



# Pennsylvania **Industrial Hemp** Newsletter

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**Russell Redding**

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**Tom Trite**



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**Steve Groff of Cedar Meadow Farms**,  
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NSF Engine Awardee  
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collaboration with **Penn State Harrisburg**,  
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“We are energized to see what we can do with hemp.”

Secretary of Agriculture,  
**Russell Redding**



Secretary of Agriculture, Russell Redding, has demonstrated staunch support and advocacy for industrial hemp legislation and the hemp industry as a whole. Secretary Redding attended Penn State University’s Ag Progress Days, giving multiple interviews and participating in panels in which he discussed questions and concerns surrounding Pennsylvania agriculture.

When asked about the first hemp-derived industrial commercial product to the market, Redding said, “We are energized to see what we can do with hemp because we are at the intersection of some of the most important issues of our time. The future is around the biobased materials that we produce off this land and put into our living. We see the hemp industry as critical to that success.”





“We look forward to building this industry together with many partners.”

Vytal Plant Science Research, President  
**Tom Trite**

As President of the nonprofit biotechnology company, Vytal Plant Science Research (VPSR), Tom Trite, brings extensive experience in business planning, development, and operations management, particularly within the hospital, healthcare, and pharmaceutical industries. In 2014, he founded PA Options for Wellness, Inc. (PAOFW) with a research and education-centered goal of becoming the leader in Pennsylvania’s emerging medical cannabis industry. This company was selected by the Penn State Hershey College of Medicine as its ten-year clinical registrant research partner in 2019. Since 2015, the company has been working closely with Penn State on non-cannabis related research to explore the medical and industrial properties of other crop plants including hemp and flax. This experience led Tom to recognize

the vast potential of the industrial hemp and plant biotech industry, resulting in the founding of VPSR in 2022 along with the formation of the team that makes up the Pennsylvania Industrial Hemp Engine (PIHE) in 2023. On behalf of VPSR, Tom said, “We are very grateful for this NSF Engine Development Award and look forward to building this industry together with many partners.” Tom strongly believes that “Industrial hemp will provide an opportunity to a great workforce in Pennsylvania in creating a lot of jobs and also giving the farmers a much better crop they can count on.”

# Agricultural Pioneers Paving the Way for Pennsylvania Hemp

Farmside Chat with  
**Steve Groff from Cedar Meadow Farms**



**Steve Groff and David Groff, Regenerative Farmers, Cedar Meadow Farms, Lancaster, Pennsylvania**

Pennsylvania farmer and Lancaster native, Steve Groff, is among a growing group of agricultural pioneers paving the way for the future of Pennsylvania hemp. Groff got his start in organic farming and has since been recognized internationally for his research in no-till and cover crop agricultural practices. He continues to gain attention for his innovation in regenerative farming practices, making him a model for those in all corners of commercial agriculture and looking to find sustainable yet economical ways to assist in the fight against global warming. From designing North America's first roller-crimper for use in no-till farming, to advancing the practice of utilizing cover crops, Groff is making

waves with his contributions to the collective idea of what farming is and what it could be.

Groff was kind enough to answer several hard-hitting hemp questions addressing the potential success and struggles of the Pennsylvania hemp industry. See his detailed responses below.

## **1. What makes you most excited about working with industrial hemp?**

SG: Well, it's a new crop and some farmers are satisfied with doing what their grandfather did. But for me and other farmers, having a new crop to put in our crop rotation and the challenge of growing something new is extremely exciting. I

# “I believe the future of hemp is bright.”

Farmside Chat Continued with  
**Steve Groff from Cedar Meadow Farms**

am really looking forward to developing all the opportunities this crop has to offer.

## **2. What do you feel will be the first hemp derived product to the market?**

SG: Well one of the easiest things to start out with in hemp is the hurd, or the center part of the plant. You can use that in the construction industry and a whole host of other things. The fiber on the other hand is probably going to take a little more to develop since a lot of it goes into textiles. Honestly, there really isn't a lot of that existing currently, but it is being developed. These opportunities that are arising and being developed now are going to be exciting to see which one takes the lead.

