

APPROPRIATE TECHNOLOGY TRANSFER FOR RURAL AREAS PROGRAM

May 16, 2021-May 15, 2022, Final Report



ATTRA
SUSTAINABLE AGRICULTURE

Appropriate Technology Transfer for
Rural Areas Program
Final Performance Report
(May 16, 2021-May 15, 2022)

Submitted to:

USDA Rural Business – Cooperative Service
1400 Independence Avenue, SW
Washington, DC 20250

Submitted by:

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Background

The ATTRA program was created in the 1985 Farm Bill and has been reauthorized in all subsequent Farm Bills. ATTRA is housed within the USDA's Rural Business-Cooperative Service (RBCS) and managed by the National Center for Appropriate Technology (NCAT) through a cooperative agreement with USDA/RD. ATTRA is a trusted source of sustainable agriculture information and maintains a knowledgebase of practical multimedia resources for farmers, ranchers, and educators. Historically, the producers who access ATTRA's services most frequently are family-scale, small-scale, beginning, limited-resource, and returning

farmer-veterans. Assistance is provided to clients in a variety of ways, including via telephone conversations; emailed/mailed technical responses; other electronic information dissemination; in-person and virtual education through workshops, conferences, one-on-one meetings, publications, and tutorials; and other appropriate outreach methods, including social media.

NCAT's agriculture specialists work directly with producers across the country. Headquartered in Butte, Montana, NCAT has field offices in Arkansas, California, Colorado, Idaho, Kentucky, Mississippi, Montana, New Hampshire, Pennsylvania, and Texas.

This report covers the performance period of May 16, 2021, through May 15, 2022.

ATTRA's COVID-19 Response

Throughout the COVID-19 pandemic, NCAT's ATTRA team continues to provide services to farmers, ranchers, and agricultural professionals through virtual workshops,

trainings, conferences, phone, Internet chat, and email technical assistance, as well as educational resources disseminated via videos, podcasts, blog posts, webinars, and publications. We maintain the [COVID-19 resource page](#) on the ATTRA website, comprised of timely relevant farming and ranching resources.



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800-346-9140 or
askanag@ncat.org

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ATTRA COVID-19 RESPONSE

The COVID-19 pandemic brings uncertainty and unique challenges to all of us. To help you understand the pandemic and how it affects your farming operation, we've gathered some resources that can help. We'll continue updating this list as new resources become available. Also, you can find upcoming webinars and listening sessions listed on our [ATTRA Events](#) calendar.

Please reach out to us and let us know how we can better serve you at: askanag@ncat.org or 800-346-9140.

Task 1: Provide Technical Assistance to Producers and Rural Communities

From May 16, 2021, through May 15, 2022, NCAT specialists provided technical assistance to **29,859** clients. In **2,028** cases, the technical assistance required in-depth research. Below are some examples of the breadth of questions received and assistance provided by our technical specialists to farmers, ranchers, and agriculture educators across the country.

- **Arkansas:** ATTRA assisted a beginning farmer with questions related to grazing management and livestock production.
- **Mississippi:** ATTRA provided information to a beginning farmer about a soil-health training program.
- **Massachusetts:** An ATTRA specialist gave technical assistance to a conservation district employee about equipment rental programs.
- **California:** ATTRA provided technical assistance to a producer on accessing land to farm.
- **Texas:** ATTRA provided technical assistance to a grower on using cover crops in vegetable production.
- **Michigan:** ATTRA provided information to a producer on organic blueberry and bramble production.
- **New York:** ATTRA provided technical assistance to a producer on crop insurance and climate disruptions.
- **Kentucky:** ATTRA assisted a beginning farmer with questions related to selecting livestock and equipment for the farm.
- **Pennsylvania:** An ATTRA specialist provided technical assistance to a sheep and cattle rancher on winter grazing and grazing wet areas.
- **Iowa:** ATTRA provided information to an Extension specialist on the type and cost of plastic used for biosolarization.
- **Ohio:** ATTRA provided technical assistance on crop insurance benefits and RMA resources to an agriculture educator.
- **Illinois:** ATTRA provided information to a small-scale processor on COVID-19-related stimulus funding and other funding for meat processors.
- **New Hampshire:** ATTRA provided technical assistance to a beginning livestock farmer on whole-farm planning.
- **Idaho:** ATTRA provided technical assistance to a grower on cherry fruit fly management, including organic control methods.
- **North Carolina:** ATTRA provided technical assistance on cooperative models and financing options to a producer interested in developing a producer cooperative.
- **Montana:** ATTRA assisted a tribal farmers market manager with resources on how to connect with growers and how to recruit vendors for the market.
- **Colorado:** ATTRA assisted a USDA agency staff person with information and resources related to a producer program.
- **Georgia:** ATTRA provided technical assistance to a vegetable grower on greenhouse plans.



Task #2: Outreach

Website and Social Media

- Digital resources were accessed during this project year **2,562,039** times, with at least **940,776** website visits.

Outreach Materials

- **Voices from the Field podcast series** We provided **50** new podcast episodes, with **32,944** listens during the project year.
- We created **169** new **videos and webinars**, with a total of **29,363** views.
- **Weekly Harvest e-newsletter** was distributed to **20,417** subscribers.
- **Cosecha Mensual Spanish e-newsletter** was distributed to **2,837** subscribers each month.

Workshops and Conferences

- **ATTRA agricultural specialists** attended/presented at **239** workshops or conferences, reaching a total of **36,963** people.
- With the **ongoing COVID-19 pandemic**, many conferences and workshops were held virtually. NCAT's agriculture specialists have successfully used online platforms to provide presentations, workshops, and technical assistance to farmers, ranchers, and agriculture professionals.

