



National Urban Research & Extension Center



Farms and Gardens in Mental Health Institutions – Opportunities for Extension

July 2025

Author

Julie Jesmer



National Urban Research & Extension Center

About NUREC

The National Urban Research and Extension Center (NUREC) is a collaborative membership-based nationwide organization for land grant universities that facilitates the co-creation and application of knowledge; enabling urban communities to improve the health and wellbeing of all residents, achieve equitable economic growth, and steward their natural environments. NUREC bridges the gap between community and research by applying the unparalleled power and reach of the land-grant university system, rooted in Extension's community-centered approach to address our nation's urban challenges.

Funding for this project was provided, in part, by a NUREC Deep Dive Fellowship.

For more information visit www.nurec.extension.org.

About the author

Julie Jesmer received her Masters in Agriculture from Washington State University (WSU) where she explored the intersections between urban agriculture and social work. She also holds bachelor's and master's degrees in social work. Julie worked at WSU as the program coordinator for the Western Region Agricultural Stress Assistance Program. She now works for Michigan State University.

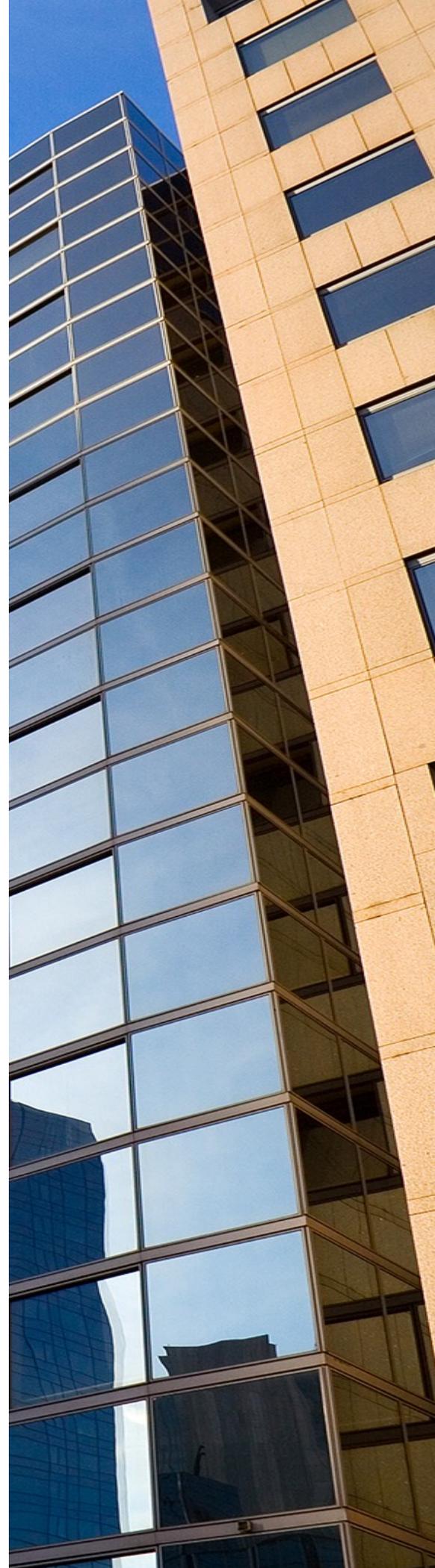
Suggested Citation

Jesmer, J. 2025. Farms and gardens in mental health institutions – opportunities for Extension. National Urban Research and Extension Center.

Graphic Design

Julene Ewert, Ellen Krugel

Cover photo by Julie Jesmer





J. JESMER

Farms and Gardens in Mental Health Institutions – Opportunities for Extension

When a person is mandated by law or society to reside in a mental health institution, most of their personal rights and choices are forfeited, including their food choices. An individual struggling with a chronic and perhaps debilitating mental illness has even less functional power than someone who is incarcerated as a consequence of a criminal conviction. In both cases, the food and recreation choices of these individuals are limited and controlled by the institution. State governments are most often the funding entity for mental health institutions. While institutions can set treatment and rehabilitation goals for their residents, they must do so within state mandated guidelines and policies designed to ensure efficient and judicious use of public funds. Through an in-depth exploration of one exemplar program, the New Mexico Behavioral Health Institute, this paper examines the history of farms and gardens at mental health institutions, the wealth of opportunity for Extension programs to partner with these institutions, and the complexities and barriers that may arise within such a partnership. It culminates in specific suggestions to help Extension provide broad-based, inclusive education to all members of the community.

Many urban Extension programs have observed demographic shifts in population, societal changes in community conditions, and the interdependencies of urban and rural communities [1]. These Extension programs are on track to become a major player in addressing complex “wicked” national and global problems. [2]. Among these problems are issues of food justice, access, and security, and the care of individuals in society that are unable to care for themselves. Some Extension programs have sought to address the complex issues at this nexus



by partnering with community-based farm and/or garden programs. In addition, some institutionally based residential programs have developed farms or gardens on the grounds of the institution [3]. These common interests provide fertile ground for partnerships.

