

SUMMER 2021 / Vol.9 No.1

Take Your **PULSE** MAGAZINE

DRY PEAS • LENTILS • CHICKPEAS • BEANS

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The USA Dry Pea & Lentil Council and the American Pulse Association represent the dry pea, lentil, dry bean, and chickpea industry in the United States. Also known as "pulses" these crops are nutritional powerhouses packed with protein, fiber, and other essential nutrients. Pulses are versatile in all kinds of recipes. As an added benefit, dry peas, lentils, beans, and chickpeas are a sustainable crop that benefits the soil and work well in many crop rotations.

ABOUT THE COVER



ILLUSTRATOR CODY MUIR:
The cover for this edition of Take Your Pulse Magazine was designed by Graphic Illustrator, Cody Muir.

Cody Muir is an award-winning illustrator with an atmospheric style that has been utilized in magazines, advertising campaigns, and brands around the globe. He's also a former APA/USADPLC Marketing intern and long-time Moscow, ID resident who happened to be visiting the area with his wife Taylor and small dog Frankie during the development of this issue. His work is heavily influenced by his Northwest upbringing where the region's jutting Cascade mountains, sweeping sunset bathed Palouse hills, and towering Seattle skyline find their way into gradient-heavy scenes.

As an intern in the marketing department, Cody designed brochures, marketing materials, and full backgrounds for trade shows. In 2016, Cody designed several illustrations, including the cover of the TYP Magazine featuring an interview with the Blue Zones founder, Dan Buettner. Cody's relationship with the U.S. pulse industry continued, when as a professional illustrator he designed the poster for the 2019 National Lentil Festival.

For this special issue of TYP, we were lucky to convince Cody to design a special cover to illustrate how pulses can play a valuable role in agricultural sustainability. Cody described the title as a "pretty bright, shining, and pulse centered scene," encompassing themes of sustainability as it applies to generational farming, water use, soil health, and the role of pulses in filling the food gap that exists between urban and rural America as well as globally. "The daughter is contributing as well with a little pack of brown lentils and is helping spread the seed," while the father teaches the daughter a lesson about regenerative agriculture. We are very appreciative of Cody's work for this issue. Enjoy!

- Editor

A YEAR OF LIVING DANGEROUSLY

CEO TIM MCGREEVY

Welcome to the first Take Your Pulse magazine after a long pandemic related hiatus. A lot has happened in the course of a year - it has been filled with highs and lows to be sure - but the U.S. pulse industry hasn't been standing still during these trying times. The growers, processors, and exporters of U.S. pulse crops are anything if not resilient.

Remember the 2019 harvest? The longest and wettest harvest in recent memory. If you were a chickpea producer, like I was, you will recall a mid to late October harvest of 15-16% moisture garbanzos that had to be dried to 13%. Unlike my friends in the northern plains, I have never had to dry chickpeas before. The 2019 harvest was like entering a haunted house with no exits. The 2019 crop had some quality challenges, but overall the U.S. produced average quality and above average yields of peas, lentils and chickpeas. Sales were slow at the beginning of the 2019/20 marketing year because of continued trade tariffs in India and China and stiff competition from Canada, Russia, and the Black Sea growing region. By December 2019 U.S. farmers were holding record stocks of dry peas, lentils and chickpeas. Pulse prices were at 15-year lows. >>>

Since 1965, the USA Dry Pea & Lentil Council has only had two CEOs, and they're both in this photo. Harold Blaine (left), the 92-year-old former and first Executive Director of the USA Dry Pea & Lentil Council visited the Stateline Office in July to drop off some historical documents. Current CEO Tim McGreevy (right) gave Harold a tour of the office and shared stories about old members of the board, marketing efforts to promote Austrian Winter Peas, and the early history of the organization. Harold recounted how the initial vote for both the Idaho Commission and the Washington Commission garnered only 51% of the grower vote. But since that time, a five-year advisory poll required by Idaho law always resulted in over 90% favorable votes.

Harold attributed his long life to a nightly glass of red wine, a daily exercise routine on a stationary bike, laughing a lot, and, yes, eating pulses. It was great to see Harold and share stories about the pulse industry.



The pet food industry was reducing purchases of pulse crops because of consumer reaction to the FDA's investigation of DCM, or Dilated Cardio Myopathy (Page 8).

On May 13, 2019, a jury in California ordered Bayer to pay a couple \$2 billion in damages after finding the company had failed to adequately inform consumers of the possible carcinogenicity of Round-up. Consumers are putting pressure on food manufacturers to eliminate glyphosate as a pre-harvest aid. (Page 16).

The pulse industry was so low, we were looking up at the worms. It couldn't get any worse, right? Maybe.

I remember hearing "Corona Virus" from some media report on the first day of January 2020. In the second week of March 2020, we hosted a Pulse Flour Summit in Minneapolis, Minnesota. It was a great summit but the storm clouds of COVID-19 were looming. As I boarded the plane back home the NCAA cancelled the Annual Men's and Women's College Basketball tournaments. They cancelled March Madness! This was no ordinary flu.

When government officials started the lock down orders, the demand for canned and dry packaged pulse crops began a consumer Tsunami that hit the grocery store shelves and stripped them bare as the wave of scared shoppers hauled them back to their pantries.

COVID-19 has resulted in consumers getting re-acquainted with their own kitchens. We ramped up our social media marketing campaigns at the beginning of the pandemic. Our social media traffic has increased dramatically as consumers seek recipes and tips on how to prepare these great foods (Page 12).

Plant based meat and dairy alternatives were growing in popularity before COVID-19. Market survey data shows that COVID-19 accelerated that growth. The adoption of plant-based foods is no longer a trend, it's a movement. This unexpected sudden burst in consumer demand for pulse crops significantly reduced global stock levels of these crops. U.S. Stock levels have declined dramatically during the pandemic and pulse crop prices have increased.