• Sampling of conferences and workshops

- Small-Scale Farm Equipment workshop, New Hampshire
- Women, Livestock, and the Land workshops, virtual trainings for women in the Southeast
- Latino Farmer Conference, virtual
- Arkansas/Oklahoma Horticulture Industries Conference, Arkansas
- Organic Regulations Workshop, Florida
- Wholesale Markets for Small Farmers workshop, Mississippi
- SIFT Demonstration Farm workshops, Montana
- Produce Safety Grower Training, virtual
- Women in Agriculture and Conservation meeting, Pennsylvania
- Western Colorado Soil Health Conference, Colorado
- Farmer Veteran Coalition Conference, Tennessee
- Texas Organic Farmers and Gardeners Association Conference
- Grazing for Resilience, virtual national webinar
- Soil and Water Conservation Society International Conference, Iowa
- Montana Farm to School Conference
- Equipment and Tool Selection for Small Farm Production workshop, Massachusetts
- Demystifying Regenerative Grazing workshops, virtual, Alabama and Arkansas
- Northeast Organic Farming Association of New York Conference
- Small Ruminant Webinar, virtual



Task #2: Outreach

Promote USDA Rural Development Programs and USDA Collaboration

- Information about the Pandemic Response and Safety Grant program was disseminated to ATTRA clients through the *Weekly Harvest* e-newsletter, email news blasts, and social media posts. NCAT's information on this program was also picked up and shared by several news outlets.
- [“Small-Scale Farmers, Farmers Markets, Food Producers Can Now Access \\$650 Million in Pandemic Relief Aid”](#) blog post explaining the USDA's Pandemic Response and Safety Grant Program.
- [“Ready for the Future? Climate Disruption and Crop Insurance”](#) blog post that provided information on USDA RMA crop insurance.
- [“From the Air Force to Alpacas”](#) podcast episode highlights a farmer veteran and the USDA programs she has utilized on her farm, including a Rural Development Value-Added Producer Grant.
- Information related to federal resources and stimulus programs for farmers related to COVID-19 was disseminated by NCAT's regional offices through many ATTRA cases, trainings, workshops, and conference presentations.



- Staff members from Farm Service Agency, Natural Resources Conservation Service, and Rural Development participated in Armed to Farm trainings in New Mexico and California. They shared information about the agencies and the many services and programs available to farmers.
- Staff from the USDA Office of Urban Agriculture and Innovative Production presented at the Armed to Farm Urban Farm training. They presented on USDA programs and how veterans can apply.
- Information about USDA funding opportunities is regularly shared on the ATTRA website, in the *Weekly Harvest* newsletter, and on social media. Information about the Value-Added Producer Grant, Meat and Poultry Processing Expansion Program, Outreach and Assistance for Socially Disadvantaged and Veteran Farmers and Ranchers, and others was shared.
- NCAT staff helped organize a series of workshops for Texas NRCS agents to learn about organic farming and organic certification. NCAT specialists presented on organic production and ATTRA resources.
- An NCAT agriculture specialist presented a webinar to more than **250** NRCS state leadership staff members as a part of NRCS's Conservation Innovation Webinar series. This presentation was related to tool and equipment technologies for small and urban farms.
- NCAT agriculture specialists presented a webinar on soil health for **115** participants in the Southwest Drought Learning Network, a consortium of climate service providers and resource managers from various USDA agencies.
- In California, NRCS and NCAT collaborated on the Latino Farmer Conference, which utilizes ATTRA publications, presentations, and technical assistance provided to Latino farmers and ranchers.
- Through a cooperative agreement with USDA Food and Nutrition Service Office of Community Services, NCAT and the National Farm to School Network developed regional training curricula for producers throughout the United States to learn how to access farm to school markets. NCAT is utilizing ATTRA resources, including tipsheets, podcast episodes, videos, and publications, in the producer training curricula.

Task #3: Educational Materials

Farmer Training

• Armed to Farm

- In May, a virtual session was held for the Washington State cohort of the Virtual Armed to Farm training.
- In September and October, a hybrid virtual and in-person Armed to Urban Farm training was held for **21** veterans. Four online sessions were held, covering topics such as whole-farm planning, financial management, USDA programs, legal issues, marketing, crop planning, and urban agroforestry. The cohort then gathered for two days in Baltimore, Maryland, to visit **five** urban farms. This hybrid model was used to address COVID-19 concerns, limiting the time spent in classrooms as a group.
- In October, a series of virtual Armed to Farm workshops were held, covering recordkeeping, soil health, and tools and equipment for small farms. **Fifty-seven** farmer veterans participated in these trainings.
- In December, a three-day, in-person Armed to Farm training was held in Georgia. Virtual sessions for this cohort were held in November, and **19** farmer veterans participated in the in-person training. The in-person segment featured farm tours and classroom sessions on beekeeping and whole-farm planning.
- In March, a week-long, in-person Armed to Farm training was held in New Mexico with **27** participants. The week featured farm tours and classroom sessions on USDA programs, legal issues, whole-farm planning, soil health, recordkeeping, marketing, and beekeeping.
- In April, **18** farmer veterans participated in a week-long Armed to Farm training in California. The week featured classroom sessions and farm tours.
- NCAT conducts regular outreach to farmer veterans across the country through social media, Veterans in Agriculture listserv, and *Armed to Farm News*.
- NCAT staff reached more than **1,000** veterans through in-person and virtual workshops during the project year.