Recent interest in community-based gardening and farming on land stewarded by government entities has been spurred by a global focus on the lack of equitable food access. Conceptualization of food access issues has progressed through concepts related to food security and food sovereignty to now centering on food justice [4]. The Food and Agriculture Organization (FAO) of the United Nations and the United States Agency for International Development (USAID) have defined food

security as “existing when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” [5] [6]. Although this definition contains the basic level of access to healthy food, it does not address land access or the ability to maintain personal or communal power over food choices. Food sovereignty is a rights-based strategy for food access originating in South America that is somewhat less common in the United States [7]. The United States and other Western-based countries have started utilizing the term food justice. This terminology takes the fight for social justice into the food sector [4] [8] [9].

When looking specifically at institutionally based farms and gardens, the concept of food justice becomes foundational. Managers and educators of mental health institutions with farm and garden programs must maintain constant awareness of the relative power and injustice experienced around basic human rights such as access to food. Food justice should serve as the umbrella under which vulnerable individuals can be served and protected in light of their food access rights [8] [5]

History

Mental health treatment practices and institutional policies have changed radically over the last two centuries since Western medicine began to diagnose characteristics of people unable to provide their own care as a result of impaired emotional, social, behavioral, or cognitive capacity [10] [11]. One of the significant dichotomies that developed throughout this process revolved around the benefits and drawbacks of providing services within a residential format or a nonresidential outpatient service provision paradigm. These opposite concepts are identified as institutionalization and deinstitutionalization or community-based care [12].

State hospitals are shrouded in complex historical legacies surrounding agricultural production. Mental health institutions established in the 19th century were food independent. Long-term residents operated the farms which provided food and income for operations [13]. Mental illness care paradigms centered on residential care, providing exposure to nature and calming landscapes [14]. These facilities operated primarily in isolation from their surrounding communities without focusing on rehabilitation [15].

Mental health institutions became notorious for isolated and chronically poor living conditions in the late 1800s. Later, care paradigms, funding, and policies shifted for people with mental health diagnoses toward deinstitutionalization and community-based care [16]. Medical treatment advances shifted institutional care again in the 1970s, realigning treatment of mental illness toward shorter stays, reducing residential treatment for most patients [12]. Because of this history many of the ubiquitous state hospital farms lacked funding and purpose, falling into disrepair. Currently, many inpatient mental health facilities operated by state governments have dormant farm and garden facilities in various states of disrepair, lacking functionality.

Care paradigms

The historical progression of care paradigms has had a radical impact on both the care of people with chronic mental illnesses and the food produced and served in institutional settings. In the late 1800s and early 1900s, people who functioned outside of societal norms were often sent to live in institutions regardless of their ability to care for themselves or the availability of family or community members to provide appropriate care. This resulted in a wide range of functional capacity and service or care needs. During this timeframe, government funding for such institutions was very limited or nonexistent, leaving family members, philanthropists, civic organizations, and community systems to provide funding and administration for institutions providing mental health services [14].

During the Industrial Revolution, the largely agrarian societies in the United States and Europe influenced vocational choices. As a result, these residential institutions all operated livestock and horticulture farms to provide food, daily activities, and unpaid labor to maintain the residence. Many of these institutions became famous for the quality of their fruit, vegetables, or livestock products [17] [18]. The design strategies of these facilities, later termed “insane asylums,” focused on elements that allowed the outdoors in and provided aesthetically pleasing scenery and fresh air to improve mental wellbeing and reduce aggression [19] [20] [21].

While some institutions moved toward peaceful surroundings and high-quality agricultural products for residents, many others were publicly exposed for inappropriate or, sometimes, even the complete lack of care for these vulnerable and powerless individuals. Horror stories of forced starvation and spoiled or rotten food, imprisonment, or extreme social isolation emerged [16]. Many of these institutions defined as insane asylums were rumored to be haunted by the ghosts of former residents [22] [21]. These negative stories gained popularity at the same time as the US food system was beginning to undergo major transitions that could no longer support widespread small-scale production agriculture [23] [24] [25].

After World War II, the implementation of diagnostic criteria for chronic mental illness brought about pharmaceutical treatment and other significant best practice interventions for many individuals that had formerly needed full-time residential care [11]. Many physical maladies such as diabetes began to be treated with greater consistency, thereby reducing or mitigating the cognitive dysfunction and emotional manifestations of chronic disease. Tax-based government funding followed the scientific research, and the number of patients in these institutions plummeted as more and more care was provided within community settings. By the late 1970’s, as the industrial-based economy was in full swing, chronically mentally ill patients were being released from residential facilities [12]. Farming was no longer the dominant profession nor practice on a wide scale. The food system began to be corporatized and consolidated, with large-scale commodity-based farming isolated to rural areas [26].

Historical descriptions abound that paint vivid pictures of the conditions at mental health facilities. Dichotomous narratives from horror stories to idyllic recitations of agrarian mythos emerged - narratives of both mystery and fame describing the quality of life and the caliber of food production in communities that host these institutions [27] [28] [18] [29] [17] [21]. However, these positive and negative stories, as well as the academic description of the shifting clinical care paradigms do not explain what happened to the productive farmland, and the non-commercialized food production, agricultural education, and vocational training programs.



