



Continuous Living Cover (CLC) Technical Assistance Training Gap Analysis & Roadmap 6.1.2021

For several years, Green Lands Blue Waters and partners have been asking questions like -

How can we help more farmers get the information they need to increase continuous living cover?

Who will be the next generation of technical assistance (TA) providers?

How do we ensure that those providers are adequately trained, and that funding and policy supports increased capacity for these TA providers to reach farmers, leading to the changes we want to see on the landscape?

From 2020-2021 we asked CLC leaders in our networks to help us answer these questions through a series of interviews, a 10 question survey, and a virtual post-it-note type exercise. We are using the term “technical assistance providers” intentionally broadly. What we are driving towards is what channels are currently or could in the future be effective in reaching farmers with good resources, information and skill building on CLC crops and cropping systems.

CLC Technical Assistance Gap Analysis: Gaps, Opportunities and Recommendations

Through gap analysis and roadmap development, we explored the current state of technical assistance (TA) training for Continuous Living Cover (CLC) crops and cropping systems. We surveyed cross-sector practitioners from farmer networks, nonprofits, state agencies, universities and extension, representing IA, IL, LA, MN, WI as well as regional and national organizations to learn how CLC-related TA is funded, prioritized, delivered and accessed.

We identified several themes and gaps in the TA pathways that could improve overall delivery and effectiveness of TA for CLC.

CLC can be seen as innovative in that it does not fit into the commodity crop/livestock pattern that our institutions, government, TA providers and farmers have focused on in recent history. This results in resource/delivery gaps around CLC in several ways:

- *Limited awareness of CLC practices, benefits, and funding options among farmers and/or TA providers**
- *Lack of prioritization and funding for delivery of TA, particularly CLC-related TA**
- *Lack of training in CLC practices for TA providers**

In the sections below, we’ve outlined what we learned about each of these gaps, and where we see opportunities to improve the development and delivery of TA for CLC crops and systems.

Limited awareness of CLC-related TA highlights a need for more information

Our survey respondents indicate there is clear demand for information and/or technical assistance resources on continuous living cover crops and cropping systems. Questions remain regarding to what degree farmers drive demand, leading TA providers to request more information and training, or TA providers proactively promote CLC practices to farmers, and support adoption. In either case, there is limited information or access to examples of successful on-farm implementation. In order to build awareness about CLC systems, and support demand for CLC-related TA, farmers and TA providers need better information on:

- What CLC is (terminology isn't universally used or understood)
- CLC as a system, not just individual practices
- Economic benefits of CLC including ROI data
- Environmental benefits of CLC
- Details on existing or developing markets for CLC crops

Opportunities to build awareness:

- Highlight regional examples of successful implementation of CLC - share successes and challenges
- Develop individual and cohort-based approaches to supporting farmers who are implementing CLC practices
- Develop and support farmers and TA professionals who are "champions" of CLC and can influence peers; develop TA cohorts for peer to peer support and learning
- With partners, continue to build and support the growth of markets for CLC products
- Share existing resources on the economics of implementing CLC practices/systems and support funding for more research and outreach on these topics
- Additionally, share resources and support ongoing research and outreach on other topics including agronomics, farmer behavior change and adoption, etc.

Current delivery of CLC-related TA shows gaps/barriers as well as opportunity

We learned that farmers seek technical assistance from a number of avenues but that content and quality of TA varies depending on the interest, expertise and training of the individuals providing the TA. Two major suppliers of CLC-related TA are nonprofits and public sector/state agency channels including Natural Resources Conservation Service (NRCS) and Soil & Water Conservation Districts (SWCDs), but farmers are also accessing information from peers, farmer networks and farm retailers (see further info in 'channels' below). NRCS/SWCDs are important vehicles for delivering TA because they are well-established and have existing relationships with farmers. However, in recent years low staffing capacity has been a tremendous challenge, and they can be limited in their ability to effectively educate about CLC specifically due to lack of interest or skepticism, lack of training and knowledge, and limited informational resources. Similarly, in the private sector (ag retailers, crop consultants) we see a fairly narrow scope of TA, often aligned with products supplied by those businesses. Nonprofits are particularly effective at filling this gap by providing CLC TA, knowledge, and skills and working directly with farmers with whom they have already built trusting relationships.