• NCAT's Soil Health Innovations Conference

- Building on the success of the inaugural Soil Health Innovations Conference held in March 2021, NCAT's agriculture specialists hosted the second Soil Health Innovations Conference virtually March 15-16, 2022. There were **390** registrants for the conference, and it featured keynote speakers and breakout sessions for farmers, ranchers, educators, and policymakers. It highlighted technologies and practices that can help producers develop on-farm resilience and implement climate-smart practices on their farms and ranches. The conference was recorded and its sessions will be available publicly later in 2022.

• Producer Resources in Spanish:

- Brambles: Organic Production (Zarzas: Producción Orgánica)—new publication
- Strawberries: Organic Production (Fresas: Producción Orgánica)—updated publication
- Cover Crops in Almonds (Cultivos de cobertura en Almendras)—new publication translation
- Finding land to work. Six ways to Secure agricultural land—podcast (Encontrando tierra para trabajar. Seis maneras de asegurar tierra Agrícola)—podcast episode



Task #3: Educational Materials

- Blueberries: Organic Production (Arandanos: Produccion Organica)—new publication
 - Velvet Bean: A Cover Crop for Hot and Humid Areas (Frijol terciopelo (Mucuna pruriens var utilis): un cultivo de cobertura para áreas cálidas y húmedas)—new publication
 - Pigeon Pea: A Cover Crop for Hot and Humid Areas (Gandul (Cajanus cajan): un cultivo de cobertura para áreas cálidas y húmedas)—new publication
 - Scarlet Bean: A Cover Crop for Hot and Humid Areas (Frijol escarlata: un cultivo de cobertura para áreas cálidas y húmedas)—new publication
 - Partridge Pea: A Cover Crop for Hot and Humid Areas (Guisante Chamecrista: un cultivo de cobertura para zonas cálidas y húmedas)—new publication
 - Butterfly Pea: A Cover Crop for Hot and Humid Areas (Guisante de mariposa: Un cultivo de cobertura para áreas calidas y humeda)—new publication
 - Pastured Poultry Production (Produccion Avicola de Pastoreo)—podcast episode
 - Applying Conservation Practices to A Garden (Aplicando practicas de conservacion a un Jardin)—podcast episode
- **13** tractor maintenance videos: Una Guia para el Funcionameinto y Seguridad de los Tractores en Español
 - *Cosecha Mensual* (Monthly Harvest), a monthly Spanish e-newsletter, provides information of interest to Spanish-speaking farmers and gardeners with **2,837** subscribers.
 - NCAT’s California regional office planned and hosted the seventh annual Latino Farmer Conference, which was held via three virtual sessions and included **186** participants. In Texas, NCAT was a major planning partner of the annual Texas Hispanic Farmer & Rancher Conference, a virtual event with **100** participants.
- **BIPOC Workshops**
 - NCAT’s Gulf States office conducted **19** virtual and **seven** in-person workshops for BIPOC and historically disadvantaged producers.
 - Whole-Farm Planning
 - Legal Rights and Responsibilities
 - Soil Health
 - Beekeeping
 - Wholesale Markets for Small Farmers



Task #3: Educational Materials

Expanded Publications Library

2021-2022 New Publications (22) and number of views this project year



Farm to Healthcare Tipsheet:
Procuring Local Food,
Improving Health **130**



Weathering the Storm: A Guide
to Preparing for Disaster and
Finding Disaster Assistance
for your Farm or Ranch **30**



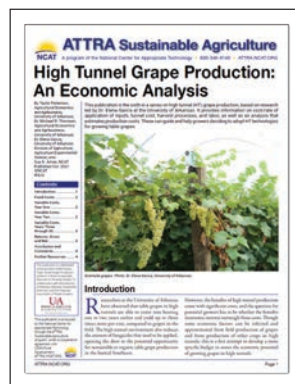
Approaches to Processing
Poultry Meat for Sale:
Navigating Regulations
Across the U.S. **184**



Helping Farmers in
Financial Crisis **209**



I'm a Farmer. When
Do I Need a Lawyer? **215**



High Tunnel Grape
Production: An
Economic Analysis **343**



Geothermal
Greenhouses:
Exploring the Potential **542**



Zarzas:
Producción Orgánica **100**



Farm Stress and Emotional
Well-Being, Part I **295**



Farm Stress and Emotional
Well-Being, Part II **171**



Pigeon Pea (*Cajanus cajan*):
A Cover Crop for Hot
and Humid Areas **299**



Velvet Bean (*Mucuna pruriens*
var utilis): A Cover Crop
for Hot & Humid Areas **211**

Task #3: Educational Materials

Expanded Publications Library (continued)

2021-2022 New Publications (22) and number of views this project year



Arandanos:
Produccion Organica **105**



Organic Pulses
Production, Economics,
and Marketing **204**



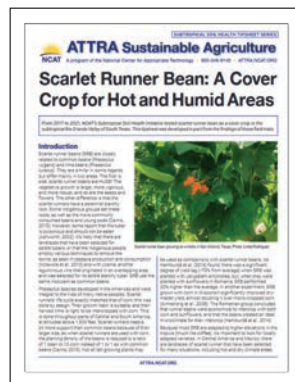
Frijol terciopelo (Mucuna
pruriens var utilis): un cultivo
de cobertura para áreas
cálidas y húmedas **22**



Gandul (Cajanus cajan): un
cultivo de cobertura para
áreas cálidas y húmedas **23**



Partridge Pea: A Cover Crop
for Hot and
Humid Areas **152**



Scarlet Runner Bean:
A Cover Crop for Hot
and Humid Areas **128**



Butterfly Pea:
A Cover Crop for Hot
and Humid Areas **134**



Frijol escarlata: un cultivo
de cobertura para áreas
cálidas y húmedas **18**



Guisante Chamecrista: un
cultivo de cobertura para
zonas cálidas y húmedas **13**