J. JESMER

Co-planting calendula and tomatoes



J. JESMER

Farm field open for planting



J. JESMER

Trees ready for transplanting

The New Mexico Behavioral Health Institute

Established in 1889, the New Mexico Behavioral Health Institute (NMBHI) Farm serves as a positive exemplar by presenting solutions to these specific social problems and creating a significant opportunity for Extension to expand its impact through its model of developing community partnerships. Located within the high Sierra mountainous region of northern New Mexico, in the city of Las Vegas, this residential and outpatient mental health treatment facility has a long-standing farm program that has experienced periods of retraction and expansion based on historical changes in clinical treatment models [13]. NMBHI is the largest employer in the city, and the only inpatient psychiatric care facility in the state of New Mexico [30] [31].

The facility was built in 1889 and was originally named The Territorial Insane Asylum, later the New Mexico Hospital for the Insane [31]. The facility houses five units that treat patients based on their individual needs and long-term care requirements [30]. Three of these units are secure, locked facilities that require staff and visitors to undergo additional security screening similar to a prison facility. The first is an adult psychiatric unit that provides residential care for adults experiencing acute symptoms of mental illness. These patients generally reside in the facility short-term, from three days to several weeks, until they can be stabilized and treated elsewhere on an outpatient basis. The second is a forensic unit that houses patients for a longer, but variable, period of time based on the individual's capacity. Patients in this unit have been determined to be incompetent to stand trial for crimes and must remain at the facility until they are found to be competent and proceed to trial. This could be anywhere from several months to many years. The third unit, the Adolescent Services Center for Adolescent Relationship Exploration, provides residential care and treatment for male youth that have been convicted of sexually-based offenses and have a co-occurring behavioral health disorder.

The Long-Term Care Services Division is an unlocked group of residential villages that provides care to seniors and people with disabilities who require additional daily medical intervention or assistance with their daily living activities. Many of these residents depend on mobility aids such as wheelchairs or walkers, necessitating additional access considerations in the farm and greenhouse areas. An additional outpatient care division of NMBHI provides mental and behavioral health services to community members residing in the small Las Vegas metropolitan region. Many of the clients receiving outpatient services are former inpatient residents of the facility residing in the city temporarily for the specific purpose of receiving additional ongoing treatment. This allows the regular and horticultural therapy staff to implement longer-term treatment plans, including early vocational rehabilitation services, after patients are discharged from residential care. [30].

While placing patients in units by their length of stay helps NMBHI treat patients' presenting mental health issues, rehabilitation, and their return to the community, it creates a complex environment for the farm and horticultural therapy staff responsible for implementing individualized treatment plans. These treatment plans form the cornerstone of the farm and horticultural therapy program operations, requiring that they operate on flexible schedules which prioritize the facility's security and the treatment needs of each individual patient over consistent food production outputs. This means that the farm at NMBHI cannot be a consistent source of food or income, nor can it help reduce the cost of contracted food supply services as a typical farm or community-based garden could.

Because the primary goal of the facility is first and foremost the care and safety of the patients and clients, food production targets and financial gain from produce sales would be an inappropriate outcome measure for the NMBHI farm program. When responding to these constraints, the farm team utilizes the field of horticultural therapy as the primary process to provide care within the boundaries of safety. The farm program benefits the residential and outpatient participants by providing horticultural and, potentially, occupational education and development, therapeutic intervention, challenging and innovative intervention projects, access to locally grown fresh produce for socially disadvantaged members of the community, an abundance of fresh air and exercise with opportunities for social interaction, and, hopefully, fun. Because horticultural therapy envelops all these benefits it has become the natural vehicle to advance the farm program [32] [33].

The NMBHI team that implements the farm program consists of one member of the facility administrative team, the director of the adult services division, three to five direct care professionals, (typically recreation therapists), and one administrative assistant. The social work, nursing, and security staff provide supportive services to the farm team. The campus of NMBHI contains multiple buildings, set in clusters, to provide residential, nutritional, medical, therapeutic and activity needs of an average of more than 500 people residing within the facility. Owned by the state of New Mexico through the Department of Health, NMBHI is situated on well over 300 acres. However, the entire residential and outpatient campus, including the five acres dedicated to the farm program, is contained within less than 20 acres. The remaining 280-plus acres of unused, state owned land represents massive potential for expanding the farm program to educate both residents and outpatient clients in horticultural production and also, possibly, in environmental conservation, rangeland management, and livestock operations. This vastly underutilized resource could also benefit the entire region surrounding the facility.

Fieldwork at the NMBHI farm program

Prior to my fieldwork, NMBHI's administration elected to implement a paradigm realignment which shifted the farm program toward improved clinical and vocational rehabilitation opportunities and cultivated a team of professional clinicians who also engage in agricultural production. The clinicians in this dual role of agricultural producer and treatment staff helped to foster a culture of growth at NMBHI. This environment created an opportunity for me to visit NMBHI as a National Urban Research and Extension Center (NUREC) fellow and explore creating partnerships between institutionally based farm and garden programs and Extension. The historical prevalence of these farms and their large swaths of fallow and potentially productive farmland could provide Extension with a significant tool to address the complexities of food access within the context of food justice, and institutional care for extremely vulnerable members of society.

