

# Programmatic Factors that Lead to Changes in Quality of Life and Independent Living and Working Levels with AgrAbility Clients and a 25-Year Overview of AgrAbility Demographics

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# Key Research Question

- What are the key factors (programmatic or personal) that contributed to significant changes in quantitative pre-post scores in Quality of Life (QOL) levels and Independent Living and Working (ILW) levels for clients with disabilities who participated in the AgrAbility Project?
- Questions revolved around:
  - Program process factors
  - Client experience with project
  - Project impact on clients' quality of life
  - Project improvements

# Sample Selection

- Of 217 AgrAbility clients with matched pretests and posttests, initially 13 who improved the most and 13 who improved the least on both QOL and ILW difference scores (posttest minus pretest) were identified for interviewing.
- Of the 26, as clients refused or were unreachable, attempts were made to reach out to other clients from the master list. As expected, attrition was higher for low scorers than high scorers.
  - Deceased : 11
  - Hospice : 1
  - No response, unreachable : 12
  - Refused : 3
  - Lack of response from state project : 28+
  - **Completed the study : 9**
- A total of nine clients from four states completed the study.

# Methodology

- IRB approval was obtained from the University of Georgia Human Subjects Institutional Review Board.
- UGA researchers initially contacted state projects to invite their cooperation. For each identified client, the state project staff made an initial phone call to potential participants introducing the study, seeking their permission, and telling them to expect a phone call from UGA researchers.
- Phone interviews were conducted by UGA researchers with farmers and ranchers who agreed to participate in the study. A semi-structured interview guide with imbedded probes was utilized during the interviews. The interviews lasted for about 20-30 minutes.
- State AgrAbility project staff completed an online questionnaire to provide information about what they and their partnering agencies (like vocational rehabilitation) provided to each of the selected clients.

# Analysis

Using the grounded theory approach as described by Glaser and Strauss (1967), data was collected and analyzed simultaneously using the constant comparative method until it reached a point of saturation. Preliminary themes emerging from the data are presented here.

# Key Programmatic Factors that Clients Value

1. Comprehensive Farm Assessments and Recommendations
2. AT Modifications and Services (In-house or Referrals)
3. Funding for Equipment, Modifications from Vocational Rehabilitation
4. Ongoing Communication and Trust with Project Staff



# 1. Comprehensive Farm Assessments and Recommendations

Project staff conduct a comprehensive farm and work assessment.

They discuss farmers' needs, review their daily farm tasks and provide recommendations on AT to make tasks easier.

...we went over stuff, and they helped build..everything for my hand clutch. Then we figured out what my position kind of was on the farm....and we went over things that would help me on the farm... I thought everything went pretty smoothly once it got rolling on stuff, it didn't take too long to get everything set up and in place. I was pretty impressed, really....They did a very good job of coming out and mulling over things with me. (41 year old male with Multiple Sclerosis)

...it was quite a process to go through all this and that, fill out all this paperwork, and see if you're eligible...And then they come out and talk to you about what you really want, what would help you the most, and then they help you get it. They were very understanding and informative. (53 year old female with arthritis)

An assessment was done and the recommendation was made to get a set of steps and I did. And they worked so well that I bought a second set of steps. (52 year old male with joint injuries)

## 2. Assistive Technology (AT) Modifications and Services (In-house or Referrals)

They provide AT solutions to make tasks easier, e.g. steps for a tractor, hand controls on a tractor, equipment to reduce strain and facilitate farm tasks.

They provide farmers with information, resources, and demonstrations on AT, ergonomics etc. through DVDs, web-based toolkits, and a wide variety of other informational resources.

..they helped me with fixing a tractor so it was easier to get into, a handle on it..to get up the steps better. And another on our skid steer tractor..they put a step up onto the bucket so it would be easier to get into the skid steer.. (53 year old female with arthritis)

And I got hand controls put on my vehicle so I could drive... then we put, ... steps to put on my tractor to help me get in that were lower to the ground. And then...I got a electric grain hopper openers for my grain trailer so I could open them from the cab. (41 year old male with Multiple Sclerosis)

..we built a lift to take me to the top of the combine to get in the cab...They got me some stuff for the shop, 'cause I was the mechanic too, they got me a roll-around table that had a hydraulic lift on its side, it raises up and down. (41 year old male with Multiple Sclerosis)



## 2. Assistive Technology Modifications and services (In-house or Referrals)

Project staff assist farmers to work with the vocational rehabilitation (VR) agency and qualify for VR services. Referrals to other professionals are made as needed.

Recommendations and modifications relate to use of AT to make tasks easier and prevent secondary injuries (further issues in the body).