In 2020 the U.S. voted in a new president with a new climate agenda and a challenge to the agricultural industry to reduce greenhouse gases and transform the agricultural industry with a sustainable future as a goal. Can pulse crops play a part in this transformation and serve as a solution to climate change? Pulses are, pound for pound, one of the lowest carbon emitters per 100 grams of protein produced, and that conversation is getting traction in Washington, D.C. (Page 6).

One thing we've learned for sure during the last two years, in good times and hard times, people still need to eat. The pulse crops we grow, process and distribute, provide one of the most nutritious and sustainable foods on the planet. We have learned during this pandemic that the farmers, processors, exporters, importers, distributors and food manufacturers who feed us, are ESSENTIAL. 🌱

All the best,



Tim McGreevy



The first office building for the Dry Pea & Lentil Council (USADPLC) was a single wide trailer placed directly on the border between Idaho and Washington State. Today, the USADPLC Headquarters is located in approximately the same location, and provides services and representation for all of the major pulse growing states.



WHAT IS REGENERATIVE AGRICULTURE?

By Director of Research • Dr. Susan “Evy” Jaconis

Regenerative agriculture. Have you heard this buzzword? Especially when we think about soil and how pulse crops are nitrogen fixing, regenerative agriculture often comes up. Some universities are even offering a Bachelor’s degree, Master’s degree, or a certificate in Regenerative Studies or Regenerative Organic Agriculture (USDA, n.d.). What does it really mean? Luckily, scientists Peter Newton et al. (2020) reviewed 229 journal articles and 25 practitioner websites to help us understand “regenerative agriculture” (Newton et al., 2020). Their search led to many descriptions and definitions along with quite a bit of variation in those definitions. As an overarching theme, Christopher Rhodes describes that “regenerative agriculture has at its core the intention to improve the health of soil or to restore highly degraded soil, which symbiotically enhances the quality of water, vegetation, and land-productivity” (Rhodes, 2017).

Regenerative agriculture seems to be the proposal for an alternative way of agriculture and food production that could have lower environmental or social impacts (Rhodes, 2017; Newton et al., 2020). It seems that many definitions are based on farming processes – practices such as no-till or reduced tilling, including cover crops in the rotation, and integrating livestock. Others are more outcome based, with goals for improving soil health, carbon sequestration, or to increase biodiversity. Some definitions combine the processes with the outcomes to create their definition (Newton et al., 2020). A challenge with so much variation in the use of the term is that there can be uncertainty when regenerative agriculture comes up in conversation and

what the people mean when they use the term is unclear. For this reason, Newton’s team recommends that individuals define what they mean by regenerative agriculture when they use the term (Newton et al., 2020). Groups like the World Resources Institute (WRI) also recognize that there is a lack of a universal definition of regenerative agriculture. Again, we see that WRI recognizes that soil health plays a key role in regenerative agriculture and that practices focus on promoting soil health by restoring organic carbon in the soil (Ranganathan et al., 2020). As an example, the Regenerative Agriculture Initiative at California State University, Chico and The Carbon Underground provide the following definition, “*Regenerative Agriculture describes farming and grazing practices that, among other benefits, reverse climate change by rebuilding soil organic matter and restoring degraded soil biodiversity – resulting in both carbon drawdown and improving the water cycle.*” They dive in a little deeper to add “it is a holistic land management practice that leverages the power of photosynthesis in plants to close the carbon cycle, and build soil health, crop resilience and nutrient density” (The Carbon Underground and California State University, 2017).

The practices that they define as associated with regenerative agriculture are practices that:

1. contribute to generating/building soils and soil fertility and health
2. increase water percolation, water retention, and clean and safe water runoff
3. increase biodiversity and ecosystem health and resiliency
4. invert the carbon emissions of our current agriculture to one of remarkably significant carbon sequestration thereby cleansing the atmosphere of legacy levels of CO₂

It seems that regenerative agriculture is catching on all over, from producers to retailers, scientists, consumers, politicians,

and media. It crosses all sectors, public, private, and not for profit (Newton et al., 2020). Speaking of non-profits, there are numerous foundations and other groups that have focused on regenerative agriculture (e.g., Regeneration International and Regenerative Agriculture Foundation). There are also many companies in the food space that are setting goals for regenerative agriculture. General Mills defines regenerative agriculture as “farming that protects and intentionally enhances natural resources and farm communities” (General Mills, n.d.). With the aim to advance regenerative agriculture on 1 million acres of farmland by 2030, they describe six core principles of regenerative agriculture:

6 Core Principles of REGENERATIVE AGRICULTURE



Are we at the stage of certification for regenerative agriculture? There is at least one non-profit, Regenerative Organic Alliance (ROC), that offers a certification program for food, textiles, and personal care ingredients. They claim that “ROC™ farms and products meet the highest standards in the world for soil health, animal welfare, and farmworker fairness”. There are three pillars of ROC™, 1) soil health, 2) animal welfare, and 3) so-

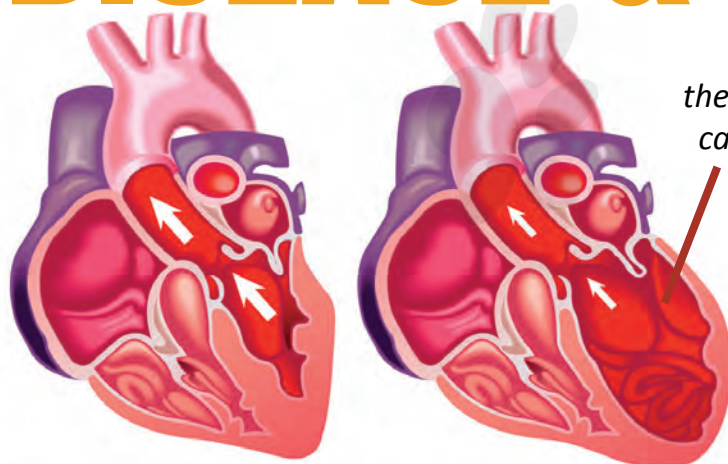
cial fairness (Regenerative Organic Certified, n.d.). We may see more certification options like this in the future.