In the last year of my master's studies in general agriculture, I helped a friend and colleague move from Washington state to New Mexico for an administrative position at NMBHI. It was an opportunity to continue building our professional relationship as macro level social work practitioners and our mutual interest in agriculture and food justice. When we arrived in New Mexico I was invited to "tour our farm" and witnessed the serendipitous convergence of my two interest areas - macro level social work and agriculture. I toured the farm and met the exceptionally creative staff. They introduced me to the emerging field of horticulture therapy and a new educational trajectory was born in my goals and dreams [34] [35] [36]. I immediately dove into the academic research surrounding the history of mental health institutions and their accompanying agriculture programs. Expanding my research into food justice at state level institutions provided me with an understanding of the current state of farms at penal institutions [37] [4] [8] [9]. It also provided me with a cautionary tale regarding the potentially problematic justice issues related to food production within locked residential facilities. Through subsequent meetings with the upper-level administration at NMBHI, I began to understand how they implemented

their patient first treatment goals within the complicated context of security issues and the lack of cognitive, relational, and emotional capacity and agency of most of the patients and clients served there.

I returned to New Mexico two additional times to meet with the staff and continue building, growing, and learning about the potential of this unique program. I developed and supported a team that applied for a Western Sustainable Agriculture Research and Education (SARE) professional development grant to provide the farm team with additional training in horticulture therapy at the Horticulture Therapy Institute (HTI) in Denver, CO [38]. I facilitated a relationship between NMBHI and HTI by incorporating both entities into the grant writing process. While we ultimately did not receive grant funding, it was a valuable learning and relationship-building experience for all involved. The most important feedback we received from the grant evaluation team at Western SARE was to build deeper Extension partnerships as well as connections with local farmers. I was able to connect the NMBHI farm team with New Mexico State University Extension to begin the process of further collaboration. The farm team also delved into their personal and professional networks to connect with farmers in the northern New Mexico region. The NMBHI team is committed to pursuing future grant applications for both professional development and the programmatic and infrastructure development of the NMBHI farm program.

Utilizing my ongoing graduate education in agriculture with a focus on urban agriculture systems, I was able to provide consultation to the farm team regarding small area vegetable production, greenhouse systems, compost production, vermiculture production processes, and many other sustainable agricultural principles. I consulted with the NMBHI farm team to build a mobile hydroponics system to be used in their classroom areas and provided education and design support for an aquaponic system the team hopes to incorporate into one of their existing greenhouses. We also designed potential projects incorporating hügelkultur (raised earthen mounds), sub-irrigation, drip irrigation, and dryland farming

methods. Using my experience working with individuals with physical mobility disabilities, I was able to consult with the NMBHI farm team in planning a fully wheelchair accessible raised bed garden incorporated into the brick enclosed courtyard of the long-term care educational building.

The partnership was fully reciprocal as I learned much from the NMBHI farm team. They educated me on the complexities surrounding providing patient first care within the prioritization of safety and security. I learned much about horticultural therapy principles and recreational therapy tools from the team. We worked together to understand and institute the principles of food justice, and also explored the difficulties of carceral food production that I learned from consulting with academic professionals from Colorado State and Washington State Universities. I learned about the complexities of institutional and state policies that govern contracting with food service providers and the diverse nutritional needs of institutionalized and long-term care residents. I was very excited to learn about New Mexico's historic cequia system, a community administered irrigation scheme that has provided agricultural water management in New Mexico for many generations of farmers in the region [39].



Produce from the farm

J. JESMER

Urban Extension

As a member of the National Urban Extension Leaders (NUEL) network, and with my education centered on urban agriculture, I am focused on principles of small area food production and distribution in urban areas. The USDA places alternative agriculture production, including institutional farming and community gardens, under the umbrella of Urban and Alternative Agriculture, regardless of the population and geography surrounding the institution [40] [41] [42]. The city of Las Vegas, New Mexico is designated as a micropolitan statistical area by the US Census bureau [43]. This small metropolitan area is embedded within large rural areas; together they span much of the urban-rural continuum. The area is significantly economically depressed with large segments of the population experiencing poverty.

The horticultural therapy goals of the NMBHI farm program lend themselves to small area production practices [20] [44]. The security goals of the facility require the ability to keep the participants in small areas. The focus on education and therapy over scalable production aligns with the principles of urban agriculture [15] [45] [46]. The NMBHI farm program has many characteristics of urban agriculture despite its location within a more rural area. One of the distinct advantages of NMBHI's location and the large available acreage is the potential to expand the program. However, the needs for small area production will always remain salient. Extension leaders are ideally positioned to help mental health institutions across the country develop similar farm and horticulture programs no matter where they are located [1]. These institutions are likely to be unaware of the benefits of Extension programs and the valuable partnership and education benefits that they can provide. It is up to Extension to reach out to these institutions and other similar facilities.



J. JESMER

Succulents for flower baskets

Barriers

There are multiple, but ultimately manageable, barriers to establishing or revitalizing farm and garden programs at residential mental health institutions, significantly, the amount of complexity involved in each facet of their programs and the procedural and regulatory complexities at the institutional level. Multiple staff members with varying responsibility levels must be fully dedicated to the programs for them to be viable at all levels of the institution. Upper-level administration must also be kept abreast and participate with the programs in order to navigate the intertwined regulatory bodies in state government.

At NMBHI, an example of this complexity is the contract signed by the state with a large commercial food distributor.