Opportunities to improve delivery:

- Lead with the principle that TA is most accepted and effective when delivered in combination with direct, on-farm education
- Build awareness of CLC at leadership and information-delivery-staff levels of Extension, USDA, NRCS and effectively connect TA providers at these agencies with farmers
- Farmer to farmer mentoring - include farmers as active/formal partners in providing TA to others through new and established platforms (extension, co-ops, etc)

- Tailor TA to specific audiences (for ex, women landowners, different cultural communities), respect and elevate different types of agricultural knowledge, and work to diversify TA providers to be increasingly representative of communities they serve

What our network thinks about different channels for CLC-related TA

We asked CLC leaders to participate in a virtual post-it brainstorm exercise on this topic - *Where do/could farmers get technical assistance (information & resources) on CLC crops and cropping systems from?*

Summary points from five key information channels include:

Nonprofits - The strongest focus on current good information for CLC was related to nonprofits. In fact all of the nonprofits listed were marked as ‘currently a great source for CLC TA.’ Of all five channels, nonprofits were the most highly rated current source of CLC information. Nonprofits appear to currently be filling a big gap in providing CLC TA, knowledge, and skills and were characterized as being especially good at working directly with farmers. The most frequently mentioned nonprofits were Land Stewardship Project, Sustainable Farming Association, and Practical Farmers of Iowa.

Public Sector (Traditional/ Institutional) - Several public sector institutions were flagged as ‘currently a great source of CLC TA,’ especially NRCS, university agronomists, and SWCD staff. Other CLC leaders mentioned that these and other public sector institutions had good potential to deliver CLC TA, but were not yet doing so, including NRCS, SWCDs and Extension. Participants indicated that there is both a lot of good work happening and a lot of potential (or, currently missed opportunities that could be organized around moving forward). CLC leaders saw these existing public channels as a good road forward because of existing relationships and structures, but noted that effectiveness in delivering CLC information currently can be hit and miss.

Farmer-to-farmer - The farmer-to-farmer channel tends to also have natural overlap with the other categories. CLC leaders saw both important and effective existing TA happening through farmer-to-farmer channels like field days, farmer-led watershed groups and farmer grazing groups, and significant opportunities for future TA through these channels. A consistent framing that came through again and again is that effective TA needs to be a blend of farmer knowledge and professional expertise. One participant explicitly said, *“I think of farmers, regenerative and conventional, as agricultural professionals, albeit not strictly advisors. I don’t favor the separation of a professional class from farmers. Each has ways of knowing and observing that brought together in respectful ways can be more powerful. And to that we need to widen the circle of knowing and participation.”*

Private Sector - CLC leaders in many ways expressed tremendous potential in working with Certified Crop Advisors and ag retailers. But there were very few direct suggestions of how to go about that well, or even where to start. Many potential challenges to working through CCAs and ag retailers (or, disincentives toward this channel delivering CLC-related TA) were identified, but because this is so consistently referenced as a key source of information for farmers, it comes up again and again as a channel worth exploring. Farmers rely on and trust their private sector contacts like ag retailers. Alternately, several specific names were mentioned as excellent individual sources of CLC information for farmers. This really points to the importance of key individuals and the value of champions within a channel. There was also some creativity referenced happening from the private sector regarding ingredient sourcing or consumer brands supporting partner TA or developing their own in-house TA. This is another avenue worth further exploring.

Emerging/ Outside the box - It is worth noting that like any creative problem solvers, farmers and TA providers are finding all kinds of ways to seek out and deliver good information. While the channels above are go-to sources for

farmers seeking information on crops and cropping systems, there are of course many innovative solutions beyond those categories. Many ideas came up in the survey and post-it exercise, everything from podcasts to church groups.