Moving forward, it seems safe to say that “regenerative agriculture” is gaining momentum in all arenas. Pulses, with their ability to enrich the soil where they are grown along with their relatively low water use, can be a good fit in a regenerative system. 🌱

RESOURCES

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CANINE HEART DISEASE & DIET



NORMAL HEART

DILATED CARDIOMYOPATHY

On the 12th of July 2018, the Food and Drug Administration (FDA) alerted pet owners and veterinary professionals about reports of canine dilated cardiomyopathy (DCM) in dogs eating certain pet foods that contain pulses, common in diets labelled “grain-free” (FDA 2018). This action completely changed the trajectory for pulse crops in pet food from steady growth to where the industry sits now, nearly a standstill. For over ten years, the pulse market in pet food continued to rise. Known as powerhouses of nutrition and beneficial health characteristics like high protein, high fiber, and low in fat, why wouldn't they? The thought of a relationship between a pet diet including pulses and a serious heart disease came as a total shock.

the heart becomes enlarged and cannot pump blood effectively

At this point you may be wondering, what is DCM? According to the FDA, “Canine DCM is a disease of a dog’s heart muscle and results in an enlarged heart. As the heart and its chambers become dilated, it becomes harder for the heart to pump, and heart valves may leak, leading to a buildup of fluids in the chest and abdomen” (FDA 2018). Yes, that does sound like a disease to take seriously - and it is. Now we ask, how is it that these healthful pulse crops could be affiliated with such a disease? At this point, we don’t know. The science available hasn’t shown that there is indeed a cause and effect relationship. This is why, as stewards of pulse crops, we must support scientific research to understand the effects of including pulses in companion animal diets. We must find answers using evidence-based, sound research so that we can share the answers and keep our pet’s health at the forefront.

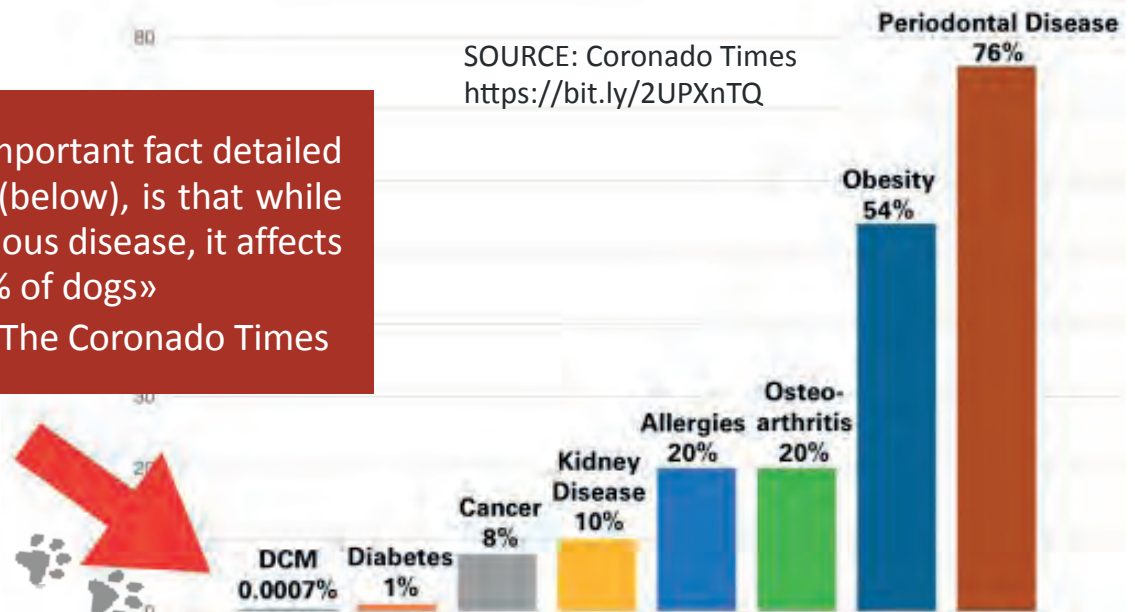
Several scientific studies have been published recently to look further into the potential relationship between eating pulses and DCM in dogs. For example, one 2020



«The most important fact detailed in the chart (below), is that while DCM is a serious disease, it affects only 0.0007% of dogs»

-The Coronado Times

SOURCE: Coronado Times
<https://bit.ly/2UPXnTQ>



Canadian study by Donadelli et al. (2020) investigated the effects of feeding a grain-free diet to large breed dogs on taurine status and health. Why did they look at taurine? Taurine is an amino acid and low levels of taurine in dogs is associated with DCM. The results of this study suggest that the grain-free diet used for the feeding trial actually improved taurine status in Labrador Retrievers. Although this suggests taurine status in Labrador Retrievers is not the basis for DCM in the trial, there are many other factors that can contribute to DCM and further research is needed. While these findings are hopeful for pulses, there are limitations of the study that don't allow us to make any conclusions about definitive causation. Long term effects were not assessed, a control was not used, and other outcomes like

increased bile acid excretion were noted. What does all this mean? It means that this study was a helpful step to better understand the health effects of dogs eating grain-free diets but it is not enough to say that pulses in canine diets do not lead to DCM. We need more science on this issue.