This contract only allows food provided by the distributor to be served by the food services department at the facility. State institution regulations surrounding nutrition require that very specific caloric profiles be offered to each resident. These two intertwining measures mean that the produce grown at the farm by the residents is not allowed to be served in their cafeteria as a normal part of their diet. NMBHI has been able to circumnavigate this complexity by offering educational "festival days" during harvest season so that the residents can consume and cook with the produce grown from their own handiwork. A large portion of the produce from the farm program is sold to the employee cafeteria, which is not subject to the same regulations, where it is incorporated into each daily meal special. The balance of the produce from the farm program is donated to the local food bank. The NMBHI farm team hopes to negotiate the contract with the food distributor to allow fresh produce from the farm to be served to the residents on a daily basis. However, doing so risks creating tensions between the institution

and the commercial food producers in the region. The reduced labor cost of the institutional residents means that food grown at the facility could be sold at a lower price point providing unfair competition to local commercial food producers. The path taken by farm to school programs, particularly in California, has provided some guidance in circumventing some of these challenges.

Issues related to food justice can also pose a significant barrier to the program. The residents at the facility cannot leave, nor do they have access to all of the internal personal resources required for individual agency. As a result, others often make decisions in service to the welfare of the patients utilizing best professional therapeutic practices [47] [48] [49]. Many decisions are made and then revised through ongoing treatment plan updates. There is no way to guarantee that a patient or client is best served by participating in the program. Food justice concerns also arise when there is the potential for states to cut costs by depending on residents' unpaid labor to provide their own nutritional requirements. This practice would be retrogressive, harkening back to the era of the 1880's and 90's when insane asylums were profiting from captive, forced labor.

At the NMBHI farm program, these complexities have largely been navigated through a comprehensive understanding and delineation of the goals and priorities of the program. The first priority is always the safety and security of all residents and staff, followed by patient-first treatment goals. The farm program's mission of utilizing horticultural therapy principles places therapeutic goals at the top of the list with education following second [44] [15] [50]. This structure means that food production is a byproduct of the program rather than an end product to be commodified.

The future of the NMBHI farm program

The farm team at NMBHI is committed to the further growth and revitalization of both the farm and the program. The staff members at the facility enthusiastically support the program when they see the benefits provided to the patients under their care, and they further support the program by consuming the farm's fresh produce served in the employee cafeteria.

Their progress was disrupted in 2022 when, during the course of my involvement with NMBHI, the Calf Canyon/ Hermits Peak wildfire devastated portions of northern New Mexico. The largest wildfire in New Mexico history destroyed 341,471 acres [51] and came within two miles of NMBHI, necessitating the evacuation of all residents and staff. Many staff members sadly lost their homes in this fire. Wildfire soot clogged the Galinas creek, which runs through the middle of the farm area, for over a year after the fire. The trauma and realities of this unmitigated natural disaster exposed the weaknesses of the area's food system. As a result, the staff all became more cognizant of the wealth of opportunity presented by the farm program both in an educational sense and as protection against future challenges to the local food system, including the inevitable impact of climate change. The wildfire further illustrated the benefits of partnerships between Extension and institutional farms and gardens as a way to revitalize historical programs and to establish new projects and programs at state operated facilities in the US and around the world.

Urban Extension is ideally positioned to contribute to the future research, exploration, and growth of institutional farms and gardens because of its ability to readily access rigorous academic knowledge of agriculture principles and community development knowledge and experience. Urban Extension engagement with institutional farms and gardens would be well served by utilizing the existing national framework for urban Extension toolkit [2]



Hydroponics cart

J. JESMER



J. JESMER

Vining plants outside of greenhouse

A role for Extension

Extension programs have great potential that can be extended to institutional farms whether established, historical, or largely fallow. Extension programs serve both rural and urban communities in a variety of different ways, acting as a guide and connector to other resources. There is a rich opportunity to partner with institutional farms and gardens like the farm program at NMBHI and other state owned and operated facilities to serve incredibly vulnerable and under resourced community members. Traditional Extension programs can provide horticultural technical assistance through Master Gardener programs. SNAP-Ed programs can partner with institutional gardens to provide nutrition education as well as food safety and preservation knowledge to residents during their stay and outpatient clients that are cooking at home. 4-H programs could partner with institutional farms to work and learn alongside residents to build farm project infrastructure or potentially lead sessions on small livestock care and husbandry. Extension family and consumer science professionals can partner with horticultural therapists at institutional farm programs to guide residents and clients in developing farm plans and other vocational opportunities to help these vulnerable populations look toward the future and provide

hope. Extension community development professionals can work with institutions to navigate the thorny policy landscapes that these alternative agricultural programs face when dealing with intricate and intertwining policy goals and procedural regulations. Extension leaders can provide connections to their university faculty in the areas of sustainable agriculture, food systems, economics, and myriad other departments. University-based researchers can work with Extension professionals to research best practices in all areas of agriculture as well as food system access, food justice, community development, social policy, and even philosophy. Extension and institutional farm and garden partnerships are potentially a rich source of knowledge and information exchange and are naturally aligned with multiple goals.

Urban Extension is the ideal partnership liaison between multiple organizations, state governments, commercial farm services, and farm and garden programs operating within mental health institutions. It would also serve ideally as the catalyst vehicle to reorganize, revitalize or realign other institutionally based farms and gardens with the foundation of food justice by utilizing the sustainability framework of agroecology and the change models offered by horticulture therapy.

Suggestions for Extension's potential role are categorized by four themes representing areas of development and opportunity for urban Extension: programs, partnerships, positioning, and personnel [2].