## **3. What is the estimated acreage and impact to Pennsylvania that you estimate for this first commercial product?**

SG: I think Pennsylvania could start with around 3,000 acres and work up from there. It is going to have to be a process of building upon experience not only at the farmer level, but in the whole supply chain. We don't have a lot of the supply chain developed right now. We know where the end uses can be. We know how to grow it but linking that supply chain is going to be the bottleneck. We can't grow too much too fast, but we have to grow enough that we're able to experiment and get this industry started.

## **4. What targets or commercial traits would you like to incorporate into hemp?**

SG: We want to discover what are the best fiber-producing varieties, what are the best hurd-producing varieties here in Pennsylvania. So we tested nine varieties here at Cedar Mead-

ow Farms this past season. What I'm looking for in the future though, is to determine which varieties will be able to be planted early and be able to grow in late spring. That's particularly important because every hemp plant starts to go into the reproductive stage when the daylight begins to shorten. So we want to grow these plants as much as possible, and in order to do that we want to get them planted as soon as possible. So, to determine the varieties that do well planted early here in Pennsylvania is going to be a key trait that we will be looking at in the coming year.

## **5. When do you see farmers naturally accepting hemp as a commodity crop?**

SG: My quick answer is when they drive down the road and don't take a second look when they see a hemp field. We want to make hemp as boring as corn. I say that where it's commonplace and people see it in their fields. There is nothing like positive peer pressure in the agricultural community, so having the fields filled with hemp plants is going to be huge in encouraging other farmers to try to do it. I see that happening in small pockets at first and working with progressive farmers who know how to grow hemp well. Then I can see it expanding from there across the state.

## **6. There are many misconceptions about hemp; how do you think you can dispel those misconceptions?**

SG: Well, that's indeed still true. I just talked to someone recently who said that they didn't think there were any other uses for hemp other than marijuana. I was surprised to hear that, but also not surprised. Education is key. We are going to have to educate the public on all this plant can

## Farmside Chat Continued with **Steve Groff from Cedar Meadow Farms**

do. I am also trying to avoid all the obvious jokes that surround this plant. This is a commodity. This is a crop for food, for fiber, for construction materials. I want to decouple from the stigma that marijuana carries. It is going to take time, but it all comes down to education.

### **7. Having experience growing hemp, what has been your biggest obstacle and what measures do you think would help with overcoming those obstacles?**

SG: The first thing that comes to mind is the bureaucracy and framework we have to work around regarding some of the rules that are in place. Those will hopefully be fixed sometime soon, but it is frustrating to have to get fingerprinted to grow this crop. The other thing is knowing how to grow it because there are so many different ideas and advice already out there. I jokingly say I can write a book about all the things I was told about growing hemp that was NOT true. Learning from experience and networking with other people who are serious about this on a commercial scale have been key in figuring out this crop. It is not going to take farmers very long to be good at growing hemp, but it is going to take time and education to get to that point.

### **8. What role do you see for cover crops toward advancing hemp as a truly commercial crop?**

SG: Great question! We're right here IN cover crop, planted right after most of this field was harvested, compared to what you see in the background. These cover crops are covering the soil, hence the name. Not only that, but we also have certain cover crops planted here that are pulling nitrogen out of the air and putting it into the soil for next year's crop. We talk about hemp being such a regenerative crop, and it truly is. What is really interesting about cover crops and

no tillage is that we can really maximize what this plant has to offer. We can grow a healthy and a vigorous plant in soil that is able to pull carbon out of the atmosphere year-round. With the way that hemp grows, it only takes 4 months, so there is plenty of time in the rest of the year to continuously sequester carbon to make our soil better as the years go by.

### **9. Where do you see the future of hemp in 10 years?**

SG: I believe that the future of hemp is bright. And we all know about all the thousands of uses it has, but it is going to take some time to get there. In ten years, I believe that we will see hemp being grown and it will not be rare. It'll be boring in the context of just driving down the road and seeing it. And we will have a supply chain and a whole processing aspect developed and functioning in a mature hemp industry. To start, I think we want to see small examples of success around the state in the next five years. Then, as we dial in on getting connected with end-users, consumers, and with factories and so forth with specific uses for hemp, those then can grow and improve. I see a vibrant hemp industry ten years from now because we're getting off to a good start right now in 2023.

