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Food Security, Women, and Higher Education in Aceh

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ABSTRACT
Universities play a crucial role in promoting sustainable agriculture and community food security. One indicator of a successful education system is the measurement of the quality of the education's output, such as the transfer of information, technology, and agricultural innovations to increase the agricultural productivity of a society and ensure its food security. Even if university students obtained the same information and abilities in lectures, many female students do not work after graduation because they marry and would rather care for their families than implement the knowledge they gained. They have a career in agriculture, but it is not their primary occupation since they support their family. Women as farmers have a substantial and vital impact on household food security. Women have a crucial part in attempts to supply food for the home.

Keywords: *Food security, women, higher education, sustainable farming.*

1. INTRODUCTION

In developing nations, women play an important part in the agricultural sector and in ensuring food security. For example, as a result of the green revolution, poor rural women have been forced farther onto the margins of society and into a state of abject poverty. On the one hand, certain technologies have resulted in an increase in the number of burdensome duties that are assigned to women, while on the other hand, other technologies have begun doing remunerative tasks that were formerly reserved for women (Paris, 1998). However, in order to enable women to realize their full potential for creating, both national and international organizations need to adopt certain policy actions. These policy initiatives include enhancing women's access to resources, technology, and knowledge. In order to optimize the positive effects that women's salaries have on the food security and nutrition of households, policymakers should work to expand women's opportunities to earn money. Strategies should be aimed at increasing women's productivity both in paid work and in domestic production, food security, in order to enable women to increase their incomes without sacrificing additional time, their children's welfare, or their own health and nutritional status. This will allow women to increase their incomes without sacrificing the health and nutritional status of themselves or their children (Quisumbing, 1994).

At the level of the home, women play a significant role in the attempts to produce food for themselves and their families. In agriculture, the distribution of labor between husband and wife is determined by the results of family meetings, but men remain in the position of decision maker (husband). Due to their adherence to Islamic law, the people of Aceh have generated this situation. Physical labor typically falls on the shoulders of males when it comes to agricultural production. Whereas women are typically responsible for less strenuous tasks. This pattern refers to customs that have been passed down from generation to generation in a society. They have observed how their parents split roles inside the family ever since they were children, and as a result, this has been their reference or foundation for how roles are divided between men and women in agricultural operations. As a result of the fact that maintaining home food security is an integral element of the reproductive function that women play, women are the primary agents responsible for achieving household food security. In this industry, a woman is in charge of making decisions, such as selecting the food ingredients, determining how best to prepare them, and determining the requirements of ecologically conscious families. For this reason, it is essential for every woman to be knowledgeable about the components of nutritious foods and the ways in which they may fulfil their body's dietary requirements, as well as the requirements of ecologically responsible homes (Shamadiyah & Nasution, 2018). The construction of a work system that does not support women's traditional economic activities can be done in tandem with domestic sector operations. As a result, women are encouraged to seek changes to enter the public sector as industrial employees. It is not good that people have to endure bad working circumstances, are seen as having low productivity, and hence only receive low earnings in this (public) sector (Esterik 1996; Putranti 2004). Gender representation in people's lives must now be considered to encompass not just the visual and textual of current social experiences, but also the production, circulation, and consumption processes (Brooks, 2011).

Women have an important role in the production and supply of agriculture and food, yet in poor nations, they frequently lack access to resources (Beintema, 2017). The measuring of the quality of education's output is one sign of a good education system. Several metrics may be used to assess the quality of graduates, including accomplishment, competency, user reaction, and career acceleration. According to the statistics from the Universitas Malikussaleh tracer research in 2019, only 51.51% of graduates from the Faculty of Agriculture worked based on their scientific skills. Agricultural origins in the family can inspire university graduates to return home and carry on the family farm heritage (Bednaková et al., 2016). On the other hand, 48.49% of graduates did not use the information they gained at university. The major reason for beginning to pick a work that is unrelated to their knowledge is that they feel that at the outset of pursuing a career, they must accept any employment, even if it is unrelated to their degree. The second reason is that this employment offers more career opportunities than working in the agricultural sector, such as working in a bank or other industrial industries (Universitas Malikussaleh, 2019). Despite structural changes toward the industrial sector, the agricultural sector continues to provide the most to employment, with a proportion of 33.57 percent for the male population and 31.71 percent for the female population (Asian Development Bank, 2013).