Programs

The ability of urban Extension to impact institutional farms and garden programming is significant because of its ready access to rigorous, scientifically based agricultural knowledge and community development experience. Traditional Extension programs have historically provided this knowledge and experience; however, urban Extension has a significant advantage of being able to provide practical knowledge of the interdependencies of rural, suburban, and urban life. Because the USDA has identified institutional farming as an alternative agriculture method, placing it in a category alongside urban agriculture, Extension is a natural vehicle to promote programs within the context of institutional farms and gardens.

Extension can connect institutional farms and gardens to its own programs, personnel and resources and to others within the community such as:

- sustainable agriculture education programs to build knowledge and capacity
- agricultural agents and local farmers to provide knowledge sharing and increase local food system capacity
- 4-H programs to provide reciprocal educational and community development opportunities to local youth
- SNAP-Ed programs to provide nutrition, food preservation, and food safety education to very vulnerable community members
- agricultural economics personnel to provide vital economic education through assistance with establishing farm plans, land access plans, and other improvements to family and community vitality
- family and consumer science educators to provide the newly released patients and outpatient clients with education about building healthy home environments
- natural resources personnel to provide guidance in the areas of natural disaster mitigation and climate change
- university faculty and researchers to provide further education and research in academic areas such as horticulture production, entomology, social work, environmental science, outdoor recreation, occupational therapy and many other fields across the academic spectrum
- local community-based food access programs such as food banks, community supported agriculture (CSA's), farmers alliance groups, and community gardens
- Master Gardener programs to increase reciprocal exposure to evidence-based horticulture and food production techniques.

Many other programs can be envisioned through the work, guidance and connection between Extension and institutional farms and gardens.

Partnerships

Perhaps the most significant area of convergence between Extension and institutional farms and gardens lies in the potential to cultivate and support expansive and lasting partnerships across the community. The partnership opportunities extend to mental health residential and outpatient facilities and many other types of institutions such as schools, prisons and hospitals which have established farms and gardens within their facilities. The partnerships can include the following and many more based on the complexity of each institutional program.

- Extension and institutional farm and garden programs
- community based gardens at churches, school or other institutions
- Master Gardener programs
- hospital and medical clinic gardens and cafeteria programs
- local grower's associations and farmers unions
- farmers markets
- community supported agriculture (CSA's)
- horticultural therapy associations and schools
- Farm Bureau and Farm Credit agencies and associations
- local schools and parent associations
- schools of social work, schools of agriculture, and food science programs at local universities
- farm to school nutrition education programs
- local farmers



J. JESMER

Planters outside greenhouse

The NMBHI farm and garden program has developed partnerships with the Horticultural Therapy Institute in Denver and the Facundo Valdez School of Social Work at New Mexico Highlands University with the hope of becoming an internship site for future horticultural therapy and social work students. These partnerships are in the nascent stages but may be seen as a template for providing broad-based community education similar to the framework utilized in urban extension.

Positioning

Urban Extension already maintains a physical presence in many geographical locations where institutions are initiating, realigning, or expanding their farm and gardens with the goal of providing expanded care programs, potential vocational therapy options, and increased access to healthy and sustainable nutrition choices for their vulnerable patients and clients. Urban extension can facilitate positioning in this new field by utilizing the following suggestions:

- build and deepen connections between extension programs and institutional facilities nationwide
- focus on the large macro level systems such as regulatory mechanisms to facilitate the expansion and strengthening of the food system allowing facilities such as mental health institutions to thrive in complex environments
- explore historical events happening in Extension in parallel to the rise and fall of “insane asylums” and their farm programs to identify areas of parallel purpose and build impact.
- locate and build relationships with institutional facilities such as mental health institutions, schools, and hospitals to increase the role of extension in this field

Personnel

There is an inherent advantage in that many of the personnel in both Extension and residential mental health treatment settings are state government employees with similar employment expectations and levels of expertise. The unique core competencies of personnel engaged with urban Extension make collaborations with institutional farms and gardens ideal. Personnel serving within urban Extension have knowledge and experience related to diversity, justice, and the ability to adapt quickly to changes in fiscal, procedural, and institutional policy contexts.

The farm and garden staff at NMBHI exemplifies this potential because of its commitment to realigning the goals and values of its farm program to prioritize justice and equity within the context of its care paradigms. Urban Extension professionals could easily understand these policy contexts and support the institution in its process of realignment while providing rich agricultural and community development knowledge and experience. Urban extension personnel could be enhanced by partnering with institutional farms and gardens by:

- providing locations for ongoing training and professional development
- enhancing professional partnerships and areas for advancement
- strengthening the bond between state level employees working within similar legislative and regulatory environments
- developing and enhancing community engagement opportunities for Extension personal
- adding horticulture therapy connections to the resources that Extension personnel can offer to their clients

Since its establishment by the 1914 Smith Lever Act, Extension has been focused on broad-based community education. That education has always extended to all persons residing in a geographical area. Extension programs also focus on the needs of the most vulnerable individuals in society. State operated mental health institutions are focused on providing care, treatment, and education for arguably the most vulnerable members of society. This convergence of mission makes urban Extension and state mental health institutions ideal partners to address some of the most difficult and wicked problems of modern society. Food security, food access, and food justice will continue to be intractable problems as well as significant areas for consistent positive intervention. As the anticipated tumult of our global environmental, social, and economic structures come to fruition, land grant university Extension programs and state mental health institutions can lead the way in partnering to explore the past, engage with the present, and prepare for the future.