You may follow the link to watch Steve Groff's responses.

<https://photos.app.goo.gl/VACaxKbeJdAQdR1n8>

To learn more, click the link below and check out his interview on Eric Hurlock's podcast, Lancaster Farming:

[https://www.lancasterfarming.com/farming-news/hemp/podcast-innovative-hemp-harvest-at-cedar-meadow-farm/article\\_c9654109-46dd-5932-bbe7-0f5abe844a6d.html](https://www.lancasterfarming.com/farming-news/hemp/podcast-innovative-hemp-harvest-at-cedar-meadow-farm/article_c9654109-46dd-5932-bbe7-0f5abe844a6d.html)



Right to Left: Russell Redding, Pennsylvania's Secretary of Agriculture; Dr Sairam Rudrabhatla, Professor of Biology, Director of Central Pennsylvania Research and Teaching Laboratory for Biofuels and Principal Investigator from Penn State on the NSF Engine Phase I grant; Tom Trite, President of Vytal Plant Science Research and founder of the PA Options for Wellness, Inc.; Matt Cartwright, Congressman for Pennsylvania's 8th Congressional District; Dr Sethuraman Panchanathan, Director of the U.S. National Science Foundation; Dr John Mason, Ex-Chancellor, Penn State Harrisburg; Dr Neeli Bendapudi, President, Penn State University; Andrew Read, Interim Senior Vice President for Research, Penn State University; Dr Vahid Motevalli, Interim Vice Chancellor for Academic Affairs, Penn State Harrisburg

# NSF Industrial Hemp Kick-Off

The Pennsylvania Industrial Hemp Engine Development Project is a statewide strategic planning effort led by Vytal Plant Science Research in partnership with Penn State University, Emory University, and a broad coalition of public and private partners. It is designed to build a plant and place-based economic ecosystem grounded in innovation, education, inclusion, and translation of technology to industrial applications.

The Pennsylvania Industrial Hemp Engine (PAIHE) is a statewide initiative which unites disparate corners of industry, politics, and academic research in the push to create a unified framework that will jump-start the hemp industry in the Keystone State. This broad coalition of both public and private partners is led by Vytal Plant Science Research in partnership with Penn State University, Emory University and other universities. This initiative is the first of its kind to emerge from innovative research in plant genetics by Penn State Harrisburg's Central Pennsylvania Research and Teaching Laboratory for Biofuels (CPRTL).

On July 7, 2023, the PAIHE hosted its kickoff event in Hazleton, Pennsylvania. National Sci-

ence Foundation Director, Dr. Panchanathan addressed a crowd of about 150 people along with U.S. Rep. Matt Cartwright, Pennsylvania Secretary of Agriculture Russell Redding, Pennsylvania State University President Neeli Bendapudi, and Vytal Plant Science Research CEO, Tom Trite.

The PAIHE is funded by the National Science Foundation through a \$1 million NSF Engine Development Award. Launched by NSF's new Directorate for Technology, Innovation and Partnerships and authorized by the "CHIPS and Science Act of 2022," The NSF Engine program uniquely harnesses the nation's science and technology research, developmental enterprise, and regional-level resources. Many pieces of a successful hemp industry already exist, and with the assistance and dedication of the PAIHE, industrial hemp can become the next commodity crop. With growing support from across the many spectrums of public and private interest, the future of industrial hemp in Pennsylvania continues to grow brighter. Anyone who wishes to collaborate with the PAIHE can reach out to David Minnig ([dminnig@vpsresearch.org](mailto:dminnig@vpsresearch.org)) or Dr. Sairam Rudrabhatla ([svr11@psu.edu](mailto:svr11@psu.edu)).