Before we get more into the present, let's take a step back to historical research on DCM. Is there any research that has already been done that gives clear answers regarding pulses and canine DCM? Unfortunately, the answer is no. However, previous research on DCM does produce a helpful foundation for the next steps. BSM Partners, a pet care research and consulting firm, has a team of dedicated veterinarians, veterinary cardiologists, and animal nutritionists that have taken

the lead in this arena. Of their own accord, this team published a comprehensive scientific literature review that put together the past research on DCM in dogs. Their publication goes through "clinical presentations of DCM, common sequelae (or causes of infection), treatment and preventative measures, histopathologic features (diseased caused changes in tissue), and a discussion of the varied etiological origins of the disease" (Mccauley et al. 2020). The team concludes that there are many causes and factors at play that can lead to DCM and no definitive relationship between diet and DCM was established. Even the FDA "believes that the potential association between diet and DCM in dogs is a complex scientific issue that may involve multiple factors" (FDA 2019). You may have guessed that this means



we still need more research. Due to the importance of this issue and the obvious need for research, BSM Partners has taken the initiative to conduct a multi-faceted research initiative focused on the heart health of dogs (due to be published in the fall). BSM's main goal is to better understand the metabolism of dogs to help improve what the scientific community knows about dietary requirements for healthy pets. The scientific literature thus far shows there is a gap in the knowledge, especially in regards to grain-free and pulse rich diets, and we need to learn more about them. BSM's research will play an important role in filling the gaps in knowledge surrounding the use of pulses in dog foods and other potential factors that influence DCM.

The pulse industry is eager to see more research on "grain-free" diets and the use of pulses in companion animal foods. We must be patient for scientific results because meaningful research can take time and multi-month clinical trials will be important for answering questions about pulse inclusion. The pulse industry cares about pet health and it is our priority to better understand the inclusion of pulses in pet diets for healthy and happy canine friends.

"The team concludes that there are many causes and factors at play that can lead to DCM and no definitive relationship between diet and DCM was established."

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Pulses: A Healthy Choice for Pet Food

Pulses are versatile and nutritional powerhouses, packed with protein, vitamins, and minerals. They're versatile, affordable, and sustainable too.



Did you know pulses have been used as an ingredient in pet food for over 50 years.

And here's why...

✓ **Cost-Effective.** Pulses are one of the most cost-effective proteins available on the market. Meeting the consumer demand for protein is easy with pulses – helping to cut overall ingredient costs and improve profits.

✓ **Beneficial for pet health.** Pulses, are rich in plant-based protein (23-26%), gluten-free, high in antioxidants and have a low glycemic index. In fact, studies show using pulses in both dog and cat foods may lower the risk of diabetes and aid in weight control. Pulses are gluten-free and allergen friendly too!

✓ **Good for the planet.** Pulses have a lower carbon footprint than almost any other food group, are water-efficient (using just one-tenth of the water of other proteins), and enrich the soil where they grow – reducing the need for chemical fertilizers. And pulses are non-GMO – a perfect fit for pet owners.

✓ **Versatile.** Whether splits, chips, whole or fractionated - pulse ingredients are a versatile option for pet food formulations. Pulses can provide the starch, protein, or fiber you're looking to add.



PULSE CROP MISSION FOR DGA & SCHOOL MEALS

By Director of Domestic Marketing • Becky Garrison, RD

GOOD NEWS FOR PULSES

On December 29, 2020, U.S. Departments of Agriculture (USDA) and Health and Human Services (HHS) jointly published The Dietary Guidelines for Americans (DGA), 2020-2025. The purpose is to provide advice on what American's should eat and drink to meet nutrient needs, promote health, and help prevent chronic disease. This edition of the DGA is the first to provide guidance for healthy dietary patterns by life stage, from birth through older adulthood, including women who are pregnant or lactating.

The new report labeled dry peas, lentils, and beans as a separate category, while encouraging Americans to consume more pulses for their nutritional benefits.

Read on to discover the U.S. pulse industry strategy to improve the diets of consumers, and children, by increasing consumption of pulse crops in the United States.

One of the top objectives of the U.S. Pulse Industry's strategic plan is *to increase the knowledge of pulses in public health policy and to elevate awareness of pulse crops through U.S. nutrition policy*. As a collaborative and interdisciplinary initiative amongst the national staff and departments, this long-term and strategic effort works to increase the recommendations for pulse consumption through federal nutrition guidelines; to increase consumer awareness of pulse crops through national education programs; and to increase the availability and acceptability of pulse products amongst Americans through government purchase programs.

To meet these objectives and goals, the national staff engages regularly with USDA Food and Nutrition Service (FNS), USDA Center for Nutrition Policy and Promotion (CNPP), U.S. Department of Health and Human Services (HHS), the Office of Disease Prevention and Health Promotion (ODPHP), and USDA Agricultural Marketing Service (AMS). These federal (and highly influential) agencies are charged with developing and implementing nutrition guidance and feeding programs across the U.S. – including the Dietary Guidelines for Americans (DGAs), the USDA *MyPlate* program, the National School Lunch Program (NSLP), Section 32 purchases, and the Child and Adult Care Food Program (CACFP) just to name a few.

It is a core mission of the U.S. Pulse Industry to ensure federal feeding programs and dietary guidance assist the public in recognition and comprehension of the health attributes of all pulse crops. Keep reading to learn more about the involvement of



- **“Legumes (beans & peas)”** vegetable subcategory renamed to **“Beans, Peas, Lentils”**
- **“Pulses”** are defined and the category name change is highlighted
- **“Beans, Peas, Lentils”** are highlighted as unique foods as they can be counted as a vegetable or a protein

the USADPLC and APA in two major nutrition policy areas: the 2020-2025 Dietary Guidelines for Americans review process and the National School Lunch Program (NSLP) crediting of pulses and pulse products in school meals.

