Ten Years of Empowering Turkish Women Farmers

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Abstract. **In 2011, Rutgers, The State University of New Jersey (New Brunswick, NJ, USA) and Akdeniz University (Antalya, Turkey) conducted a survey to identify needs, interests, and capacities of Turkish women farmers. We interviewed extension educators and female farmers in three villages and used the results to develop a pilot, 28-hour course to train 40 small-scale citrus (*Citrus* sp.) and greenhouse producers from Kumluca, Turkey. Training included computer literacy, citrus and greenhouse production, and business management. The municipalities of Elmali, Duzce, Korkuteli, and Boztepe, Turkey, duplicated the successful pilot program within the next 2 years. To expand the training to more women farmers, we partnered with colleagues in Germany, Spain, and Malta to develop Empowering Women Farmers with Agricultural Business Management Training (EMWOFA), which had a multiplier effect by training educators who then trained women farmers to improve their business skills. The outputs of EMWOFA were a training manual for educators, a workbook for the women farmers, and e-learning videos in English, Turkish, Spanish, German, and Maltese.**

Agriculture is a major economic sector in Turkey; one in four people is employed in agriculture. Agriculture's contribution to Turkey's economy has been declining in recent decades. As men began working in other industries, women took over operating family farms. Antalya accounts for 43% of all agricultural land under protective cover in Turkey, and produces 20% of Turkey's exported fruits and vegetables. Antalya Province is the first or second highest producer of nine of Turkey's top 22 vegetables, including fresh tomato (*Solanum lycopersicum*), eggplant (*Solanum melongena*), cucumber (*Cucumis sativus*), and bell pepper (*Capsicum annuum*) (Turkish Statistical Institute 2022). In Turkey, 32% of employed women work in agriculture (Sawe 2018). The majority of women's work is unpaid and often seasonal during harvesting, making it difficult to estimate accurately the number of women working. Because women farmers are not a part of the formal labor force, they often miss out on social benefits and access to key inputs such as finance, land rights, and pension access (Food and Agriculture Organization of the United Nations 2016).

Turkish women spend more hours of unpaid labor than any other country and represent almost half of the total agricultural labor force, but are paid less than men working in agriculture (Turkish Statistical Institute 2022). Although Turkish men and women spend equal time in greenhouse vegetable production, women handle most of the household duties (Brumfield and Ozkan 2016). Because women must balance the responsibilities of home and work, educational programs must accommodate their schedules.

Materials and methods

Because Antalya is the center of Turkish greenhouse vegetable production, we began our program there. Turkey's extension service is part of the government, not the university (as in the United States), but we worked with the local extension service to conduct a needs assessment in 2011. We conducted in-person interviews with 12 extension educators and with groups of about 15 women farmers in three villages in Turkey's Antalya Province selected by those extension educators. Questions included what previous training they had in farm management and crop production, what best practices they use (production, environmental, financial, legal, and marketing), where they get information on best practices, size of their farm, farm enterprises, how long they have been farming, who is the decision maker on the farm, how they divide tasks, how many family members work on the farm, what business management issues they face, and what kind of training they would like. We found that no farm management extension training had been offered to women or men in Antalya Province. In addition to how they can receive a higher price for their farm produce, they wanted to learn how to grow organic crops and more details on best management practices. They had computers in their homes for their children, but the women were not using them. We used our findings to develop a pilot 28-h course to train 40 small-scale citrus (*Citrus* sp.) and greenhouse producers from Kumluca, Turkey, on 24 Oct to 18 Nov 2011. We wanted to empower extension educators as well, so we had local female extension educators select the women they felt would benefit most from our training. The training included hands-on instruction in computer literacy, citrus and greenhouse production, and business management. Production topics included greenhouse construction and ventilation, soil productivity and plant nutrition, pesticide safety, plant protection, biological insect and disease control, sustainable production, and protection of soil and water resources. Business management topics were structured around using worksheets to develop a business plan. At the end of each session, we assigned homework to develop the next section of their business plan, and we reviewed the homework during the first 20 min of each class. This networking helped build a sense of community and empowered the women as they gained confidence in sharing their plans and helping each other develop their business plans. During the course, most women developed a business plan for their farms, and they named the course Suzanne's Project. As a result of the successful pilot program, training in Elmali, Duzce, Korkuteli, and Boztepe, Turkey, followed within the next 2 years (Brumfield et al. 2016a).