# A showcase of research and innovation in the ever-changing field of industrial agriculture



## **Penn State Ag Progress Days** State College, PA

Penn State is proud to present Penn State AG Progress Days, a showcase of the culmination of research and innovation in the ever-changing field of industrial agriculture. The event takes place just outside of University Park in the expansive farmland and research plots of Pennsylvania Furnace, where visitors can gain insight into the University's agricultural program and land-grant research. They can also partake in a variety of workshops, see demonstrations, and learn about University Extension programs to promote the exchange of ideas and innovations in advancing Pennsylvania agriculture. During the summer

of 2023, a particular focus was on the subject of plant disease arising from soil-borne pathogens. Since industrial hemp's reintroduction to PA agriculture as a commodity crop, a number of challenges have arisen in ensuring robust and profitable harvests. Among these is the presence of soilborne pathogens, which have a complex relationship with many crops and can affect harvest quality and yield. A significant theme of the AG Progress Days was focused on sharing Penn State's research conducted on hemp which will aim to help farmers, growers and visitors to understand the differences between several types of plant diseases and promote overall health of crops.

# Pennsylvania Department Of Agriculture's Hemp Program

## **Sarah Pickel**

Hemp Program Coordinator, Bureau of Plant Industry

The Pennsylvania Department of Agriculture (PDA) has been working for more than seven years to provide Pennsylvania's farmers with the connections and knowledge they need to grow hemp, a crop with significant economic potential and seemingly endless uses in the marketplace. The 2023 growing season was the seventh consecutive year that hemp was grown in Pennsylvania following a prohibition which lasted more than 80 years. In these last seven years, we've seen some highs and lows as the new industry becomes established and processing capacity grows.

The 2014 federal Farm Bill allowed the growth of hemp for research. Following this, the PA General Assembly passed the Industrial Hemp Research Act, which was signed by Governor Wolf in 2016. Pennsylvania's hemp industry then saw a modest start in 2017, with the state issuing sixteen research permits resulting in a total of thirty-six acres of hemp. Over the next two years, the 2018 Farm Bill was passed, and the total acreage of hemp had increased to 4,195 acres grown by 324 commercial permit holders in 2019. The majority of this acreage included the CBD varieties.

After 2019 saw a surplus of harvested hemp grown for CBD not just in Pennsylvania, but across the country, hemp growing saw a downturn for several years. Pennsylvania growers planted 1,000

acres in 2020, followed by 420 acres in 2021, and 156 acres in 2022, as the processing side of the industry worked to catch up to the hemp-growing potential. In 2023, we have seen an upturn in hemp acreage grown to 290 acres under 215 permits. This increase in acreage could in part be due to an increase in the percentage of hemp grown for fiber in Pennsylvania. This season, 21.5% of the hemp acreage in Pennsylvania was fiber varieties, an increase from 12% in 2022.

With an increased interest in growing and processing fiber varieties of hemp, as evidenced by the establishment of the PA Industrial Hemp Engine research effort, the PA Department of Agriculture is looking to reduce some of the sampling burden for fiber and grain hemp varieties. New for the 2024 hemp growing season, Pennsylvania's Hemp Program has added parameters for performance-based sampling for fiber and grain varieties, as allowed by USDA, and which will be available for renewing hemp-growing permittees. If all requirements are met, performance-based sampling will allow growers to avoid compliance testing on lots of qualifying fiber or grain varieties, although PDA will conduct random audit testing on a percentage of approved lots. Permittees will be eligible for performance-based sampling if: 1) they have grown compliant hemp varieties for two consecutive seasons, 2) they have completed PDA compli-



ance sampling requirements, 3) they are not currently under a corrective action plan, and 4) they are growing a fiber or grain variety that has been certified by a seed-certifying agency or is included in PDA's listing of low-risk hemp varieties. Those interested in viewing the complete requirements and the low-risk hemp variety listing can view the PDA guidance document on performance based sampling of fiber and grain varieties on the Growing & Processing subpage at [agriculture.pa.gov/hemp](http://agriculture.pa.gov/hemp).

Also new for 2024-instead of having an April 1 deadline for growing permit applications and renewals, applications will now be accepted year-round. The application and renewal period for 2024 permits opened in October 2023 and will remain open until next year's application and renewal period begins in October 2024. All permits will expire on December 31 of the permit year and will need to be renewed each year.

