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Sisters in Sustainability: Gender-Driven Agricultural Initiatives Promoting Socioeconomic, Environmental, and Cultural Sustainability

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Abstract

An increasing number of women are choosing to pursue careers in agriculture. A higher percentage of women are represented among sustainable farmers than are counted among conventional farmers. For example, in the United States, this percentage is 21 percent as compared to 9 percent. The way in which women farmers approach sustainable agriculture is consistent with the feminist ethic of care that encompasses responsibility, nurturing, relationality, and interdependence. These characteristics are expressed in a number of ways on women-owned or operated sustainable farms. Their farms, for example, have fewer acres than those of male farmers; they plant, cultivate, and harvest by hand much more than with heavy equipment; and they only very rarely use inorganic fertilizers. Also, their operations are more diversified. Women who farm also have a record of developing strong networks with their fellow women farmers. Thus, these sisters in sustainability appear to be applying gender-normativity to organic farming, prioritizing relationships and engaging in holistic, systems thinking. They integrate a broad range of relevant factors into their farming practices, such as the environment; food safety, nutrition, and public health; and home, farm, and community socioeconomic improvement. This is a much broader scale of “relevance” than would be considered in conventional agriculture, cultivating not only the social and economic sustainability of the farmer and her family but also of her network and local community. It also protects biodiversity, indigenous knowledge, and environmental sustainability and preserves the cultural sustainability of historical production methods and heritage seed varieties critical to food security.

Keywords: Gender, Agroecology, Ethic of Care, Sustainability, Organic Agriculture, Sustainable Agriculture

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Introduction

An increasing number of women are choosing to pursue agriculture as their occupation. Women's roles and their status in the agricultural sector can vary greatly depending upon their age, their ethnicity, their social class, or the geographic area in which they live (Doss, 2011). For example, women may own or operate their own farms; they may work as paid or unpaid labor on family farms or on other farms or agricultural enterprises; and they may work with crop, livestock, or aquacultural production at subsistence and commercial levels.

Many women, however, are choosing to focus on sustainable¹ farming, and they represent a larger percentage of organic farmers than of conventional farmers. For instance, while women represent 9 percent of all U.S. farmers, that figure rises to 21 percent for all organic farmers (Farnworth & Hutchings, 2009).

The approach taken by women farmers to organic, or sustainable agriculture, is a paradigm shift from the more conventional model strongly associated with masculinity. Sustainable women farmers work with less mechanized, natural methods, and their farms have fewer acres than those of male farmers. Their operations are more diversified. Women who farm also have a record of developing strong networks with their fellow women farmers to share information.

Thus, women, whom in this context these authors refer to as Sisters in Sustainability, appear to be applying gender-normativity² to organic farming, prioritizing relationships and engaging in holistic, systems thinking to their farming that integrates a broad range of relevant factors, such as the environment; food safety, nutrition, and public health; and home, farm, and community economic improvement. This is a much broader scale of "relevance" than would be considered in conventional agriculture, a scale that cultivates not only the social and economic sustainability of the farmer and her family but also of her network and local community. It also protects biodiversity, indigenous knowledge, and environmental sustainability and preserves the cultural sustainability of historical production methods and heritage seed varieties critical to food security.

Despite the significant contributions that they make to their families, to their communities, and to society at large, women farmers normally have "less access to land, information, capital and credit, and other inputs than men farmers" (Doss, Meinzen-Dick, Quisumbing, & Theis, 2018). This negatively impacts society at all levels as it undermines economic development by, inter alia, limiting food security and educational prospects (Nierenberg, 2014). Rather than continuing to ignore this unequal access, opportunities for female farmers should be expanded, particularly in the sustainable farming segment where Sisters in Sustainability are enhancing our food systems - socioeconomically, environmentally, and culturally.

¹ The adjectives "alternative," "sustainable," and "agroecological" are utilized interchangeably herein to describe a particular approach to farming. The term "organic" is **not** limited to **certified** organic farms as certified organic has become a "political, cultural, economic and social construct ... located within western ideologies and practices" and is laden with hegemonic overtones that the authors seek to avoid (Farnworth & Hutchings, 2009).

² This article does not use the concept of "gender" in the biological sense, but rather in the context associated with social roles and identities as shaped by ideological and other factors (Moser, 1989).