Recommendations and modifications relate to doing things safely on the farm.

...the occupational vocational therapist was the best thing that ever happened ... Because even though we did get some tools and machinery, they were able to really have an educated approach to how to safely do things, complete tasks...  
(40 year old female with arthritis)

I made a lot of changes. First of all, some of the vehicles that we were using were high and required heavy physical exertion and sometimes bending and twisting in ways that weren't safe for my body. So we had made changes to those vehicles. I'm not lifting, bending, pulling in the ways that were damaging to my body and to my joints. (40 year old female with arthritis)

...there was information that I got from them about exercises and things like, think before you lift, look at ways to minimize... one of the other things we did was started using gloves that running impact tools and stuff like that would protect your hands.  
(52 year old male with joint injuries)

### 3. Funding for Equipment and Modifications from Vocational Rehabilitation

Clients reported that the project helped them (sometimes through participation with vocational rehabilitation) get the needed equipment to make farm tasks easier.

AgrAbility project helped clients apply for vocational rehabilitation services and obtain referrals and funding for needed services.

..they...got me a **Kubota 900 UTV** vehicle..it helped because I didn't have the money to buy a UTV vehicle, and ... I'm able to get around a lot more to help with the fencing, and getting the calves in out of the field. ....carrying feed back and forth for them without having to always walk.....when I have bad knees and couldn't get around very good... ..it saved me a lot of stress...  
(53 year old female with arthritis)

...helped me get a **Bobcat**. I use that thing every day, I mean, feeding bales, digging post holes, pulling post, moving pipe, moving bales, digging dirt, tilling holes, everything....  
(57 year old male with leg amputation above the knee)

..getting a **four-wheeler**, it made life a whole lot simpler. 'Cause when it got too wet or anything to use the wagon or carry the stuff around I had to use a pickup to go from pen to pen. And then I was having to get out every pen or had to carry the buckets over to the pens individually.  
(57 year old male with leg amputation above the knee)

...The **scooter** part helped me a lot because I would have trouble walking...And having to run around between equipment and stuff and it helped me to get between the equipment...Everything. I can't believe how much it helped me. (41 year old male with Multiple Sclerosis)

### 3. Funding for Equipment and Modifications from Vocational Rehabilitation

One farmer chose not to go through the vocational rehabilitation agency but instead to self pay for things.

Another farmer mentioned being very upset because after a lot of paperwork and time-lapse, they did not qualify for VR services. He had low scores on his QOL and ILW measures.

..I didn't have to go out and buy one myself. So that released up a lot of money to do the other things I needed to get...because you use one every day. I feed with it, I check cows on it. It was just another set of legs really. (57 year old male with leg amputation above the knee)

Some of those changes we provided funding for and we did on our own as per recommendations. Some of the other changes were assisted funding through VR....I believe it was like (some amount >\$40,000) for farm equipment that was AT to help us keep in operation without further causing damage to my body.... (40 year old female with arthritis)

Actually I bought both sets of steps so there was no financial gain for me. See we didn't work through VR or anything so. So, it was done and the recommendation was made. (52 year old male with joint injuries)

## 4. Ongoing Communication and Trust with Project Staff

Clients appreciated frequent communication and check-ins from project staff members. They appreciated being involved in planning discussions and getting updates on progress.

The frequency of communication ranged from once a week to monthly and every six months afterwards.

It was every few months they would check in to see how, or let me know how things were progressing...And then they checked in with me, probably about six months into it, to see how things were...They were very understanding and informative. (53 year old female with arthritis)

Yes...we talked at least once a week, maybe more often than that, talking about what we were going to get done, or what was the next step. They were wonderful for helping me there. (41 year old male with Multiple Sclerosis)

Yes, they were very easy to work with. A lot of it was one-on-one, person-to-person. A lot of it was phone calls. A lot of it was actually emails to stay in touch.....probably at least once a month to start with, and then they still check up on you even after years, they still check up on you. ...and have done a really excellent job with it. (52 year old male with joint injuries)

## 4. Ongoing Communication and Trust with Project Staff

The relationship with project staff members played a role in how engaged and satisfied the clients were with the project.

One client with a sensory impairment related to vision mentioned being dissatisfied that the project staff member could not come up with better suggestions to help them.

...the project staff member has always been in my corner and I really appreciated that they cared about the people....They understood what I was going through and stuff...Well, they'd call me every so often to make sure I was doing okay and stuff....the staff member is one of a kind. I just wish they had more people like them.  
(57 year old male with leg amputation above the knee)

They were here a couple of times and then they contact me over the phone several times....I was disappointed, because they could help more. I mean I guess it wasn't their fault they couldn't come up with some ways to help. (71 year old male with visual impairment, arthritis)

# Key Client Factors

**Proactivity:** Clients reported making changes proactively in how they performed farm tasks due to their participation in the AgrAbility Project. Family played an important role in helping sustain the changes.