Getting More “Pulses” into The 2020-2025 Dietary Guidelines for Americans

The Dietary Guidelines for Americans (DGAs) provides evidence-based nutrition information and advice for Americans to help make healthy choices about food and beverages in their daily lives. The DGAs provide guidance for programs such as *MyPlate* and the National School Lunch Program. The Dietary Guidelines emphasize the following

principles:

- The importance of “eating patterns” – also known as the combination of ALL foods and beverages a person consumes regularly over time. The guidelines do not focus on individual nutrients or foods on their own.
- Consuming more foods from food groups such as vegetables, fruits, whole grains, fat-free and low-fat dairy products, lean meats, seafood, other protein foods, and oils.
- Limiting sodium, saturated and trans fats, and added sugars.

WHAT IS THE DGA REVIEW PROCESS?

The guidelines are produced by HHS and the USDA every five years, based on the latest research. At the beginning of the review process, a DGA Advisory Committee (DGAAC) is nominated to review recent research and is charged with producing a report to HHS and USDA staff. The review process for the 2020-2025 Dietary Guidelines for Americans was completed in late December, 2020 and the new guidelines were released, replacing the 2015-2020 Dietary Guidelines for Americans.

Throughout the review process, the public has several opportunities to provide written and/or oral comments to the DGA Advisory Committee. Once the DGAAC has produced a final report and hands it over to HHS/USDA to write new guidelines, the public once again has the opportunity to provide written



2019 DGA PUBLIC COMMENT - USA PULSES

The DGA is used as guidelines for policymakers and nutrition and health professionals to help all individuals and their families consume a healthy, nutritionally adequate diet. The publication of the 2020-2025 Dietary Guidelines for Americans “sets an amazing stage for 2025,” said Becky Garrison, Dir. of Marketing, shown presenting to the Advisory Committee in 2019.



"Beans, Peas, Lentils: All cooked from dry or canned beans, peas, chickpeas, and lentils: for example, black beans, black-eyed peas, bayo beans, chickpeas (garbanzo beans), *edamame, kidney beans, lentils, lima beans, mung beans, pigeon peas, pinto beans, and split peas. Does not include green beans or peas."

and oral comments to the agencies and staff writing the new guidelines.

According to the HHS website, each edition of the Dietary Guidelines builds upon the previous edition, with scientific justification for changes informed by the Advisory Committee's Scientific Report.

WHAT CHANGED FOR PULSES?

In very exciting news, the term "pulses" was defined for the first time in the 2020-2025 Dietary Guidelines for Americans! In addition, the DGAs referred to the "legumes (beans and peas)" vegetable subcategory in a variety of ways over the past 15+ years. In the newest Dietary Guidelines for Americans edition, pulses now fall into the "Beans, Peas, Lentils" category; and this new name will be updated in the near future throughout all feeding programs, including the National School Lunch Program. The latest DGA version emphasizes that the "Beans, Peas, Lentils" food group is nutrient-dense and it encourages the consumption of these foods throughout all stages of the life cycle.

Taking a look back at pulses in previous guidelines we see that in 2005, the DGAAC recommended "legumes (dry beans)" at 3 cups/week for a 2,000 kcal diet. The 2005 report specifically recommended that the weekly serving of legumes increase to three cups per week because "legumes were relatively high in nutrients needed to meet unmet nutrient goals," such as potassium, magnesium, folate, and fiber. But in the 2010 edition, the category name changed to "beans and peas (legumes)" and the recommendation fell to 1.5 cups/week for a 2,000 kcal diet and 3 cups/week for a 3,000 kcal diet for the USDA Food Pattern – the recommendation dropped in half without any clear scientific evidence or justifications. In 2015, the recommendations continued with "legumes (beans and peas)" at 1.5 cups/week for a 2,000 kcal diet and no recommendation for the higher calorie category for the Healthy US-Style Eating Pattern and the Mediterranean-Style Eating Pattern. In the 2020-2025 edition, recommendations continue at 1.5 cups/week for a 2,000 kcal diet for all three eating patterns.

What is The National School Lunch Program (NSLP)?

Another initiative of the U.S. Pulse Industry is to ensure pulse crops and pulse ingredients are being served in schools across the nation. Packed with vitamins, minerals, and dietary fiber – pulses can help to keep kids fuller longer and to meet the nutritional needs of young, growing bodies. One effort to ensure pulse crops and pulse ingredients are in school meals, is by ensuring pulse ingredients are encouraged through the National School Lunch Program (NSLP). Under current NSLP standards, pulses face many barriers for crediting under the NSLP making it harder to include them on the menu. The USADPLC and APA are fighting hard to remove those barriers and encourage consumption in schools across the U.S.

According the USDA FNS website, NSLP is a federally assisted meal program operating in public and nonprofit private schools and residential child care institutions. It provides nutritionally balanced, low-cost or free lunches to children each school day. Participating school districts and independent schools receive cash subsidies and USDA Foods for each reimbursable meal they serve. In exchange, NSLP institutions must serve lunches that meet Federal meal pattern requirements and offer the lunches at a





free or reduced price to eligible children. All NSLP lunches must meet Federal crediting requirements.

According to the School Nutrition Association, nearly 100,000 schools/institutions serve school lunches to 29.6 million students each day, including: 20.1 million free lunches, 1.7 million reduced price (student pays \$0.40), 7.7 million full price, making a total of 4.9 billion lunches are served annually.