The Data

Women comprise approximately 43 percent of agricultural labor globally (Doss, 2011), and they produce more than 50 percent of the world's food (Akter et al, 2017). These data almost certainly underestimate women's involvement in agriculture: women who work on family farms or who work at home in gardens, with livestock, in food preparation, or in catering often are not reported as agricultural workers (Doss et al., 2018). Notwithstanding the essential role of women in agricultural production, women confront a consistent gender gap in access to productive assets, inputs, and services (Doss, 2011).

For example, women farmers typically lack access to education and extension services and to land and credit. One can see this in the U.S., where, in 2017, the U.S. Department of Agriculture's Farm Service Agency decreased lending to female farmers and farmers of color for the second year in a row (National Sustainable Agriculture Coalition [NSAC], 2018). This funding decrease was larger and relatively disproportionate for this group of farmers vis-à-vis other categories of loan applicants (NSAC, 2018). Because the farmers in this category, a group that the Farm Service Agency categorizes as "socially disadvantaged," often find it difficult or impossible to secure private financing, it can be financially devastating when access to government-supported lending is denied.

Globally, data report that, on average, women are paid less than men with comparable levels of education and experience for equivalent agricultural jobs (Doss, 2011). Average female wages are lower than average male wages in both rural and urban areas, and, even in high-value, export-oriented agro-industries that offer better opportunities for women in developing countries than do traditional agricultural jobs, women appear to occupy a lower percentage of managerial or professional jobs than do men and appear to be replaced by men when company profits increase (Doss, 2011). These data are consistent with reports from the developed world. According to 2011 data from the U.S. Bureau of Labor Statistics, just one out of six full-time U.S. farmers, ranchers, and other agricultural managers was a woman, and only one out of seven principal farm operators in the U.S. was a woman (Faruqi, 2013).

Women also hold a significantly much smaller percentage of agricultural land than their male counterparts in developing regions (World Bank, 2012). Women with land generally have smaller plots of an inferior quality than those held by men, and their rights to these plots are legally less secure (Doss, 2011). Again, this is not unique to the developing world. Female farm operators in the U.S. also hold far fewer acres than their male counterparts (Doss, 2011). Women farmers in Knoxville, Tennessee, for example, operate 15 percent of 912 farms, and the average size of their farms is 15 acres less than the male-average in the State (U.S. Department of Agriculture [USDA] Census, 2012).

In addition to this consistently disparate access to data, education, capital, land, credit, and other inputs, most agricultural R&D programs ignore the unique needs of women farmers (Meinzen-Dick et al., 2011). Conventional agricultural R&D tends to be gender blind or gender biased. Its programs are designed in an environment with "a persistent lack of gender balance among scientists and leadership;" they are focused on the male-oriented activity of producing field crops; and they are disseminated by a

largely male extension service to a significantly higher percentage of male farmers (Meinzen-Dick et al., 2011). This gender inequality extracts a price from society as it undermines family and community food security and excludes women from educational opportunities (Asian Development Bank, 2013).

There are additional, critical reasons to address this discriminatory gender-based treatment in the agricultural sector, i.e., reports suggest that female farmers would produce the same yields as their male counterparts given equal access to productive resources and services: with these comparable resources, female farmers could lift 100-150 million people out of hunger (Nierenberg, 2014). Indeed, many studies go further and estimate that reducing inequalities between male and female farmers could potentially *increase* agricultural productivity by as much as 10–20 percent in certain geographical areas (Meinzen-Dick et al., 2011).

If one believes, as these authors do, that addressing gender-based discrimination in the sector is a high priority, then alternative, sustainable agriculture appears to be one option that is providing “spaces of empowerment for women” to participate more equitably in farming (Trauger, 2004). The global increase of women in the sustainable farming sector may not be related to a sex- or gender-specific characteristic, but rather may be a response to the gender bias that prevails in conventional agricultural models. Whatever the catalyst, however, sustainable agriculture may substantially lower the barriers to entry to agricultural careers for women vis-à-vis conventional agricultural models. A number of reasons have been posited for this relative ease of access, i.e., it: (1) reduces capital and land requirements, (2) provides a “level” playing field for all new market entrants given the relatively “new” nature of the segment; (3) provides opportunities to acquire the skills necessary for success, (4) improves farm income, and (5) allows farmers to locate in urban and suburban areas as opposed to more remote, rural regions (Pilgeram & Amos, 2015).