Guisante de mariposa: un
cultivo de cobertura para
áreas cálidas y húmedas **22**



Task #3: Educational Materials

Expanded Publications Library (continued)

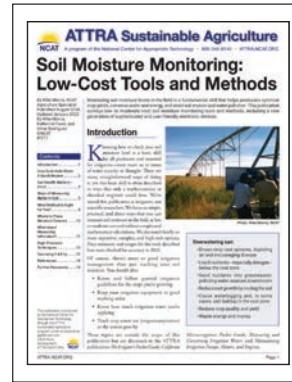
2021-2022 Updated Publications (4) and number of views this project year



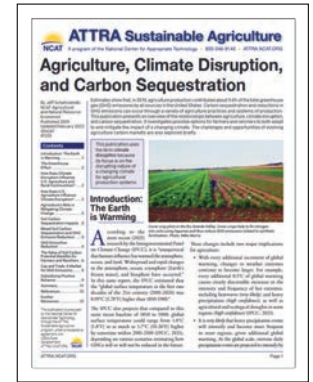
Fresas: Producción Orgánica **192**



Managing Internal Parasites: Success Stories **273**



Soil Moisture Monitoring: Low-Cost Tools and Methods **416**



Agriculture, Climate Disruption, and Carbon Sequestration **78**



Task #3: Educational Materials

Videos and Webinars

ATTRA added **169** video and webinar titles to our library, which were viewed **29,363** times this project year. All ATTRA videos were viewed **198,100** times this project year.

2021-2022 New Videos and Webinars (169) and number of views this project year

• Episode 252. Meet NCAT. Darron Gaus Has a Passion for Teaching Sustainable Ag.....	17	• Episode 240. Urban Agroforestry for Dryland Environments	58
• Episode 251. She’s Raising Sheep: California Shepherd Lani Estill.....	28	• Manego Integrado De Plagas – Generalidades y Practicas para Viñedos.....	23
• Episode 250. Practical Steps for Reducing Fertilizer Use	7	• Soil for Water	1,611
• Advanced Grazing Series. Session 1: Grazing Dynamics, Soil Health, Aggregate Stability, Water	135	• Soil for Water Film + Panel Discussion.....	221
• Episode 249. Meet NCAT. Dan Birnstihl Aims to Make Resources Easy to Use	17	• Organizaciones con Servicios para Agricultores.....	45
• Episode 248. Winter Farmers Markets Can Bring Year-Round Customers.....	22	• Visita a la Granja con Javier Zamora y JSM Organics	28
• Episode 247. She’s Raising Sheep: Montana Shepherd Becky Weed	42	• La Certificación Orgánica.....	25
• Episode 246. She’s Raising Sheep: New Zealand Shepherd Bev Trowbridge.....	25	• Episode 239. Good Things Come in Small Packages: A Look at Small-Frame Cattle	38
• Episode 245: Starting a Farm, Review and Planning	42	• Farrowing on Pasture.....	91
• How to Assess Soil Health on Grazing Lands Using a Shovel and a Knife	235	• Grazing for Resilience – Bouncing Forward from Catastrophic Events	159
• Episode 244. She’s Raising Sheep: Indiana’s Denice Rackley.....	28	• A Risk-Management Conversation with Daphne Snow of Choctaw Fresh Produce in Mississippi. Part 1	32
• Weekly Wednesday Workshop – Perennial Forages, Shrubs, and Trees	87	• A Risk-Management Conversation with Daphne Snow of Choctaw Fresh Produce in Mississippi. Part 2.	25
• Weekly Wednesday Workshop – Beekeeping.....	76	• Alcorn University Farm Manager on Risk Management. Part 1.	25
• Episode 243. Cover Crops and Their Impact on Soil Health, Crop Productivity.....	76	• Alcorn University Farm Manager on Risk Management. Part 2	21
• Episode 242. Understanding the Organic Certification Process	27	• Episode 238. Producción Avícola de Pastoreo.....	11
• Soil Health 101: Cover Crops and Water Infiltration.....	190	• Episode 237. What Your Stockdog can Teach You About Livestock	36
• Soil Health 101: Principles for Livestock Production	188	• Agrivoltaics as a Climate-Smart Conservation Cropping Practice.....	269
• Soil Health 101: Grazing and Soil Health with Jody Reyer	93	• Risk Management on a Diversified Specialty Crop and Livestock Operation.....	46
• Episode 241. NCAT’s Soil for Water Project to Connect a Community of Regenerators	55	• Biosolarización: Control Sostenible de Malezas.....	95
		• Virtual Farm Tour: Risk Management at Appel Farms.....	73
		• Chainsaw Operation, Safety, and Maintenance for Women in Agriculture. Part 3	86
		• Panel de Agricultores – El Mercadeo Agrícola	28
		• Introducción al Programa H2-A	19

Task #3: Educational Materials

Videos and Webinars (continued)