In early 2020 and in an effort to extend flexibilities on NSLP guidelines, FNS proposed a new rule “Simplifying Meal Service and Monitoring Requirements in the National School Lunch and School Breakfast Programs” and opened the proposed rule for public comment. The U.S. Pulse Industry met with FNS staff in 2019 and submitted comments on the 2020 new proposed rule, to encourage the Department to consider:

- Updating the vegetable subgroup currently termed “beans and peas (legumes)” to the more appropriate terminology of “pulses (lentils, chickpeas, dry peas, and beans) and soybeans
- Recognizing and highlighting the nutritional benefits and versatility of legumes, and more specifically pulses, in school meals;
- Finalizing the proposal to allow pulses offered as a meat alternate to count towards the weekly legume vegetable requirement;
- Maintaining USDA’s Policy Memo SP 26-2019 provision that allows pasta made of vegetable flour to credit as a vegetable, even if the pasta is not served with another recognizable vegetable;
- Expanding USDA’s Policy Memo SP 26-2019 provisions to also allow pasta made of legume flour to credit as a meat alternate, even if the pasta is not served with another recognizable meat/meat alternate; and
- Educating school food service operators about the many innovative uses of legumes, and more specifically pulses, in school meals as well as providing more detailed information about crediting various legume products.

Unfortunately, these efforts are on standby while Congress reviews changes to the Child Nutrition Reauthorization Act slated for this fall

The USADPLC/APA will continue to represent and engage on behalf of the U.S. pulse crop industry for regulatory fairness of crediting for pulse crops in federal feeding programs such as the NSLP, striving to not only break down barriers that stand in the way of pulse consumption, but to also create opportunities for children across the nation to be served nutrient-dense and affordable pulse crops. 🌱

RESOURCES

<https://www.hhs.gov/fitness/eat-healthy/dietary-guidelines-for-americans>

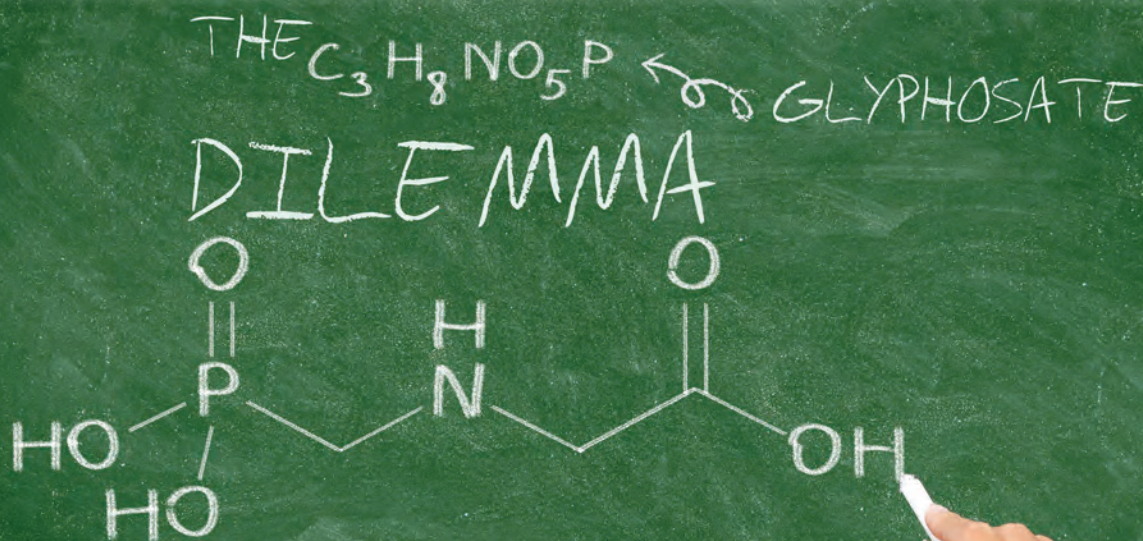
<https://fns-prod.azureedge.net/sites/default/files/resource-files/NSLPFactSheet.pdf>

<https://schoolnutrition.org/aboutschoolmeals/schoolmealtrendsstats>

THE GLYPHOSATE DILEMMA

The agricultural sector has transformed rapidly over the last few decades, utilizing every tool in a farmer's arsenal to increase yield, decrease inputs, and walk the fine line between sustainable methods and agricultural efficiency. From traditional breeding to advances in technology, the world of a pulse grower has become both a brave new world and an accident waiting to happen, and today's farmer must be prepared to respond to either scenario.

Enter into this mix a communication platform that is so instantaneous, bold, and outspoken, that any mistake made, rumor started, or question posed is amplified to a degree not calculable by the human mind. This is the stage set for the glyphosate dilemma – a situation where a farming production tool has been vilified to such a degree that consumers fear it, customers dread it, and purchasers avoid it – yet producers have no option but to continue to use it.



It's arguable as to the exact year that glyphosate first caught the eye of environmental groups or the media, but when a California jury awarded a school groundskeeper a multi-million-dollar verdict in 2018 on the argument that his cancer was caused by repeated exposure to Roundup – a popular herbicide featuring glyphosate as the active ingredient - the social media frenzy ensued. Glyphosate has been labelled a “probable carcinogen” since 2015, and there are now tens of thousands of cases pending in the U.S. courts. To make matters worse, a research article published last year confirmed that glyphosate products caused high levels of mortality following direct contact with pollinators, or bees.