References

- [1] K. Kopyawattage, L. Warner and T. G. Roberts, "Information Needs and Information-seeking Behaviors of Urban Food Producers: Implications for Urban Extension Programs," *Journal of Agricultural Education*, vol. 59, no. 3, p. 229–242, 2018.
- [2] J. M. Fox, M. A. Ruemenapp, P. Proden and B. Gaolach, "A National Framework for Urban Extension," *The Journal of Extension*, vol. 55, no. 5, p. Article 21, 2017.
- [3] D. R. George, L. S. Rovniak and J. L. Kraschnewski, "A growing opportunity: Community gardens affiliated with US hospitals and academic health centers," *Preventive Medicine Reports*, vol. 2, pp. 35-39, 2015.
- [4] K. Bradley and H. Herrera, "Decolonizing Food Justice: Naming, Resisting, and Researching Colonizing Forces in the Movement," *Antipode*, vol. 48, no. 1, p. 97–114, 2016.
- [5] L. O. Diekmann, L. C. Gray and G. A. Baker, "Growing 'good food': Urban gardens, culturally acceptable produce and food security," *Renewable Agriculture and Food Systems*, vol. 35, no. 2, pp. 169-181, 2020.
- [6] UN/FAO, "Basic Concepts of Food Security," 2008. [Online]. Available: <http://www.fao.org/3/al936e/al936e.pdf>.
- [7] J. Clendenning, W. H. Dressler and C. Richards, "Food justice or food sovereignty? Understanding the rise

of urban food movements in the USA.," *Agriculture and Human Values*, vol. 33, no. 1, pp. 165-177, 2016.

- [8] J. Sbicca, "Growing food justice by planting an anti-oppression foundation: Opportunities and obstacles for a budding social movement," *Agriculture and Human Values*, vol. 29, no. 4, pp. 455-466, 2012.
- [9] J. Sbicca, "Solidarity and Sweat Equity: For Reciprocal Food Justice Research. *Journal of Agriculture, Food Systems, and Community Development*," vol. 5, no. 4, pp. 1-5, 2015.
- [10] R. Petros and P. L. Solomon, "Social workers' propensity to endorse recovery-oriented service provision: A randomised factorial design," *British Journal of Social Work*, vol. 50, no. 1, p. 42-61, 2020.
- [11] C. R. Schen, "Farming and Doctoring," *Psychiatric Times*, vol. 30, no. 12, 31 July 2013.
- [12] M. P. Dumont and D. M. Dumont, "Deinstitutionalization in the United States and Italy: A Historical Survey," *International Journal of Mental Health*, vol. 37, no. 4, pp. 61-70, 2008.
- [13] Asylum Projects, "New Mexico State Hospital," 20 June 2021. [Online]. Available: https://www.asylumprojects.org/index.php/New_Mexico_State_Hospital.
- [14] C. Hickman, "Cheerfulness and tranquility: Gardens in the Victorian asylum," *The Lancet Psychiatry*, vol. 1, no. 7, pp. 506-507, 2014.
- [15] K.-T. Han, "A Review: Theories of Restorative Environments," *Journal of Therapeutic Horticulture*, vol. 12, pp. 30-43, 2001.
- [16] M. B. Kearin, "Dirty Bread, Forced Feeding, and Tea Parties: The Uses and Abuses of Food in Nineteenth-Century Insane Asylums," *Journal of Medical Humanities*, vol. 43, pp. 95-116, 2020.
- [17] N. Mitchell and B. Mitchell, "State hospital's dairy farm once was among the finest in the nation," *The Pueblo Chieftain*, 17 June 2017.
- [18] D. P. Finney, "Author Pens History of Iowa Mental Hospitals," *Des Moines Register*, 16 1 2016.
- [19] D. Kamp, "Design Considerations for the Development of Therapeutic Gardens.," *Journal of Therapeutic Horticulture*, vol. 8, pp. 8-10, 1996.
- [20] R. S. Ulrich, L. Bogren, S. K. Gardiner and S. Lundin, "Psychiatric ward design can reduce aggressive behavior," *Journal of Environmental Psychology*, vol. 57, p. 53-66, 2018.
- [21] L. B. Massie, "Asylum Lake Preserve," 9 February 1991. [Online]. Available: <https://wmich.edu/asylumlake/report>.
- [22] A. Vandegrift, "Oregon State Hospital Museum of Mental Health," 4 February 2012. [Online]. Available: <https://oshmuseum.org/colony-farm-history/>.
- [23] California Department of State Hospitals, "Metropolitan Facilities," [Online]. Available: <https://www.dsh.ca.gov/Metropolitan/Facilities.html>.
- [24] Colorado College History Department, "Gardens and Hatcheries. Past, Present, Prison.," 11 July 2016. [Online]. Available: <https://sites.coloradocollege.edu/hip/gardens-and-hatcheries/>.
- [25] WA State DSHS, "Behavioral Health Administration.," 2020. [Online]. Available: <https://www.dshs.wa.gov/bha/division-state-hospitals/wsh-greenhouse>.
- [26] C. Dimitri, A. Effland and N. Conklin, "The 20th Century Transformation of U.S. Agriculture and Farm Policy / EIB-3," 2005.
- [27] B. Barth, "The strange, horrifying history of cherry research farm in North Carolina. .," *Modern Farmer*, 11 December 2017.