Supporting women's self-organization in order to strengthen their independence and involvement in agriculture, community-based engagement, and women empowerment via education and training are important drivers of increased sustainable food security, poverty reduction, and social equality (Devendra, 2013). According to Devendra, Safrida et al. (2013), strategies to strengthen women in economic development in Aceh Besar District include: (1) increasing women education through training, which includes gender issues in the community; (2) reforming local institutions that override the role of women; and (3) advocating men to provide the right for women to be involved in decision-making processes in the household, economic development, and other areas. Women also contribute to such uneven processes in terms of access and control over resources and decision-making, directly effecting family and societal well-being (Dilanthi Koralagama et al. 2017). Plowing with oxen and planting are popular routes for males in most parts of the world, whereas women share other farming duties with men, such as sorting, processing, and harvesting. Women's responsibilities and decision-making capacities in agricultural operations differ among households, localities, and cultures/ethnicities in the community. Men and women in the same family have uneven access to sources and information. As a result, they make distinct technology adoption decisions (Gebre et al. 2019). Gender is rarely addressed in agricultural extension and technology adoption (Lambrecht et al. 2016). Gender should be the top priority when assessing the environment in which development is taking place, yet it is frequently overlooked (Diaz & Najjar, 2019).

Agricultural development seeks to boost agricultural productivity and farm family welfare in order to attain food security. Food security cannot be divorced from the role of women. Women work in agriculture, food processing, and food distribution. They not only generate food, but also take on the primary task of providing food for all family members (Novia, 2015). Previous research has shown that women are a determining factor in food security for their families, spanning from the production process on agricultural land, marketing, and food supply, implying that women make an essential contribution to family food security (Shamadiyah & Nasution, 2018). Women's contribution to fisheries in Harper et al. (2013) research mention, both directly and indirectly, is frequently disregarded in management, economic analysis, but is most beneficial in fisheries decision making. Women contribute considerably to protein-containing diets for their families in most countries, and women's actions in fisheries may add significant economic value to fish collected and landed by men who offer processing and marketing operations. Baliki et al. (2019) from Bangladesh demonstrate that women empowerment and participation in selling agricultural goods have a favorable affect on increasing the income of women farmers through agricultural products and family food security. Women and youth empowerment through community-based training initiatives can significantly improve resource sustainability (Mapiye, et.al, 2019). Empowering women and youth is one of the key methods that has been shown to increase family food security and nutrition (Njuki et al, 2011; Galié et al, 2019).

The main theme of discussing gender in the agricultural sector in Indonesia is closely related to the imbalance of the division of labor, unpredictable work status, and excessive workload, to the quantity and quality of women and men participation in various agricultural development activities, access to and control of human and development resources, as well as development benefits. Although the presence of women in the agricultural sector is frequently marginalized due to the patriarchal culture that develops in society, which leads to the problem of gender division of labor, the study revealed that it should be acknowledged that women's potential in agricultural development is very strategic.

Women's contributions to agriculture have enabled the country to preserve its food sovereignty. On the other side, the frequent exclusion of female farmers from agricultural development projects reflects the unfairness and inequality between men and women in Indonesia. In reality, women perform practically the whole agricultural process. Women do everything from seed preparation, planting, and upkeep to harvesting.

Here, we review the most important subject on several studies about women and agriculture in Aceh. Investigated how they apply the technology they learned at university to their family's farming activities, and how the technology impacts farming activities to support practicing sustainable agriculture in order to increase household

income, particularly in terms of work division and relationship to the ability to use the technology specifically by male and female.

2. METHOD

This study applied qualitative methodology. The qualitative method generates descriptive data in the form of written or spoken words from individuals as well as behaviour observations (Bogdan and Taylor, 1975). This technique stresses observed events and the context of the meaning that surrounds a reality, and it characterizes the study subject and their families as graduates. In this strategy, data is collected by survey. This investigation was done with a number of female graduate students and their families, as well as farmers from numerous districts adjacent to Universitas Malikussaleh. The research involved a review of the relevant literature and in-depth interviews. A team was tasked with doing all of the research stages that would be outlined in the study methodology.