There is plenty of research and information existing that argues that glyphosate is not only safe to use in agriculture, but beneficial as well. However, the perception that the use of glyphosate in agriculture is dangerous is harmful to the agriculture industry. In the pulse industry, products such as Monsanto's (now Bayer) *Roundup*, which contain glyphosate, are commonly used to kill weeds pre-emergence in a direct seed operation (to avoid a green bridge issue – disease moving from live plant to live plant), or prior to harvest in a process called *desiccation*. It's not typically used while the pulse crops have emerged, because killing the weeds also happens to kill any crop that's not tolerant of the herbicide. Green weeds can damage the pulse crop during harvest by creating stain or discoloration of the seeds. Desiccation prevents heavy infestations of weeds to damage the crop. In addition, dessication helps to reduce weed seed production of for the next season. Dessication is only allowed when more than 80% of the pulse crop is ripe. Using this product in a responsible way is one tool a pulse grower uses to manage his crop. In fact, scientist [Andrew Kniss estimates](#) in an opinion written for [plantoutofplace.com](#) that ignoring



Shelves with a variety of Herbicides in a Carrefour Hypermarket in Belgium. Roundup is a brand name of an herbicide used globally containing glyphosate, made by Monsanto.

weeds could cause a decline of 20-40% in world food production.

The Environmental Protection Agency (EPA) announced in late April their finding that glyphosate is not a cancer risk to users, noting that their scientific findings on the human health risk of glyphosate are consistent with that of other countries and federal agencies. “There’s no evidence that glyphosate causes cancer,” said Alexandra Dunn, an EPA assistant administrator for chemical safety and pollution prevention. “There’s no risk to public health from the application of glyphosate.”

Glyphosate has been tested by scientists and regulatory agencies including the Environmental Protection Agency¹ (EPA), the European Food Safety Authority² (EFSA) and the World Health Organization³ (WHO) with over 800 studies and evidence shows “that there is insufficient or no evidence that glyphosate causes cancer.”

In spite of the evidence, a recent Global Agricultural Information Network (GAIN)





A caution sign on a city park path in Perth, Wa. March 23, 2021

report by the USDA Foreign Agricultural Service (FAS) announced that France intends to end the use of glyphosate by the end of 2021, with limited exceptions. In fact, France intends to cut pesticide, insecticide, and herbicide use in half by 2025, urging French farmers to revert back to the farming methods used by their grandparents. The problem is, if countries start limiting agricultural imports with glyphosate residue beyond the Minimum Residue Limits (MRL), some pulse crop processors are nervous about producers using the product as a pre-harvest aid. Processors are reacting to some major international customers, including India and the EU, that have considered not accepting shipments with glyphosate residues present. Your processor or first purchaser need to know whether the crop is treated or not so they can take action to help market your crop. Communication is the best policy.

Maximum Residue Limits (MRLs) for all pesticides, not just glyphosate, will continue to be a concern for pulse growers and processors. will continue to be a concern for all pulse crops. U.S. pulse crops are the best quality in the world and MRL's are a part of the formula.

The crop protection plan for your crop helps to define the quality of your crop. You should follow the label and communicate with your processor to insure you are producing a quality product. Quality is worth it!

As we move through harvest and into the fall,, pulse producers should keep the following in mind when applying glyphosate or any pesticide:

- Follow the Label. This includes pre-harvest interval – don't harvest before the label allows.
- Watch for drift. Drift can cause residues for unlabeled products to be detected on pulse crops.
- Coordinate applications with your processor – especially pre-harvest aid application.

The U.S.A. Pulse Industry has worked hard for over 50 years to build a reputation as the quality supplier to the world. There is a growing, significant body of science demonstrating the health benefits of pulses, which continue to be an important part of our diets. Pulses are safe to consume and meet all regulatory safety requirements. We work closely with growers,



processors, food manufacturers, as well as conservation and sustainability organizations to minimize the use of all inputs on our crops.

To many producers, pesticide use is a necessary part of their production system. In many cases, tools like glyphosate enable producers to utilize sustainable practices like no-till or direct seeding and cover crops which promote soil health and prevent erosion and improve

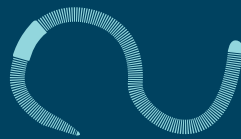
the value of their products. Weed control and pest management improves the productivity and quality of our crops. The U.S. pulse industry continues to work to supply the best quality products for our customers. Safe and responsible use of all pesticides, but especially well known products like glyphosate, will ensure the U.S. Pulse products continue to keep their reputation for quality, nutrition, and sustainability across the world. 🌱

HOW #GLYPHOSATE WORKS FOR US ALL

The withdrawal of approval for glyphosate would entail serious consequences for farmers and our environment



1 Returning to mechanical weed control would impact on lapwing, partridge and skylark nests destroying eggs and young chicks



2 Using glyphosate allows conservation tillage which protects soils. There are **53%** more earthworms in no plough systems of cultivation

-4%

3 Reintroducing ploughing into non-tillage fields can reduce soil organic matter by **4%** in the first 1-6 months



4 **49%** more labour would be needed per hectare each year



5 Glyphosate protects **20%** of winter wheat and winter oilseed rape yield



6 Glyphosate use allows **15%** more rapeseed and **17%** more wheat to be produced



3.4 TIMES THE SIZE OF LONDON

7 Losing glyphosate would mean **546,000 hectares** more land would be needed to grow the same amount of food



8 **25%** increase in arable crop GHG emissions if glyphosate were no longer available



9 Without glyphosate **12 million tonnes** of CO₂e would be added to our atmosphere (equivalent to emissions from at least **2.5 million cars**)

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THE SILENT FOOTSTEPS OF SHAKUN DALAL

By Director of Communications • Drex Rhoades

After over 30 years of working with the USA Dry Pea and Lentil Council, Shakun Dalal retires from the pulse industry, helping create one of the biggest markets in the world for U.S. pulse crops.



