bill becomes law, companies will be allowed instead to disclose their GMO ingredients through a QR code on the package. That's the kind of square bar code that you've seen on airline boarding passes. Consumers could scan that code with their smartphones to retrieve the information. Small companies could just print a phone number or a Web address where consumers could find out whether a particular product contains GMOs.

Many advocates of GMO labeling attacked the bill. Wenonah Hauter, executive director of Food and Water Watch, released a statement calling it "a slap in the face for all of the activists" who have worked to pass mandatory GMO labels. Senators from Vermont opposed the bill because it strikes down Vermont's own law that required GMO labels right on the package.

But the Senate proposal won support from the Organic Trade Association, which represents major organic food companies and has long supported labeling of GMOs. On June 27, the leaders of the OTA sent a long and occasionally anguished-sounding message to the OTA membership, explaining why they supported the Senate bill. They argued that Congress was inevitably going to pass some sort of bill to pre-empt Vermont's labeling law, and that this proposal contained key advantages for the organic industry.

The Senate bill, for instance, says that any organic product can automatically be labeled "non-GMO." Currently, some organic manufacturers pay substantial fees to organizations such as The Non-GMO Project in order to get their products certified as non-GMO.

The OTA letter also revealed deep concern in the organic industry about the rise of conventional, but non-GMO, food products, such as eggs or milk. These products are typically much cheaper to produce than organic products. The OTA letter called such non-GMO claims "bogus, misleading and meaningless."

The Senate bill has not yet been considered in the House.
Draco is a broadly adapted great northern bean variety ideally suited to Nebraska and Colorado production regions.

Draco has shown higher yield potential than traditional great northern beans, such as Marquis and Beryl. Draco has excellent upright architecture, higher pod set and good dry down making it a great candidate for direct harvest.

Assuming a 112 lbs./AC yield advantage compared to Marquis. Growing Draco will potentially increase your profit by $50/AC on $45/cwt. beans. This amounts to $5,000 on 100 acres and the added benefit of upright architecture.

Plant Variety Protection for GN Draco <06107> is contemplated. Unauthorized propagation of this variety is prohibited.

TALL, HIGH POD SET
DIRECT HARVESTABLE GREAT NORTHERN

> A flexible variety that performs well on a range of different soil types.
> Excellent upright architecture suitable for direct harvest.
> Matures 90-94 days similar to Marquis.
> Approximate seed count is 1,280 sds./lb.
> Demonstrated resistance to Bean Common Mosaic Virus. It has shown resistance to prevalent strains of rust that currently affect the Nebraska and Colorado growing regions.

To purchase seed, contact your local Kelley Bean representative. www.kelleybean.com

All variety information presented herein is based on field and laboratory observations. Actual crop yield and quality are dependent upon many factors beyond our control. Since environmental conditions and local practices may affect variety characteristics and performance, we disclaim legal responsibility therefore. Read all tags and labels. They contain important conditions of sale, including limitations of warranties and remedies.
Please Help!

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Please contact us if you are no longer involved in the bean industry but are still receiving The Bean Bag.

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