This research included both primary and secondary data sources. The acquisition of primary data involved interviews with students and graduates of agricultural faculty. Through digital interviews, some restrictions imposed by Covid-19, such as in-person meetings and the inability to conduct lengthy interviews, have been eliminated. We acquire secondary data using articles that are separated into public and private papers. Public records such as meeting reports, newspapers, secondary data from the Agricultural Extension Center and the Central Statistics Agency, as well as local governance documents. (Includes notebooks, chapters of books, diaries, and letters pertaining to women, food security, and sustainable agriculture.)

3. RESULT AND DISCUSSION

The result shows that women are a determining factor in food security for their families, ranging from the production process on agricultural land, marketing to food supply so that women, including female student, have a significant contribution to their family food security. According to the results of a study, few female students use or utilize the agricultural technology they learn on university because they cannot afford to purchase it and because it differs from the technology they use every day at home or the commodities of their family farming company. In addition, they rely only on the knowledge passed down from generation to generation in their farming enterprise (traditional farming). If anything is applied, it is restricted to a tiny portion of the family's farms and not the entire property. Three informants requested their parents for a small plot of land to cultivate in accordance with the university-learned agricultural techniques. In other words, they sought to demonstrate to their parents and family that modern agriculture is far superior to traditional agriculture.

In general, sustainable agricultural knowledge is already taught in universities. However, it lacks depth. The instruction is confined to organic agricultural cultivation without the use of chemical fertilizers or pesticides. The practice is conducted in the agricultural faculty's experimental garden. The teaching of agricultural business management and sustainable agriculture marketing is incomplete. This content is not offered as a distinct course, but rather as a component of agricultural development courses and other courses. There are several female students that can implement organic farming in their households upon graduation. Because their farms and soil had previously been treated with chemical fertilizers and pesticides, the majority of respondents also reported that implementing organic agriculture was rather challenging. On addition, their parents forbade it since it had been a standard practice in the family farm.

Female alumni implement the technologies they acquired at university and the impact of technology o agricultural activities to promote sustainable agriculture. As a result, the role of women in agricultural growth and food security is extremely critical. Given the multiple issues confronting women farmers, there is only one solution: expand their ability. So far, the role of women as a significant portion of human resources in agriculture has not been effectively used. Many women have been excluded from the numerous attempts to promote access to information as a method of obtaining knowledge for farmers (Luluk, 2020). The similar event happened in Aceh province. Women play an essential part in agriculture, yet they are still underrepresented in the agricultural industry, which disadvantages them.

The students and graduates at the agricultural faculty believe that the lecturers have done an effective job of teaching them and have inspired them to become excellent graduates and to continue working in the agriculture sector. However, it is believed that the provision of this motivation is insufficient because it is currently on a very limited scale. It is necessary to make an effort to create motivation among students who are enrolled in the

agricultural faculty so that these students will either proceed with their careers in the agricultural industry or carry on the family farming company. To this day, there are a significant number of graduates from agricultural faculties who do not find employment in the agricultural sector. The primary reason for this is because agricultural graduates believe the agricultural industry offers less opportunities for leading a respectable life. The majority of them are employed in the financial industry, are self-employed business owners, or are employed in oil palm farms, which are still quite popular among agricultural graduates.

The distribution careers of both men and women are quite varied. Women's job is regarded as secondary, serving mainly to "assist" male (Panaia, 2016). As a result, women may have dual hurdles in finding job and gaining social respect for the labor they undertake (Martnez, 2016). In fact, women have significant potential in agricultural development, and their role in the agricultural sector is frequently marginalized as a result of patriarchal culture that develops in society, resulting in gender division of labor in agriculture, differences in working hours, and wage disparities between the sexes in agriculture (Priminingtyas, 2013). In Aceh Utara, the allocation of duties between husband and wife in agriculture is based on family consultation, although the decision maker is still a male (husband), and for agricultural operations, men do hard work and women do light work (Shamadiyah & Nasution, 2018). It can be concluded that gender issues in agriculture are closely related to unbalanced division of labor, excessive workload for women with unclear employment status, unequal quantitative or qualitative participation of men and women in various agricultural development activities, access and source control of human resources and development resources, and development benefits (Hutajulu, 2015).