2021-2022 New Videos and Webinars (169) and number of views this project year

• Episode 236. Programs Focus on Farmer Well-Being	15	• Learning from Western Fiber: How to Process Hemp into Fiber and Create your Own Market.....	512
• Granja Tierra Sana – Visita a la granja con preguntas de la audiencia.....	10	• Leave No Trace Farming	16
• Lambing, Kidding, and Calving on Pasture.....	174	• Building Strong Foundations, Part 1. Soil Health: Your Grazing Foundation.....	527
• Episode 235. Silvopasture 101	75	• Building Strong Foundations, Part 2. Adaptive Grazing: Matching Land and Livestock	326
• The Internal GAP Audit: General Questions.....	27	• Building Strong Foundations, Part 3. Choosing Livestock for Your Farm	268
• The Internal GAP Audit: Scope Two, Field Harvest and Field Packing Activities.....	16	• Conservation Hedgerows at Terranova Ranch.....	161
• Episode 234 State Soil Health Programs: From the Ground Up in Montana.....	50	• Leave No Trace Farming	60
• Episode 233: Aplicando prácticas de conservación a un jardín.....	15	• Episode 223: Do Cover Crops Steal Water? Part 2.....	49
• La Agroforestería y sus Beneficios.....	59	• Episode 222. Do Cover Crops Steal Water? Part 1.....	43
• Eficiencia de Riego	44	• Diversificando y Revitalizando un Huerto Viejo de Aguacates.....	65
• Sequía y Estrategias de Adaptación	40	• Episode 228. A Closer Look at Hair Sheep.....	45
• Virtual Farm Tour: Risk Management at Windset Ranch	91	• Episode 224. From the Air Force to Alpacas.....	17
• Risk Management on a Livestock Operation	109	• Episode 225. The Past, Present, and Future of the Early Snyder Farm.....	16
• La Agroforestería y sus Beneficios.....	64	• Episode 226. Organic Pulse Production is Timeless in Montana	14
• Episode 232. Conservation Hedgerows at Terranova Ranch.....	49	• Cultivar Sin Dejar Rastro.....	55
• Eficiencia de Riego	45	• Episode 227. Meet NCAT. Chris Lent aims to help farmers be resilient.....	26
• Sequía y Estrategias de Adaptación	44	• Episode 230. NCAT’s AgriSolar Clearinghouse Aims to Make Solar More Accessible to Land Managers	29
• Virtual Farm Tour: Risk Management at Uncle Jerry’s Farm	123	• Episode 221. Meet NCAT: Katherine Favor says agroforestry can plant the seeds of sustainability.....	25
• Risk Management: Heirs’ Property with Attorney Andrea Barnes	119	• Chainsaw Operation, Safety, and Maintenance for Women in Agriculture. Part 2	126
• Risk Management: What Every Farmer Needs to Know.....	100	• West Coast Hemp Webinar Series: Lessons from the Hemp Field.....	136
• Virtual Farm Tour: Risk Management at Ames Orchard and Nursery.....	58	• Episode 229: Encontrando tierra para trabajar. Seis maneras de asegurar tierra agrícola.....	24
• Risk Management: Crop Insurance as a Risk Management Tool.....	51	• West Coast Hemp Webinar: Hemp Harvesting, Processing, and Marketing	78
• Risk Management on a Diverse Orchard and Nursery	39		
• Risk Management: Mitigating Marketing Risk on the Farm.....	31		
• Episode 231. Leave No Trace Farming.....	50		

Task #3: Educational Materials

Videos and Webinars (continued)

2021-2022 New Videos and Webinars (169) and number of views this project year

• West Coast Hemp Webinar: Regulation, Compliance, and Insurance.....	58	• Effects of Agricultural Management Practices on Soil Health in Dry Climates with Dr. Clain Jones	80
• Winter Cover Crops – Weekly Wednesday Workshop	193	• Marketplace Innovations: Soil Carbon and Ecosystem Services with Donnelly, Peterson, and Erickson	60
• Permaculture 101 – Weekly Wednesday Workshop	117	• Soil Health Policy with U.S. Senator Jon Tester.....	54
• Risk Management on a Livestock Operation. Part 1.....	72	• Palates Link Soil Health and Plant Health to Livestock and Humans Health	52
• Armed to Farm Virtual Workshop Series – Recordkeeping.....	93	• How Food and Fiber Companies Can Invest in Soil Health with Rebecca Burgess and Randy Brown.....	45
• Armed to Farm Virtual Workshop Series – Soil Health.....	70	• Management Practices and Soil Test Interpretation in Wet Climates with Dr. Kristen Veum	25
• Armed to Farm Virtual Workshop Series – Equipment and Tools	48	• Cultivating Soil Health.....	45
• West Coast Hemp Webinar: Deep Dive into Hemp Production and Cultivation	175	• Farmer Cooperatives and Youth Education.....	44
• Soil Health Policy with Senator John Boozman	39	• Managing Risk and Supporting Beginning Military Farmers.....	38
• Growing Healthy Soils on a Large Scale with Rick Clark.....	454	• Fruit and Nut Production with Guy Ames	27
• Regenerative Grazing with Chase Hibbard, Jeff Mosely, and Dave Scott.....	419	• Sheep and Goat Health: Part 2.....	82
• The Evolution of Regenerative Science with Dr. Cindy Daley.....	231	• Sheep and Goat Health: Part 1.....	53
• Soil Health Innovations for the Market Farmer with Dan Kittredge	177	• Episode 219: Soil Health: the Land Core Approach to Climate Mitigatio.....	37
• Managing Soil for Water with Mike Morris and John Dickey.....	137	• Episode 218: Embracing Opportunities, Even in a Pandemic	18
• Indigenous and Traditional Soil Health Practices: Bell, Berhane, Ducheneaux-Scott, Evans, Cassadore	114	• Part 1: Overview of Record Keeping Goals and Processes with Julia Shanks.....	142
• Soil Health Innovations Public Policy: Arohi Sharma, Aria McLauchlan, Bianca Moebius-Clune, Dorn Cox.....	106	• Part 2: Getting Started in Quickbooks for Farmers and Ranchers with Julia Shanks	73
• Soil Health – Human Health with Dr. Selena Ahmed	103	• Part 3: Getting Started in Quickbooks for Farmers and Ranchers with Julia Shanks.....	49
• Soil Health Innovations in Action: Moebius-Clune, Chappell, Lester, Guidroz, Scott.....	95	• Biosolarization: Sustainable Weed Control.....	201
• Advances in Biology-Based Soil Testing with Robin "Buz" Kloot	92	• Episode 217. Flexibility in an Unexpected Growing Season.....	39
• Applying Remote Sensing with Phillip Owens, Dorn Cox, and Chinmay Soman.....	83	• Episode 216. Sheep and the Sun: Solar Grazing with Lexie Hain.....	84
		• Educating Future Farm Leaders	432
		• Episode 215. Urban Ag is People Taking Care of People.....	41