**Increased self confidence:** Clients mentioned having increased confidence to be creative and make changes themselves that they wouldn't have made otherwise.

...we actually raise tomatoes and raise some vegetables...made changes from all those brochures they do on gardening.... plant crops where you don't have to bend over and then we also made a few different wrinkles on our high tunnel to make it more easy for me to water them and stuff...the other thing is that I did fairly recently ...realize your own strength. I have a loader tractor that has the steps. That was my first tractor I put steps on. But then I also have purchased a little skid steer loader and I used it a lot for lifting things that normally I wouldn't have lifted myself. (52 year old male with joint injuries)

...we have 100 percent change. Sometimes my husband would have to remind me to not do things the old way. So my family was a very integral part in making changes. AgrAbility is a big part. AgrAbility would probably be half of the reason why because they just simply recommended things being different. The other half would be split evenly between myself and my family reminding me to do things the right way...Because when you work for so long for so many years and you have a habit, it's hard to break...It took me some time to adjust. (40 year old female with arthritis)

Not really. I just ... some of the stuff that I had to. I was raising (some crop) that requires a lot of stooping. I just cut back on raising as much of that product. (61 year old male with leg amputation below the knee)

# Key Program Impact

Participating in the project led to:

1. Positive Impact on Health (physical, mental, emotional, and spiritual)
2. Improved Mobility and Ability to Continue Farming
3. Positive Financial Impact and Increased Productivity





# 1. Positive Impact on Health

Physical health: Clients reported having positive impact on physical health including less pain and more sleep due to less strain on the body and prevention of secondary injuries.

Mental health: Clients also mentioned having improved mental health due to less physical and emotional stress.

Well it's helped a lot with the physical. The rest was just, it just relieved a lot of stress, because it was easier to get around and get the things done without having to try to figure out ... Otherwise I used to have to drive my truck a lot of places, and there were places you couldn't get around with a truck like you can with a UTV vehicle.  
(53 year old female with arthritis)

No. My health status has not improved, but living with the conditions has improved because of the AgrAbility program. I still have rheumatoid arthritis and I still have pain but my occupation is not increasing the pain because of what I'm doing in my daily activities....

I would say all five things (physically, emotionally, spiritually, mentally and financially) improved because of the reduced impact on my body led to better sleep because I was not in pain so much. I still have bad days ...still have rheumatoid arthritis. I still have sore joints, but I'm able to do more because I have the tools to do more with. I sleep better at night because most nights, I go to sleep with less pain than I had before from working all day long. I'm spiritually better off and emotionally better off, physically better off (40 year old female with arthritis)



# 1. Positive Impact on Health

Clients reported improved mental health due to being able to continue farming as a way of life.

Clients mentioned feeling meaningful engagement with farming. They also talked about the independence they experienced due to not having to rely on others to accomplish farm tasks.

Yeah, it helped at the time, I guess you say mentally. I don't know as far as you say physical. It's like I told you, I just kind of cut back. (61 year old male with leg amputation below the knee)

And not have to rely on people. And then, I mean it just made me feel more...more independent-you know ...Less reliance on others and more purposeful, meaningful-you know engagement...

...Cause farming is not just one of them things that, to me-farming is a lifestyle, it's not a job...Way of life, and when you can't do your way of life, it brings your attitude way down. So it helps your attitude out so much being able to still do your stuff. (41 year old male with Multiple Sclerosis)

## 2. Improved Mobility and Ability to Continue Farming

Increased Mobility: Clients reported that they experienced improved mobility to continue performing various farm tasks with less physical strain or fewer secondary injuries.

I'm able to get around a lot more to help with the fencing, and getting the calves in out of the field. Just being able to go get things, and take care of animals ...get around with carrying feed back and forth for them without having to walk...it saved me a lot of stress, and a lot of walking...And there was something that I really needed, and it really worked out great. (53 year old female with arthritis)

...it helped me to get between the equipment...then, with the electric tarp-it saved me from having to climb out of the truck ...And the hopper openers-they saved me from having to crank on the hoppers, climbing in and out doing that...And then baling hay, just having that hand clutch saved me a lot of trouble... And putting the steps on the tractor just made it so that I could get in and out so much easier. It didn't wear me out as bad that way and stuff. (41 year old male with Multiple Sclerosis)

It also let us continue to farm.....But the thing of it is, we were able to continue when probably physically we couldn't have without their help. (52 year old male with joint injuries)

### 3. Positive Financial Impact and Increased Productivity

Increased farm productivity: Clients mentioned being able to increase the number of acres they farmed and reported being able to maintain and manage parts of their farm better due to increased mobility and AT.