- [28] B. Bogart, "The Wyoming State Hospital.," 8 November 2014. [Online]. Available: <https://www.wyohistory.org/encyclopedia/wyoming-state-hospital>.
- [29] Massillon Museum., "Massillon History: State Hospital," 2019. [Online].
- [30] NMDOH, "New Mexico Behavioral Health Institute," 2022. [Online]. Available: <https://www.nmhealth.org/about/ofm/lcf/nmbhi/>.
- [31] N. Lafin, *Target 7 goes inside the Las Vegas mental institution*, Las Vegas, NM: KOAT7, 2014.
- [32] AHTA, "About Horticultural Therapy," 2023. [Online]. Available: <https://www.ahta.org/about-horticultural-therapy>.
- [33] American Horticultural Therapy Association, "American Horticultural Therapy Association," 2022. [Online]. Available: <https://www.ahta.org/>.
- [34] C. Clopton, "Horticultural Therapy in a Therapeutic Farm Community," *Journal of Therapeutic Horticulture*, vol. 9, pp. 9-13, 1998.
- [35] C. Leck, D. Upton and N. Evans, "Growing well-beings: The positive experience of care farms," *British Journal of Health Psychology*, vol. 20, no. 4, p. 745–762, 2015.
- [36] H. Pieters, L. Ayala, A. Schneider and N. Wicks, "Gardening on a psychiatric inpatient unit: Cultivating recovery," *Archives of Psychiatric Nursing*, vol. 33, no. 1, pp. 57-64, 2019.
- [37] K. Cadieux and R. Slocum, "What does it mean to do food justice?," *Journal of Political Ecology*, vol. 22, no. 1, pp. 1-26, 2015.
- [38] HTI, "Horticulture Therapy Institute," 2023. [Online]. Available: <https://www.htinstitute.org/certificate-program/certificate-program/>.
- [39] Office of the State Engineer, "Interstate Stream Commission," [Online]. Available: https://www.ose.state.nm.us/Acequias/isc_acequias.php.
- [40] B. Goldstein, M. Hauschild, J. Fernández and M. Birkved, "Urban versus conventional agriculture, taxonomy of resource profiles: A review," *Agronomy for Sustainable Development*, vol. 36, no. 1, p. 9, 2016.
- [41] USDA, "Urban Agriculture," [Online]. Available: <https://www.nal.usda.gov/farms-and-agricultural-production-systems/urban-agriculture>.
- [42] S. Daftary-Steel, H. Herrera and C. Porter, "The Unattainable Trifecta of Urban Agriculture," *Journal of Agriculture, Food Systems, and Community Development*, vol. 6, no. 1, pp. 19-32, 2015.
- [43] U.S. Department of Commerce, "NEW MEXICO - Core Based Statistical Areas (CBSAs) and Counties," U.S. Census Bureau, 2013.
- [44] L. Bortz and M. Gal, "Gardening as a treatment modality in an acute psychiatric center," *Journal of Therapeutic Horticulture*, vol. 13, p. 30–35, 2002.
- [45] S. C. Iancu, J. G. Bunders and A. van Balkom, "Bridging the gap: Using farms to enhance social inclusion of people with chronic mental disorders," *Acta Psychiatrica Scandinavica*, vol. 128, no. 4, pp. 318-319, 2013.
- [46] S. C. Iancu, M. B. Zweekhorst, D. J. Veltman, A. J. van Balkom and J. G. Bunders, "Mental health recovery on care farms and day centres: A qualitative comparative study of users' perspectives," *Disability and Rehabilitation*, vol. 36, no. 7, p. 573–583, 2014.

- [47] T. Kenmochi, A. Kenmochi and M. Hoshiyama, "Effects of Horticultural Therapy on Symptoms and Future Perspective of Patients with Schizophrenia in the Chronic Stage," *Journal of Therapeutic Horticulture*, vol. 29, no. 1, p. 11, 2019.
- [48] K. D. Sellers, "Effectiveness of Horticultural Therapy Activities in a Psychiatric Hospital," *Journal of Therapeutic Horticulture*, 12,, vol. 12, p. 9–20, 2001.
- [49] J. Szofran and S. Meyer, "Horticultural Therapy in a Mental Health Day Program," *Journal of Therapeutic Horticulture*, vol. 15, p. 32–35, 2004.
- [50] M. de Seixas, D. Williamson, G. Barker and R. Vickerstaff, "Horticultural therapy in a psychiatric in-patient setting," *BJPsych International*, vol. 14, no. 4, pp. 87-89, 2017.
- [51] New Mexico Forest and Watershed Restoration Institute, "Hermit's Peak and Calf Canyon Fire," 24 August 2022. [Online]. Available: <https://storymaps.arcgis.com/stories/d48e2171175f4aa4b5613c2d11875653>.
- [52] M. Ostrom, "Radical roots and twenty-first century realities: rediscovering the egalitarian aspirations of Land Grant University Extension," *Agric Hum Values*, vol. 37, p. 935–943, 2020.