The Impact of Women as Sisters in Sustainable Farming

While it may not, again, be a gender-specific approach, these Sisters in Sustainability appear to farm differently as a group than do their male counterparts. They apply a holistic, integrative approach to farming (Stonehouse, 2003) that explicitly considers the socioeconomic, environmental, and cultural dimensions of their activities, activities in which many women are motivated to engage in order to nourish themselves, their families, and their communities (Jarosz, 2011). These dimensions are examined in more detail below.

- **The Socioeconomic Dimension**

Women often exhibit the feminist ethic of care when they farm sustainably (Jarosz, 2011). This ethic encompasses values traditionally associated with women, such as responsibility to self, family, and community; sensitivity; empathy; and interdependence (Gilligan, 1982). In an agricultural setting, this expresses itself in a number of ways that distinguish the practices and motivations of many female farmers from many of their male counterparts.

For example, women in alternative agriculture in the U.S. define their work “as centered upon nourishing themselves and others” (Jarosz, 2011); their roles as

mothers and homemakers and their income-generation and community development work are inextricably interconnected. Sustainable farming provides opportunities to enhance the health and environment of the families and the communities of these women (Farnworth & Hutchings, 2009). Some Sisters in Sustainability, for example, see alternative farming as a “political [and] revolutionary [activity that promotes] food sovereignty” and as “a mission of supporting Black and underserved farmers around the country” (Richards, 2018). Their motivations are not solely economic, but rather they prioritize their own social and economic sustainability as well as those of their networks and local communities.

Because their interest in farming is multi-faceted, while the interest of men who farm typically is not (Sachs et al., 2016), Sisters in Sustainability often diversify their farm operations. They do this in a variety of ways, combining traditional crop and/or livestock production with community supported agriculture; with production and sale of farm-related products such as knitted clothing, soap, or prepared food; and with involvement in agritourism operations, such as cooking schools, inns, and/or restaurants (McColl, 2018).

Female sustainable farmers also share a strong land care ethic and a commitment to providing alternatives to commodified food and to food security through the development of smaller scale sustainable food networks. These women often participate in an economy that includes barter, community supported agriculture, and farmers’ markets (Jarosz, 2011). These outlets express their ethic of care for their community in the public sphere, providing alternatives to conventional food outlets and allowing women farmers to develop more meaningful social relations with their customers (Jarosz, 2011).

Educational goals also motivate these Sisters in Sustainability. They seek to provide consumers with a connection to the land and to educate them about their food supply, offering, for example, cooking classes (Jarosz, 2011) and courses on gardening (Richards, 2018). They also have a strong desire to improve themselves and to learn. The relational aspect of the feminist ethic of care exhibited by women sustainable farmers expresses itself here in their record of developing strong group relationships to share information with their fellow women farmers and of creating and engaging in peer-to-peer networks (McColl, 2018). These networks can be formal, such as the Women Food & Ag Network, a nonprofit that seeks to support women in ecological agricultural systems, and the Women’s Agricultural Network, a service associated with the University of Vermont that is designed to increase the number of women in agricultural-related businesses. There also are the more informal networks, such as the Green County Area Women in Sustainable Agriculture, more commonly known as the Soil Sisters, a group in the U.S. state of Wisconsin that is loosely organized and that serves as a support, political action, and marketing group (McColl, 2018). These associations are critical for women who farm as they often lack access to more formal educational channels such as higher education or extension services (Food and Agriculture Organization of the U.N. [FAO], 2010-2011).

- **The Environmental Dimension**

Sustainable agriculture is characterized by production systems that support the health of soils and ecosystems adapted to local conditions (Altieri, 2018). The Sisters in

Sustainability who practice this form of farming seek to achieve harmony with nature and to protect land for future generations. In the tradition of Rachel Carson (Carson, 2002), many women who farm sustainably focus on ecologically-sound, nonchemical agricultural methods and technology or those that use less persistent chemicals. In North America, for example, women engaged in sustainable farming rarely apply inorganic fertilizers; studies indicate that female farmers are less likely than their male counterparts to engage in chemical-intensive production (Richards, 2018). Further, women in the organic sector also only very sparingly use heavy machinery and perform fieldwork such as planting, cultivating, and harvesting by hand (Paul & Fremstad, 2016). While many have made a deliberate choice to farm this way, some argue that sustainable female farmers employ these practices due to their lack of access to capital-intensive agricultural assets like machinery (Trauger, 2014). However, if these women are able to gain access to heavy farm equipment, they often are not trained to operate and/or maintain it and either must, or choose to, enlist or hire men for these tasks (Farnworth & Hutchings, 2009).