Improving training on CLC for TA providers is a critical next step

TA providers are viewed as knowledgeable and trusted by farmers, but in many cases lack specific details or training in CLC practices/systems. We found that training on CLC practices for TA providers is varied, and dependent on several factors including available funding, area of expertise of the individual TA provider and interest of the parent agency in supporting that training. Some TA providers have very little training on practices outside of traditional corn/soy systems, while others have a breadth of experience with particular practices (ex. soil health) but lack an understanding of how CLC fits into the whole farm cropping system. Additionally, TA providers do not have training or experience with more innovative/ less common practices like agroforestry. There is a strong sense that TA providers need more of their training time spent on farms, engaging with farmers and learning from successful CLC operations. Finally, TA providers do not have enough information on the economics of implementing CLC practices/systems.

Opportunities to improve training/ professional development for TA providers:

- Rethink training as a partnership where trainers and farmers learn from each other collaboratively
- Include on-farm training
- Provide peer to peer support for TA providers
- Better understand current professional development for TA providers and learn how to influence that by encouraging prioritization of CLC related TA and directly offering training or curriculum development where possible
- Integrate training on CLC into certifications that already require annual training
- Offer incentives and/or compensation for participation in trainings
- Support consistent training and funding, and start early with agriculture students, vo-tech programs and 4-H

Overarching recommendations and GLBW Network Next Steps

One common theme in each of these opportunities is to develop pathways to CLC adoption that effectively engage farmers and TA providers collaboratively learning together. Encouragingly, many partners in the Green Lands Blue Waters network are already modeling how to do this well.

With our network of agricultural professionals in research, government, non-profit and private sector, GLBW and partners are well-positioned to support training programs that prioritize CLC and deliver relevant information on economic and environmental benefits. We recommend the following steps:

GLBW & Network Next Steps

- **Highlight CLC success stories**, including specific detail on economic components of success.
- Continue to work with our research partners to **support on-farm research and demonstration** in close partnership with farmers implementing CLC, work with farmers on field days, outreach events, and on farm training, and otherwise share the findings in an accessible, wide-reaching way. Think longer term about developing model CLC operations at existing demonstration farms (such as Discovery Farms or University Outreach Centers) that can be used for research and training.

- **Explore collaboration across nonprofits to scale impact beyond reaching individual farmers.** Nonprofits are currently filling a tremendous gap in CLC training and doing a good job of meeting farmers in the field with good information. GLBW could bring several of these nonprofits together to explore whether there's a role for these nonprofits in transitioning to helping get good CLC info into other channels. Rather than only continuing direct delivery to farmers, could these nonprofits also work together to develop curriculum and train the trainers in other channels, as well as collaboratively making the case for increasing support for CLC TA needs (to funders, policy makers etc.).
- **Better understand how to influence existing training for public sector TA providers.**
- **Work through existing GLBW relationships with public sector partners to build awareness and prioritization of CLC related training.** Consider cultivating internal champions and building peer-to-peer cohorts of TA providers. Work through GLBW's existing NRCS cohort and existing NRCS and SWCD relationships. Consider partnering with cross-sector partners including trainers (NRCS, SWCD, Extension), farmers and nonprofits to develop training/curriculum that could be widely and consistently implemented across the region.
- **Work through existing GLBW relationships with partner organizations to seek and respond to opportunities to collaborate on CLC TA-related work.** Lots of good work is already happening and could benefit from continued focus and collaborative funding development. GLBW can work to encourage open communication flows and sharing of resources across partners. (Specific examples include: GLBW and partners re-submitting a 2020 unfunded SARE proposal to develop curriculum modules for CLC training; GLBW partnering with Savanna Institute and others on an AFRI proposal for agroforestry training for TA providers; sharing learnings from GLBW's active participation in Kernza-related inreach to Extension channels; partnering with North Central Region Water Network's potential project to launch online curriculum modules; GLBW continuing discussions with Soil & Water Conservation Service staff to include CLC related questions in their annual member surveys or in potential future conservation professional national polls.)
- With partners to collectively **advocate for consistent and increased funding through public, private and philanthropic sources for CLC-related technical assistance programs and TA provider training on CLC.**

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Appendix 1 - Survey questions

Survey Description:

Assessing & improving technical assistance for continuous living cover crops & cropping systems.