4. CONCLUSSIONS

The potential of women in sustainable farming is significant. In fact, in line with the previous statement, the contribution of women in family income from agricultural sector is also important. Inviting women, especially young women, into the agriculture industry is the most difficult task. Due to the fact that agriculture has not yet guaranteed them riches, it is difficult to locate skilled and competitive female farmers. Curriculum and instructional methods must be flexible in order to prepare female students to face actual obstacles. Preparing competent students for employment in the agricultural industry, community involvement, improving extension institutions, and establishing cooperation networks with banks, private companies, and the university are potential answers. It is also essential to educate their parents about a brighter future for sustainable family farming. During the school-to-work transition, female students from rural upbringings, particularly those with agricultural education, have an edge over other graduates in securing rural employment. Their advantages in the long-term accumulation of agricultural production expertise, given that the majority of agriculture is identical to that historically conducted by families.

AUTHORS' CONTRIBUTIONS

The authors NS and NA indicated in made substantial contributions in this study.

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REFERENCES

Asian Development Bank. (2013). Gender Equality in the Labour Market in Cambodia. Mandaluyong: Asian Development Bank.

Atkinson R, Flint J. (2001). Accessing Hidden and Hard-to-Reach Populations: Snowball Research Strategies.

Bednaříková, Z., Bavorová, M., & Ponkina, E. V. (2016). Migration motivation of agriculturally educated rural youth: The case of russian siberia. Journal of Rural Studies, 45, 99-111. doi:10.1016/j.jrurstud.2016.03.006

Bogdan, R., Taylor, S. J. (1975). Introduction to qualitative research methods: A phenomenological approach to the social sciences. New York: Wiley.

Cornelia Butler Flora. (1992). Building Sustainable Agriculture, Journal of Sustainable Agriculture, 2 (3), 37-49.

Cuéllar-Gálvez, D., Aranda-Camacho, Y., & Mosquera-Vásquez, T. (2018). A Model to Promote Sustainable Social Change Based on the Scaling up of a High-Impact Technical Innovation. Sustainability, 10 (12), 4532. MDPI AG. Retrieved from http://dx.doi.org/10.3390/su10124532

Devendra, C. (2013). Systems perspectives in agricultural education, research and development: A vision for sustaining food security in asia. ASM Science Journal, 7(2), 152-165.

Galiè, A., Teufel, N., Girard, A. W., Baltenweck, I., Dominguez-Salas, P., Price, M. J., Jones, R., Lukuyu, B., Korir, L., Raskind, I., Smith, K., Yount, K. M. (2019). Women's empowerment, food security and nutrition of pastoral communities in Tanzania. Global Food Security, 23, 125-134. doi:10.1016/j.gfs.2019.04.005

Ghassan Baliki, Tilman Bruck, Pepijn Schreinemachers, Md. Nasir Uddin. Long-term behavioral impact of an integrated home garden intervention: evidence from Bangladesh. Food Security (2019) 11:1217–1230.

Higgins, L. M., Schroeter, C., & Wright, C. (2018). Lighting the flame of entrepreneurship among agribusiness students. International Food and Agribusiness Management Review, 21(1), 121-132. doi:10.22434/IFAMR2016.0166

Josua P. Hutajulu. (2015). Analysis of the Role of Women in Agriculture in Rasau Jaya District, Kuburaya District. Journal of Social Economic of Agriculture 4 (1), 83-90.

Kabeer, N. (2012). Women's Economic Empowerment and Inclusive Growth: Labour Market and Enterprise Development, SIG Working Paper 2012/1, School of Oriental and African Studies, UK.

Mack, Chris.A. (2018). How to Write a Good Scientific Paper. Bellingham, Washington USA: SPIE PRESS

Mapiye C, Chikwanha OC, Chimonyo M, Dzama K. Strategies for Sustainable Use of Indigenous Cattle Genetic Resources in Southern Africa. Diversity. 2019; 11(11):214.