To train more women farmers, we partnered with colleagues in Germany, Spain, and Malta to develop Empowering Women Farmers with Agricultural Business

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Table 1. Percentage of participants who completed, were in the process, or planned to complete sections of their business plans at the end of Suzanne's Project training at Elmali, Turkey, in 2012.

	Participants (%)				
Components	Done before the course	Do not plan to finish	Plan to finish	In process	Complete
Mission statement	6	0	0	0	94
Goals	0	0	0	11	89
Farm description	0	0	0	0	100
Production plan	0	0	0	0	100
Marketing plan	6	0	0	0	94
Financial plan	0	0	39	11	50
Executive summary	0	0	0	94	6
Management plan	0	22	6	33	28
Estate plan	0	67	6	6	6

Management Training (EMWOFA), which was funded by a European Union (EU) Erasmus+ grant with the aim of helping meet the EU 2020 Strategic Goals. The goals include modernizing labor markets and empowering people by developing skills throughout their life cycles, increasing labor participation, matching labor supply and demand more effectively, improving the business environment, and supporting the development of a strong and sustainable industrial base able to compete globally (European Commission 2010). The aims of EMWOFA are 1) to provide a comprehensive training program for extension educators and women farmers; 2) to develop technical, entrepreneurial, and managerial skills of women farmers through specialized training; and 3) to help women farmers realize their full potential to operate and sustain profitable farms. The project had a multiplier effect by training educators who then trained women farmers to improve their business skills (Brumfield et al. 2017). The outputs of EMWOFA were a training manual for educators, a workbook for the women farmers, and e-learning videos in English, Turkish, Spanish, German, and Maltese. The English and Spanish versions of these outputs are available on the Rutgers Annie's Project website (Brumfield 2023).

Results and discussion

Suzanne's Project was the first farm management training session the women in the pilot project had attended, although they had been farming for an average of 18.7 years on a mean farm size of 5.3 ha (13.10 acres) (Brumfield et al. 2016a). Before the course began, almost none of them had a business plan, but by the end of the course, all of them had completed or planned to complete their mission statement, goals, farm description, production plan, marketing plan, financial plan, and executive summary components of their business plans, indicating a change in their perceptions of value and knowledge of business management (Table 1).

A survey of participants in the first pilot project conducted a year and a half after the course finished found that, as a result of Suzanne's Project, participants were personally empowered; were able to empower their businesses, reduce debt, plan long term, improve production practices, begin to gain market power, and network with other women; and had stronger families (Brumfield et al. 2016b).

Farming can be looked upon as less progressive than other job opportunities, and something farmers do not want to pass on to their children. However, educating the farmers can make them realize farming is a profession to be proud of because it feeds the nation. After the course, all the participants felt more personally empowered and proud to be farmers (Brumfield et al. 2016b).

A survey of 13 extension educators after they had attended the first EMWOFA training seminar in Freising, Germany, found that participants had positive impressions of EMWOFA and felt confident to teach business management and production topics (Brumfield et al. 2017).

Turkey depends on women to grow the food that its people consume and its companies export (Colak 2020), yet women farmers struggle with a severe lack of access to agricultural resources, including extension services, credit, inputs, and productive assets (Food and Agriculture Organization of the United Nations 2016). Women's productivity and confidence can be increased significantly with the right skills and training, and access to key inputs such as finance and land rights. Giving women farmers training in computer literacy, business management, and production practices empowers them, contributes to food security, builds communities, and empowers families.

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