Financial Impact: Getting equipment and AT from VR helped save them money and use it for other things. One farmer reported that the increased mobility and independence enabled him to do maintenance work himself without outsourcing thus saving him money.

Well, it helped because I didn't have the money to buy a UTV vehicle... I was able to get one that way. (53 year old female with arthritis)

...Before, we were only managing (some number) acres of vegetable production and we were able to increase that to (a higher number) acres of vegetable production. That's something that I would not have been able to do before the program. We're actually able to manage and maintain the rest of our (some number) acres in crop production. I'm able to maintain that a lot better, too, because I was not able to go to the North point of my farm or the South part of my farm before AgrAbility. (40 year old female with arthritis)

...Well, the financial part is it made it so we don't have to hire people to do good jobs for-you know, to help me out all the time. .... it has helped me...You know, when the combines break down, I didn't have to hire somebody to come fix them, I was able to get around there and work on them myself..... it helped us financially because I was able to be more independent and able to do things more by myself (41 year old male with Multiple Sclerosis)

### 3. Positive Financial Impact and Increased Productivity

Increased productivity and Income:

One client mentioned that they continued farming just because of the AgrAbility Project and reported an increase in income for three years.

Another farmer talked about cutting back on his farm activities due to physical limitations and other family situations.

Yes, the project has helped me because I would not have continued farming. I was really considering getting out of farming completely. We have a lot of expenses that we've wrapped up in infrastructure to get...our farm established. All of that would have been an economic loss. .. It did help increase my productivity and my income for the immediate three-years (40 year old female with arthritis)

Basically the only thing I done was just cut back on what I raised. At one time I had (some number) gardens of fairly good size, ....I was raising green beans that requires a lot of stooping.... I had to cut back on the produce that I was raising, so that was money I was making.. We're down to one garden. It's fairly good size, but it's raised mainly for our own use. (61 year old male with leg amputation below the knee)

# Key Project Barriers

## Project Factors

- Gaps in AT recommendations, services, referrals
- Communication gaps with project staff or VR
- Lack of specialized expertise on AT for sensory issues (i.e. blind, deaf)
- Excessive paperwork

## VR Factors

- Delay in VR eligibility and services
- Limited farm knowledge and attitudes of VR counselors
- Client did not qualify for VR.

## Client individual and family factors

- Motivation, time, personal circumstances



## Key Barriers

**Lack of Specialized Expertise in Sensory Impairment (vision):** I was disappointed, because they could help more. I mean I guess it wasn't their fault they couldn't come up with some ways to help.

(57 year old male with leg amputation above the knee)

**Excessive Paperwork:** A lot of people won't even mess with it because there's too many hoops they want 'em to jump through and they're just not interested in doing it...Well you gotta do this and you gotta do that... farmers don't have that much excess time. Most people that live in town, they got a 9-5 job. On a farm, it's 24/7, 365 days a year....So you got something to do every day.

(57 year old male with leg amputation above the knee)

**Communication gaps with project staff:** They just finally come to the situation that they just quit calling. They'd sent me some information and stuff through the mail, and I stopped getting that also...when they quit communicating with me, I didn't do any call backs or anything.

(61 year old male with leg amputation below the knee)

## Key Barriers

**Delay with project and VR eligibility:**... as far as helpful, I didn't get no reaction from them. They had suggested a few things that I could possibly do...possibly some equipment I could use to make it easier, and the end result was that they figured out nothing, as far as anything to help. (Project staff added in survey that client experience was not so positive... length of time it took for client to become VR eligible. Lack of follow up on behalf of VR with client and project staff. (61 year old male with leg amputation below the knee)

**Client Family Factors:** No, because well ... spiritually, financially, and emotionally I was pretty well tied up with my wife's cancer. (57 year old male with leg amputation above the knee)

**Limited Farm knowledge of VR counselors:**  
Case worker! Case worker!... that don't know nothing about farm work and it makes it difficult. They have no idea how a farm runs... I wanted to get me a four-wheeler so I could make my life easier and I told them... I told her that I was pushing cows and she thought that I was hitting cows with that four-wheeler and pushing them with the four-wheeler. (57 year old male with leg amputation above the knee)

**Client factors, technological limitations:** ..Technologically challenged due to age- Which to me, I think that's one of the problems with what's going on with, well, it's like I feel like I'm outta touch. Because I can't text and everybody's texting anymore. (71 year old male with visual impairment, arthritis)