Task #3: Educational Materials

Videos and Webinars (continued)

2021-2022 New Videos and Webinars (169) and number of views this project year

• Episode 214. Attracting and Protecting Pollinators.....	23	• Burroughs Family Farms: Mobile Henhouse Construction	114
• Tractor Ops Toma de Fuerza.....	7,520	• Burroughs Family Farms: Daily Care of Pastured Poultry	100
• Tractor Ops Enganche de Tres Puntos	3,127	• Burroughs Family Farms: Integrating Pastured Poultry, Other Enterprises: Dairy, Almonds and Olives.....	91
• Tractor Ops Pedales y Palancas	743	• Burroughs Family Farms: Fencing for Poultry, Sheep, and Cattle	86
• Tractor Ops Aperos de Toma de Fuerza	664	• Burroughs Family Farms: Organic Certification of Laying Hens	82
• Tractor Ops Doble Tracción	425	• Episode 209. Meet NCAT: Linda Poole – No Regenerative Grazing Cookbook but Networks Are a Key Ingredient.....	45
• Tractor Seguridad Tres Puntos de Contacto	183	• Celebrate National Farmers Market Week in Montana	45
• Tractor MD Nivel de Fluido.....	113	• Episode 208. Meet NCAT: Justin Morris’ Experience Deepens our Regenerative Agriculture Resources.....	22
• Tractor Ops Terminología.....	84	• Episode 205. Inoculating Legume Cover Crops	137
• Tractor MD DEF y Diesel.....	66	• Solarization and Biosolarization: Harnessing the Sun and Organic Matter to Control Weeds.....	285
• ESP Tractor Seguridad Equipo de Protección Personal.....	51	• Episode 206: Meet Agriculture Specialist Mike Lewis.....	29
• Tractor Seguridad 10 Mandamientos	51	• Episode 204: School Purchasing Cooperative in Ohio	19
• Tractor Ops Lineas Hidraulicas	36		
• Tractor Ops Origenes	23		
• Episode 213. Using Drones in Agriculture.....	27		
• Episode 212. Forty Years Later, Mr. Burch is Back on the Farm.....	18		
• Armed to Farm: Supporting Farmer Veterans	123		
• The Lambulance with Linda Poole, NCAT Regenerative Grazing Specialist.....	183		
• Building Blocks for Healthy Herds and Flocks	232		
• Episode 211: Native Plants Offer More Than Beauty to the Farmscape	54		
• Episode 210. Harnessing the Power of Worms in Composting.....	51		
• Soil Health and Composting with Nina Prater and Matt Casteel.....	222		
• Organic Production with Vicki Morrone: Part 1	136		
• Organic Production with Vicki Morrone: Part 2. Cover Crops	114		
• Burroughs Family Farms: Livestock Guardian Dogs for Poultry and Sheep	330		
• Introducing Burroughs Family Farms, an Organic, Regenerative Multi-Generational Farm	155		



Task #3: Educational Materials

Podcasts

In early 2022, NCAT began hosting its podcast, *Voices from the Field*, on Buzzsprout. This new tool gives NCAT episode analytics that we've never had access to until 2022. In addition to seeing concrete download numbers, the podcast is now available on additional platforms such as Spotify, Stitcher, Amazon, LastFM, TuneIn, Apple, and Google. In 2021-2022, we created **50** new podcast episodes, with **32,944** listens during the project year.



2021-2022 New Podcasts (50) and number of listens this project year

• School Purchasing Cooperative in Ohio.....	30	• Native Plants Offer More Than Beauty to the Farmscape.....	101
• Inoculating Legume Cover Crops.....	49	• Forty Years Later, Mr. Burch is Back on the Farm.....	83
• Meet NCAT: Veteran Farmer Mike Lewis Brings Diverse Expertise to Our Team.....	48	• Using Drones in Agriculture.....	94
• What to Consider When Choosing U-Pick Crops.....	52	• Attracting and Protecting Pollinators.....	103
• Meet NCAT: Justin Morris' Experience Deepens our Regenerative Agriculture Resources.....	53	• 'Urban Ag is People Taking Care of People'.....	92
• Meet NCAT: Linda Poole Explains There's No Cookbook for Regenerative Grazing but Networks Are a Key Ingredient.....	66	• Sheep and the Sun: Solar Grazing with Lexie Hain.....	115
• Harnessing the Power of Worms in Composting.....	86	• Flexibility in an Unexpected Growing Season.....	69
		• Embracing Opportunities, Even in a Pandemic.....	84
		• Soil Health: the Land Core Approach to Climate Mitigation.....	106
		• Grazing Management Strategies for Drought.....	131
		• Meet NCAT: Katherine Favor says agroforestry can plant the seeds of sustainability.....	120
		• Do Cover Crops Steal Water? Part 1.....	139
		• Do Cover Crops Steal Water? Part 2.....	149
		• From the Air Force to Alpacas.....	136
		• The Past, Present, and Future of the Early Snyder Farm.....	128
		• Organic Pulse Production is Timeless in Montana.....	130
		• Meet NCAT. Chris Lent aims to help farmers be resilient.....	142
		• Closer Look at Hair Sheep.....	236
		• Encontrando tierra para trabajar. Seis maneras de asegurar tierra agrícola.....	170