2021 was a year denoting many changes for the international marketing program for the USA Dry Pea & Lentil Council, from a slew of global tariffs to last minute marketing strategy changes spurred on by a global pandemic. However, during the midst of all this chaos, one of the friendly faces among the 7 anointed marketing representatives responsible for promoting U.S. pulses across the globe, tiptoed into retirement quietly and without much fanfare, just as she served the industry - with humility. Shakun Dalal, the long-time representative to India, and the first marketing representative hired by the USADPLC announced her retirement from the pulse industry.

Our 35-plus year relationship with Shakun Dalal officially began in 1985 when members of the USADPLC board of directors needed someone in India to staff their booth at an industrial fair and educate fair-goers of the potential of dry peas in Indian cuisine. At that time, Shakun knew little about the U.S. pulse

Shakun Dalal started working for the USA Dry Pea & Lentil Council in 1985 when she stepped in at the last minute to host a U.S. pulses booth at an Indian industrial fair.

industry, and few consumers in India had even heard of a dry pea. For over 30 years, Shakun covered the East Asian region including India, Sri Lanka, Nepal, Bangladesh, Pakistan, and Afghanistan. India is arguably one of the most important markets for U.S. dry peas and lentils. Retaliatory tariffs imposed by the Government of India on U.S. pulses has interrupted the flow of U.S. pulses into India for the moment, but Shakun has no doubt that India will once again be top dog for U.S. pulse exports. "I feel a little sad that as I'm leaving because due to present policy, I can't bring it back to the great market it was in the past," Shakun remarked. "The U.S. government will have to work with the Indian government to sort their differences out."

USADPLC Chair Andrew Fontaine of Spokane Seed remarked that Shakun has been a terrific representative and a great friend to the industry. "Shakun has worked with three generations of my family, which speaks volumes of her longevity and effectiveness," Andrew recalled, "We relied on her quite heavily as we built our market in India."

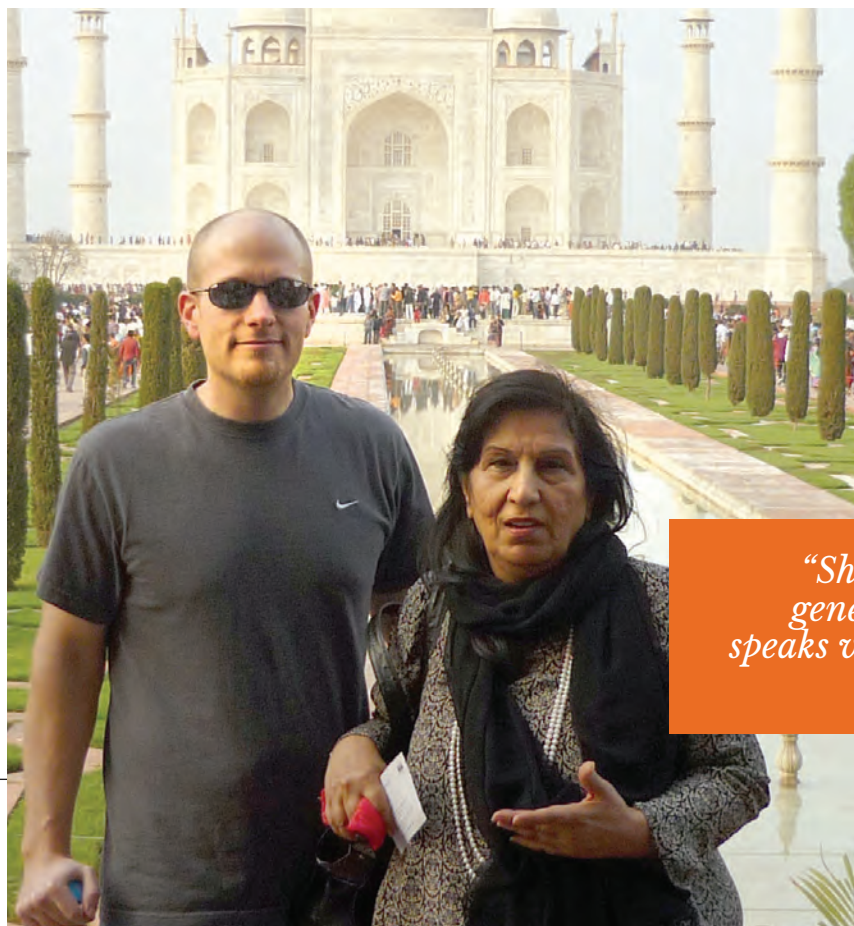
"I want to thank the U.S. pulse industry for their good faith in me," Shakun remarked during her final USADPLC board meeting, "It was my honor to work with all of you. I consider this industry my second family."

Shakun has agreed to consult as needed while transitioning to the newly contracted marketing representative to India, Sachin Khurana and



Shruti Gupta of the marketing firm QuikRelations, LLC. "Our commitment to the India market continues," said Tim McGreevy, CEO of the USADPLC and the American Pulse Association. "We have been so proud of the work that Shakun has done in the market. As an organization, we are grateful that Shakun continues to support the market by assisting with a smooth transition."

Welcome to the family, Sachin and Shruti. You are following in the footsteps of a very well respected and beloved member of the family. The U.S. Pulse Industry wishes Shakun Dalal good fortune in her next life adventure! 🌱



"Shakun has worked with three generations of my family, which speaks volumes of her longevity and effectiveness."

Andrew Fontaine of Spokane Seed shown with Shakun in front of the Taj Mahal.

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**READ THE USADPLC
2019/20 ANNUAL
REPORT AT
[https://usapulses.org/annual report](https://usapulses.org/annual-report)**