Regardless of the motivation, however, these practices result in positive environmental outcomes. As do the economic choices made by many Sisters in Sustainability. When sustainable women farmers produce for local markets or work with ecologically-responsible distributors, they are acting to reduce lengthy food chains and minimize their carbon footprints. As one example, organic female farmers in the Western U.S. are able to choose Veritable Vegetable to move their food from farm to market. Veritable Vegetable is an all-women owned organic produce distributor that operates a fleet that includes hybrids tractors and hybrid refrigeration units producing nearly zero emissions and that utilizes efficient routing, trailer skirts, and sophisticated on-vehicle technologies such as tire pressure monitoring and inflation systems and wind resistance inserts to reduce fuel consumption (Straight, 2012).

Local market sales also allow alternative female farmers to address animal welfare issues related to transportation before slaughter (Farnworth & Hutchings, 2009). The feminine ethic of care expressed by sustainable women farmers is evident in their attitude toward farm animals. One observer noted in interviews with farmers that “women ... in agriculture showed a clear preference for working on organic and small farms, which are more likely than factory farms to reflect the values of animal welfare, human health, and environmental sustainability. ... [and that women were] generally more humane in their treatment of animals” (Faruqi, 2013).

The motivations of women who farm sustainably also impact their physical environments. The survival instinct has long created a special interconnection between women and agroecological systems. In certain cultural contexts, and in some circumstances, women rely on natural resources to provide food, housing, and clothing for themselves and their families (Bodouroglou & Alarcón, 2014). Their very survival may therefore be dependent upon the conservation and preservation of these resources, and they have developed expertise in the practices and systems that facilitate their sustainability. Even in the developed world, the role that women play in their homes and families, a role that often is assigned primary responsibility for food preparation, provides an interest in the source and quality of their food supply.

- **The Cultural Dimension**

To restate a commonly-used phrase, women who farm sustainably keep the culture in agriculture. Many female farmers are motivated to participate in alternative agriculture to make a life as opposed to making a living (Jarosz, 2011). These women are motivated by the farming lifestyle, making a deliberate choice to live a way of life deeply rooted in their cultures (McColl, 2018).

On some farms, sustainable women farmers preserve historical production methods and land-management systems as well as heritage plant, animal, and aquatic species. Adding heritage Red Devon cattle to an existing herd is one example of this type of activity undertaken by one female farmer in Wisconsin (McColl, 2018). Another example: women in Peru's Potato Park Indigenous Biocultural Heritage Territory strongly contribute to landscape management systems that have evolved over centuries in the harsh Andean environment and that are essential to preserving the Park's local biocultural heritage, products, and services (Sayre, Stenner & Argumedo, 2017).

Women such as those in the Potato Park, and in many other cultures, have considerable knowledge about, and experience with, the management and preservation of indigenous biodiversity reserves and with farming techniques compatible with local agroecological systems. Women in Bangladesh whose organic farming practices rely upon animal traction from indigenous livestock and poultry species of the region for soil management exemplify this dimensional aspect (Farnworth & Hutchings, 2009). In this way, they not only are performing conventional economic activities, but they also are providing ecological services, such as ensuring the conservation of diverse genetic resources (Bodouroglou & Alarcón, 2014).

Also, women tend to farm locally-important crops such as leafy vegetables and sorghum, and they conserve traditional varieties of these and other crops as well as flowers, handicraft crops, and heritage animal species. This is essential to preserving species that are critically important to geographically-bounded food security but that often are ignored and driven out in the interest of commercially-focused conventional agricultural goals (Farnworth & Hutchings, 2009). This has been reported in East Africa, for instance, where tobacco production for export is driving out the cultivation by female farmers of local food crops such as millet and sorghum (Doss, 2011).

Conclusion

To conclude, Sisters in Sustainability are a growing share of what has been referred to as "civic agriculture" rather than capitalist agriculture, in part due to their multi-dimensional, innovative approach to food production systems (Lyson, 2012). As their share grows, so too does their influence: male farmers entering the alternative farming sector may also be embracing the relational, emotional, and interdependent qualities of the feminine ethic of care exhibited by their female counterparts (Elliott, 2015). This has the potential to expand the opportunities for women choosing agriculture as a career as well as for all those with intersecting interactions.

While this concludes these authors' paper, it is not the end of the story of these Sustainable Sisters. It is clear that they are transforming traditionally masculine spaces on farms – socioeconomically, environmentally, and culturally. Promoting these dimensions of agricultural sustainability has the potential to enrich much more than just the global food system.

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