Task #3: Educational Materials

Podcasts (continued)

2021-2022 New Podcasts (50) and number of listens this project year

• NCAT’s AgriSolar Clearinghouse Aims to Make Solar More Accessible to Land Managers 172	• Understanding the Organic Certification Process 509
• Leave No Trace Farming 188	• Cover Crops and Their Impact on Soil Health, Crop Productivity..... 586
• Conservation Hedgerows at Terranova Ranch..... 187	• She’s Raising Sheep: Indiana’s Denice Rackley 503
• Aplicación de prácticas de conservación a un jardín 170	• Starting a Farm: Review and Planning..... 524
• State Soil Health Programs: From the Ground Up in Montana 206	• She’s Raising Sheep: New Zealand Shepherd Bev Trowbridge 480
• Silvopasture 101..... 284	• She’s Raising Sheep: Montana Shepherd Becky Weed 501
• Programs Focus on Farmer Well-Being..... 219	• Winter Farmers Markets Can Bring Year-Round Customers 407
• What Your Stockdog Can Teach You About Livestock 260	• Meet NCAT: Dan Birnstihl Aims to Make Resources Easy to Use 414
• Producción Avícola de Pastoreo..... 275	• Practical Steps for Reducing Synthetic Fertilizer Use 479
• Good Things Come in Small Packages: A Look at Small-Frame Cattle 571	• She’s Raising Sheep: California Shepherd Lani Estill 458
• Urban Agroforestry for Dryland Environments..... 563	• Meet NCAT: Darron Gaus Has a Passion for Teaching Sustainable Ag..... 428
• NCAT’s Soil for Water Project to Connect a Community of Regenerators 507	• How to Conserve Water at an Urban, Mountain Desert Farm..... 432



Task #3: Educational Materials

Blog Posts

ATTRA published **70** blog posts from May 16, 2021 through May 15, 2022—at least one blog post per week, *more than twice the target goal*.

2021-2022 Blog Posts (70) and number of views this project year

• LC Compost Solutions.....	97	• \$650 Million Soon Available for Small-Scale Farmers, Farmers Markets, and Food Producers ...	152
• NCAT’s Armed to Farm Returns to In-Person Training	180	• NCAT Programs Help Service Members Succeed in Agriculture.....	134
• The Two Best Legume Cover Crops for Hot and Humid Climates.....	275	• Next Gen Regen: Becky Weed on Building Resilient Agroecosystems	151
• NCAT Staff Complete Rigorous International Organic Inspectors Association Crop and Livestock Inspector Training.....	68	• NCAT Releases 19 Soil Health Innovations Videos.....	128
• Risk Management in the Real World.....	41	• Help Shape Montana’s Soil Health Future	72
• How to Make Sure your Leguminous Cover Crop is Doing its Job.....	162	• The ABC(DE) of Animal Health	147
• The Power of Worms: Helpful Tips for Composting Success.....	116	• Integrating Pastured Quail into a Whole-Farm System	353
• Miles of Hedgerows, A California Project Update ...	158	• Small-Scale Farmers, Farmers Markets, Food Producers Can Now Access \$650 Million in Pandemic Relief Aid	261
• Series of Virtual Sustainable Agriculture Workshops Now Online	155	• NCAT Leads Partnership to Train Beginning Farmers and Ranchers Across Northern Great Plains.....	65
• Soil Health and Adaptive Grazing with Dr. Allen Williams	136	• Many Places for Pastured Poultry on this Integrated Farm.....	181
• National Farmers Market Week 2021 Demonstrates that Farmers Markets are Essential	110	• Advanced Beekeeping	145
• Top 5 Lambing Hacks for a Panic-Free Season	282	• The Impact of Grazing Frequency and Recovery Period on Plan Diversity and Soil Health	475
• For a Safe Lambing Season, Make a ‘Lambulance’.....	220	• NCAT Launces Nation’s First AgriSolar Clearinghouse.....	154
• Novel Nutrient Management Method: Applying Poultry Litter in Subsurface Bands	247	• The Timeless Pulse: A Personal Story.....	248
• Combcutting: An Innovative Approach for Reducing Broadleaf Weeds in Small Grains	276	• Farm Visit to JSM Organics with Congressman Panetta and Under Secretary Moffitt	128
• Vineyard Agroforestry: Growing Grapes in the Era of Climate Change	525	• Overgrazing—A Chronic Soil Disturbance on Grazing Lands: Part 1.....	426
• New Digital Home for NCAT’s Armed to Farm.....	54	• Agroforestry for Improved Soil Fertility	395
• Demystifying Regenerative Grazing at BDA Farm	262	• Safety for Sheep and Shepherd	208
• 3 Reasons Your Legume Cover Crop Nodulation May Have Failed.....	251	• Conservation Hedgerows for the Southwest.....	166
		• Overgrazing—A Chronic Soil Disturbance on Grazing Lands: Part II.....	146

Task #3: Educational Materials

Blog Posts (continued)