# Nurturing Growth

## The Impact of the Industrial Hemp Act on Pennsylvania



### **Erica Stark**

#### Chair of Pennsylvania Hemp Industry Council

In recent years, Pennsylvania, along with the rest of the nation, has grappled with challenges in the burgeoning hemp industry. As the sector strives to establish itself and allow farmers to embrace the versatility and sustainability of hemp, clear obstacles have emerged. The Industrial Hemp

Act of 2023 (IHA), championed by the National Hemp Association, Agricultural Hemp Solutions, and IND HEMP, stands out as a beacon of hope, with the promise of dismantling these barriers. The existing regulatory landscape poses significant challenges for farmers cultivating



# PAHIC

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hemp for grain and fiber. Supported by forward-thinking leaders, The Industrial Hemp Act of 2023 (IHA) (S.980 & HR.2755), aims to address these challenges by streamlining bureaucratic processes and offering a straightforward path for industrial hemp producers.

At the core of the issue lies the necessity to distinguish between different varieties of hemp. There is a noticeable visual difference between hemp grown for fiber or grain and cannabinoid/floral hemp. Current regulations, primarily focused on perceived risks associated with cannabinoids, have hindered the seamless integration of hemp into common crop rotations like corn, soy, or wheat. To tackle this issue, the IHA introduced a new sub-definition of 'Industrial Hemp,' referring to hemp exclusively grown for fiber and/or grain with no extraction or manufacturing of cannabinoids. When fiber and grain cultivation is specified in the application, the IHA eliminates fingerprinting/background checks and replaces mandatory chemical testing with a visual inspection. This not only reduces costs for farmers but also grants them the flexibility to harvest without being confined to an arbitrary

30-day window. The Department of Agriculture retains the right to impose additional verification methods, including chemical testing, for crops deemed suspicious during inspection.

Pennsylvania, with its rich agricultural history, stands to gain significantly from the Industrial Hemp Act of 2023. Our farmers have displayed a keen interest in hemp cultivation, recognizing its potential to diversify crops and contribute to sustainable farming practices. However, onerous regulations and compliance tests have impeded the industry's growth for both farmers and potential investors seeking legal clarity. While there may be ambiguity surrounding cannabinoid products, hemp fiber and grain (both raw materials and final consumer products) have always been fully legal and exempted from the Controlled Substances Act. The 2018 Farm Bill legalized hemp cultivation, and hemp grain for human consumption already holds GRAS status from the FDA, with established guidelines in place.

# Stakeholder Engagement

## PAIHE Launches Monthly Stakeholder Engagement Meetings

**The Pennsylvania Industrial Hemp Engine (PAIHE) is now convening regular stakeholder engagement meetings. The aims of the stakeholder meetings are to:**

- Inform stakeholders about the activities of the PAIHE
- Obtain guidance from stakeholders about PAIHE directions.
- Expand and deepen stakeholder participation in the PAIHE

Stakeholder engagement meetings will be held regularly from 11:00 am. - 1:00 pm. on Tuesdays and will be held via zoom to promote participation. Separate monthly meetings will focus on each of the primary PAIHE activity areas as follow:

**Production and Processing Stakeholder Meetings** will address industrial hemp plant genetics, seed production, growing, harvesting, and processing challenges. **Dates are March 5, April 2, May 7, and June 4.**

**Consumer and Industrial Product Development Stakeholder Meetings** will identify applications in building materials, textiles, paper, plastics, absorbents, packaging, automotive, and other sectors. **Dates are March 12, April 9, May 14, and June 11.**

**Economic Development and Public Policy Stakeholder Meetings** will identify how legal issues, financial markets, workforce skills, regional development, and diversity can strengthen PAIHE impacts. **Dates are March 19, April 16, May 21, and June 18.**

All meetings will be announced separately, and agendas will be provided in advance. Meetings are open to all and will be recorded. Attendance is free. To register for a meeting and obtain the zoom link, please visit <https://paihe.org/stakeholders> or send an email message to Ariel Matz at [amatz@vpsresearch.org](mailto:amatz@vpsresearch.org)

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