Martínez, K. (2016). Professions have sex. Men and women in female and male professions, the case of nurses and electrical mechanical engineers. University of San Luis. San Luis Potosi.

Ministry of Women's Empowerment and Child Protection. (2016). Thematic Gender Statistics - A Portrait of Gender Inequality in the Economy.

Moleong L.J. (1989). Qualitative Research Methodology. Bandung: Remaja Rosda Karya

Njuki, J. M., Wyatt, A., Baltenweck, I., Yount, K., Null, C., Ramakrishnan, U., Girard, A.W., Sreenath, S. (2016). An exploratory study of dairying intensification, women's decision making, and time use and implications for child nutrition in Kenya. European Journal of Development Research, 28(4), 722-740. doi:10.1057/ejdr.2015.22

Novia, D. 2015. "Marginalization of Women in Agricultural Development". Proceedings of the Interdisciplinary Seminar on Education for Girls, Women's Empowerment and Social and Environmental Change. Women's Studies Master Program, Post-Graduate Program, Brawijaya University, Malang.

Shamadiyah, N, Nasution, PPA. (2018). The Role of Women in the Availability of Household Food (Case Study in Rice Farming Communities in Blang Pala Village, Banda Baro District, North Aceh Regency, Aceh Province). Agrifo: Agribusiness Journal, Malikussaleh University 3 (2), 45-54.

Panaia, M. (2016). The inclusion of women in the engineering profession. In: Virajes Magazine, 16(1). Manizales: University of Caldas. 19-43.

Priminingtyas, D. N. (2013). The Role of Women in the Development of the Micro, Small and Medium Enterprises (MSME) Sector. Department of Agriculture Social Economics, Faculty of Agriculture, University of Brawijaya Malang.

Safrida, Agussabti, Sofyan. (2013). Strategies for strengthening women in economic development Fisheries Subsector (Case Study of Fisheries Agroindustry in Meunasah Keudee Village, Mesjid Raya District, Aceh Besar District. Agrisep 14 (1), 36-43.

Sarah Harper, Dirk Zeller, Melissa Hauzer, Daniel Pauly, Ussif Rashid Sumaila. Women and fisheries: Contribution to food security and local economies. Marine Policy 39 (2013) 56–63.

Universitas Malikussaleh. (2019). Report on Cohort Alumni Tracking Activities for 2017 and 2018 Implementation in 2019.

Zimmermann, B. (2020). Gender gap in the career success of university graduates: Effects of work-related values. Swiss Journal of Sociology, 46(1), 37-71. doi:10.2478/sjs-2020-0003

Dilanthi Koralagama; Joyeeta Gupta; Nicky Pouw (2017): Inclusive development from a gender perspective in small scale fisheries. In Current Opinion in Environmental Sustainability 24, pp. 1–6. DOI: 10.1016/j.cosust.2016.09.002.

Gebre, Girma Gezimu; Isoda, Hiroshi; Rahut, Dil Bahadur; Amekawa, Yuichiro; Nomura, Hisako (2019): Gender differences in the adoption of agricultural technology: The case of improved maize varieties in southern Ethiopia. In Women's studies international forum 76, p. 102264. DOI: 10.1016/j.wsif.2019.102264.

Ileana I Diaz; Dina Najjar (2019): Gender and agricultural extension why a gender focus matters. In Journal of Gender, Agriculture and Food Security 4 (2), pp. 1–10. Available online at doi:10.19268/JGAFS.422019.1.

Lambrecht, Isabel; Vanlauwe, Bernard; Maertens, Miet (2016): Agricultural extension in Eastern Democratic Republic of Congo: does gender matter? In Eur Rev Agric Econ 43 (5), pp. 841–874. DOI: 10.1093/erae/jbv039.

Nienke Beintema (2017): An assessment of the gender gap in African agricultural research capacities. In Journal of Gender, Agriculture and Food Security 2 (1), pp. 1–13. Available online at https://doi.org/10.19268/JGAFS.212017.1.

Strachan, Jane; Samuel, Janet; Takaro, Minnie (2007): Ni Vanuatu women graduates: what happens when they go home? In Development in Practice 17 (1), pp. 147–153. DOI: 10.1080/09614520601092055.