2021-2022 Blog Posts (70) and number of views this project year

• Applications Open for Armed to Farm New Mexico	91	• A Tale of Two Pastures: Pasture Response to Catastrophic Events.....	168
• The Journey to a More Holistic System of Ranching.....	26	• NCAT’s Free Farmer Veteran Training is Headed to Texas	21
• NCAT Launches Nationwide ‘Soil for Water’ Regenerative Agriculture Project	216	• Assessing Soil Health on Grazing Lands Using a Shovel and a Knife	269
• Join Us for the ‘Soil for Water’ Film Premiere	197	• Soil Steaming for Pathogen, Pest, and Weed Control in High Tunnels	158
• Building a Strong Foundation for Working with Livestock	300	• Armed to Farm in Albuquerque.....	85
• For the Love of the Wild: Livestock Pastures as Wildlife Habitat.....	220	• New Toolkit: How to Reduce Synthetic Fertilizer Use	129
• New Video Series: Safe is Better than Sorry When You’re Using and Buying a Chainsaw	121	• Reflections from a Shortgrass Prairie	46
• Introducing the Regenerator’s Atlas of America.....	91	• NCAT Webinar Series Addresses Advanced Grazing.....	157
• Applications Open for Armed to Farm California Training.....	19	• Video Series Provides Solar Education to Farmers.....	8
• Register Now for NCAT’s Virtual Soil Health Innovations Conference.....	83	• Farmers and Ranchers Are Neither the Cause Nor the Solution to Climate Disruption	248
• Looking for On-farm Diversification? Consider Pastured Pigs	218	• Resilient Butte: Beijing to Butte, Montana.....	11
• Watch: NCAT Premieres its ‘Soil for Water’ Film	58		
• Bigger Isn’t Always Better: When Small Cows Shine.....	350		
• NCAT’s Free Farmer-Veteran Training is Headed to California.....	19		
• Grazing for Resilience: Bouncing Forward from Catastrophic Events	147		
• Montana’s Winter Farmers Markets Help Provide Local Food Access and Bridge Revenue for Farmers.....	73		
• Watch: NCAT Releases Soil Health 101 Series	52		
• NCAT’s AgriSolar Clearinghouse Project Brings Together Solar and Agriculture.....	142		
• Grapes in High Tunnels Can Greatly Reduce Pesticide Use and Increase Yields	129		
• NCAT’s AgriSolar Clearinghouse Launches National ‘Follow the Sun’ Tour.....	62		



Summary

NCAT has exceeded all deliverables and projected number of clients served in the appropriate categories during the 2021-2022 project year. NCAT's ATTRA program continues to offer trusted, practical solutions to farmers, ranchers, and educators across the U.S. Through the ongoing COVID-19 pandemic, NCAT agriculture specialists have adapted successfully to using virtual platforms to provide technical assistance, trainings, workshops, webinars, and participating in other conferences and workshops. ATTRA is successfully utilizing social media, online forums, and in-person events to engage with farmers and ranchers, connect them to the resources they need, and facilitate peer-to-peer learning opportunities.

A recent use survey showed that respondents found

that they gained useful information (**87%**) from ATTRA workshops and many plan to make changes to their operation based on what they learned (**82%**). **62%** of respondents reported that they had already changed their production practices based on the information gained through ATTRA resources and trainings. ATTRA clients reported improvements to soil quality, income, and quality of life based on information received from ATTRA.

We have enjoyed working with various USDA agencies to leverage ATTRA, expand its reach, and improve the quality of service to America's agriculture communities. NCAT, through the ATTRA program, is well suited to meeting the needs of clients, as we offer trusted resources, practical training and technical expertise at a level our clients want.

Accolades

I stumbled upon ATTRA and NCAT and boy, am I grateful!! Your group has been the most helpful by far. I recently signed a CSP contract with USDA NRCS and am trying very hard to implement enhancements. I didn't know what I didn't know and underestimated the availability of material if it wasn't already produced on my farm. I was recently accepted to Women, Livestock, and Land: Arkansas Cohort. I have learned SO much. Linda Coffey and Linda Poole have been the ones I have interacted with the most and they have been so gracious to share their experience. NCAT's online resources are phenomenal.

– Online ATTRA resource user and Women, Livestock, and the Land workshop series participant

The collaboration with other farmers was honestly my favorite. I also really valued making a business case. I think what Farm Business Lab did really well was making you ask yourself and your business the really hard questions that people don't like to have to ask: financials, what drives this business forward, how are you going to market yourself?

– Farm Business Lab training participant



More Accolades

Some good ideas for networking with other agencies at the state and federal level (I am a Federal agency employee) to make our programs more effective and accessible.

– Soil Health Innovations Conference attendee

As a beginning farmer/rancher, I have gained much knowledge that is beneficial to the overall establishment diversification of my farm operation.

– Beginning farmer/rancher, Mississippi

The access to the educational materials is so helpful when assessing how to deal with one of many situations on my certified organic farm.

– Commercial producer, North Dakota

Learned about practical applications of regenerative farming practices and was able to communicate those to others.

– Resource conservation district board member, California

As a loan official for FSA I have been able to direct borrowers and applicants to information that has been helpful for them in their operations.

– FSA loan officer, New York

Really grateful for the information. I feel I have become more knowledgeable and up-to-date on standards and practices of sustainability, which is the direction I've always been going in.

– Private service provider, Texas

A wealth of knowledge and contacts for questions that I couldn't answer in the past.

– Commercial Producer, Mississippi

I am a new farmer who is building a year-round commercial greenhouse. ATTRA has been a source of excellent information including grants, Federal gov't resources that include architectural reviews and more.

– Commercial producer, Colorado



ATTRA is a program developed and managed by the National Center for Appropriate Technology (NCAT). We are committed to providing high-value information and technical assistance to farmers, ranchers, Extension agents, educators, and others involved in sustainable agriculture in the United States.

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