For several years now, Green Lands Blue Waters and partners, including many of you, have been asking questions like - How can we help more farmers get the information they need to increase continuous living cover? Who will be the next generation of technical assistance providers? How do we ensure that those providers are adequately trained, and that funding and policy supports increased capacity for these TA providers to reach farmers, leading to the changes we want to see on the landscape?

Your participation is critical in helping us assess & improve the availability of TA for CLC.

We're asking you to help us better understand what we do and don't know about information available to farmers and training for TA providers through this 10 question survey.

Thank you!

Survey Questions:

1. Do you think there is a demand for information and/or technical assistance resources on continuous living cover crops & cropping systems?
2. Where do you think farmers are getting reliable technical assistance on CLC crops and cropping systems?
3. What do you see as the biggest opportunities or gaps in where farmers could or should be getting this info?
4. To what degree do you think technical assistance providers have adequate training to assist farmers with implementing/ adopting CLC crops and cropping systems?
5. What are your thoughts on why better training on CLC crops and cropping systems doesn't exist?
6. What are your thoughts on how training could be improved?
7. What insights do you have about how train-the-trainer/ professional development content is prioritized or delivered in any given channel(s)? (NRCS, SWCD, Extension, specific ag retailers, specific CEU training programs, etc.)
8. Would you be interested in participating in working collaboratively to address these issues?
9. What are 1-3 concrete ideas you have regarding how to begin to address any current challenges with TA for CLC, or to replicate successful examples or programs?
10. Who else should we be talking to as part of this project? (Any key sectors, organizations or names of specific individuals? Maybe an example of a TA provider and/or farmer associated with successful CLC implementation/transformation?)

Appendix 2 - CLC TA Roadmap



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CLC Technical Assistance Roadmap

What next steps can GLBW and partners take to improve CLC TA?

- Highlight CLC success stories.
- Support on-farm research & demonstration.
- Explore collaboration across nonprofits to scale impact.
- Better understand how to influence existing TA provider training.
- Work with existing GLBW public sector partners to build awareness and prioritization of CLC related training.
- Continue to work with GLBW partner orgs to seek, respond to and collaborate on TA related opportunities.
- Collectively advocate for funding for CLC training and TA.

What is not yet but could be a good source for CLC TA?

- Extension
- SWCD
- NRCS
- Va-Ag Instructors
- FSA
- State Dept's of Conservation
- Soil health coalitions & conferences
- Commodity groups
- E-magazines
- Field days
- Research & demo farms
- CCAs, CPGs
- Ag Retailers
- Trade publications
- Brands hiring agronomists
- Sourcing brands working with farmers
- Podcasts
- Online - including blogs and online networks
- Church

Who is currently providing good CLC technical assistance (TA)?

- NRCS staff
- SWCD staff
- U Agronomists
- Demonstration Sites
- Gov't forestry staff
- LSP, SFA, PFI, SWCS, Rural Advantage, AFT, Pheasants/ Quails
- Forever, DU, WFAN, Cannon River
- Watershed Partnership, Pasture Project & more! [see report]
- Farmer watershed & grazing groups
- Field days
- Individual farmer to farmer
- Fishers & Farmers
- Research farms
- Private crop consultants
- Ecological services consultants
- CLC seed retailers
- Neighbors
- Family
- Social Media

Improving resource / delivery gaps in CLC TA by addressing:

- Limited awareness of CLC practices, benefits, and funding options among farmers and/or TA providers
- Lack of prioritization and funding for delivery of TA, particularly CLC-related TA
- Lack of training in CLC practices for TA providers



Public Sector



Nonprofit



Farmer-to-Farmer



Private



Outside the box

Appendix 3 - Jamboard

Where do/could farmers get technical assistance (information & resources) on CLC crops and cropping systems from?

No wrong ideas! This is a collaborative mapping & prioritizing brainstorm.

