

## **ENHANCING WOMEN'S PARTICIPATION IN AGRICULTURAL EDUCATION IN AFGHANISTAN THROUGH DISTANCE EDUCATION BY THE NATIONAL AGRICULTURAL EDUCATION COLLEGE (NAEC) AFGHANISTAN**

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### **ABSTRACT**

Agriculture dominates the Afghan economy, providing an income to 61% of the households. 44% of the labour force is engaged in agriculture and women make up to 65% of this labour force. One of the priorities of the Afghan government is to develop agricultural high-school education, vocational education and training and agricultural extension services. In line with these efforts, the National Agriculture Education College (NAEC) was established in 2011, which provides a two-year teacher training course, targeted at prospective teachers for agricultural high schools (AHS).

Even though women participate actively in the agricultural sector, they are underrepresented in agricultural education and extension in Afghanistan. This is also seen at NAEC, where the number of female students remains very low and as a consequence limited female teachers are available for the AHS. This paper analyses the situation at NAEC and explores the alternatives that are currently deployed by NAEC to increase access to agricultural education for women and girls:

- ✓ Targeted recruitment policies to increase the number of girls enrolling at NAEC. This will contribute to more female teachers at the agricultural high schools, thereby setting an example and creating role models for other women and girls.
- ✓ Gender sensitive curricula to prevent gender stereotyping to be reproduced in the schooling system.
- ✓ Distance education for rural girls and women to overcome social and cultural barriers they face in pursuing education.

It is realized that the specific needs of girls and women have to be taken into account when designing gender sensitive curricula. Even more in distance education the specific needs of women in agriculture requires consideration. Generally it can be said that developing and designing distance education is a challenge, which is worthwhile to investigate further.

**Keywords:** Afghanistan, agriculture, gender, women, distance education, innovation

## INTRODUCTION

This paper gives a short introduction of agriculture in Afghanistan, the Afghan educational system and the specific niche that the National Agriculture Education College (NAEC) occupies.

The second part of this paper deals with the relevance and complexities of women's participation in agricultural education and finishes with an exploration of alternatives or possible solutions for increasing the access of Afghan women to agricultural education.

## AGRICULTURE IN AFGHANISTAN

Agriculture, including livestock, dominates the Afghan economy, providing an income for 61% of the households, with it being the main source of income for 28% of the households. (Central Statistics Organisation, 2016).

According to the numbers published by the World bank (Hogg, Nassif, Gomez Osorio, Byrd, & Beath, 2013), more than 80% of the Afghan population generates its income specifically through agricultural activities, whereas in the (Central Statistics Organisation, 2016) states that 44 percent of the labour force is engaged in agriculture.

Smallholder farmers who mostly grow wheat, barley, fruits and nuts dominate Afghan agriculture. Approximately half of the country is also used as seasonal rangelands for livestock, especially small ruminants. Women comprise up to 65% of the agricultural workforce in rural areas, but their participation is primarily family based and without remuneration (World Bank, 2005).

More than thirty-five years of war and instability have had serious consequences on the agricultural sector, on farm infrastructure and on the institutions that support agriculture.

This situation has led to a loss and failure to renew the knowledge and skills needed to produce, innovate and adapt to changes.

One of the priorities of the Afghan government (the Ministry of Education, the Ministry of Higher Education and the Afghanistan's Ministry of Agriculture, Irrigation & Livestock - MAIL), is to provide agricultural high-school, vocational education and training and agricultural extension services to foster sustainable and inclusive economic growth in the agricultural sector (Ministry of Agriculture Irrigation and Livestock, 2017; Ministry of Education, 2017; Ministry of Higher Education, 2017).

## AFGHANISTAN'S EDUCATIONAL SYSTEM

Since the start of the reconstruction efforts of Afghanistan in 2001, a strong emphasis has been placed on education. For example, the constitution lays down that education, both formal and religious, is provided free of charge from primary to bachelor level.

Primary level education starts at class 1 and continues until class 6. Lower secondary education runs from class 7 until 9.

After completing lower secondary education, pupils can either continue with a higher secondary education, from class 10 until 12, or gain admission to secondary vocational

and technical education. This type of education lasts from class 10 until 12 or until 14, depending on the programme.

Higher education, at bachelor level starts after the 12<sup>th</sup> class and students need to pass an entrance level exam, the Kankor, to qualify for entry. After the bachelor level, students can enter a Master's programme, although only a few programmes are currently available in Afghanistan (EP-Nuffic, 2015).

Although education is compulsory for children between 6 and 14, roughly corresponding with grade 1 until 9, only a small minority finishes class 9. Even less pupils, under 10 percent, complete their education until class 12 (EP-Nuffic, 2015). The participation of girls in the general educational system is lower than boys, and girls also tend to drop out sooner than boys (after 5.6 years for girls vs 9.5 years for boys) (Central Statistics Organisation, 2016). This results in a high illiteracy rate of 88% among women. Literacy courses and vocational training for women is available, but these courses are based in Kabul. They tend to be short term and often men prevent women attending (Momsen, 2010).

### **NATIONAL AGRICULTURE EDUCATION COLLEGE**

The Agricultural High Schools (AHS) in Afghanistan are part of the secondary vocational and technical education system and need to deal with various challenges depending on the part of the country they are located. Agricultural education in Afghanistan needs to reconcile extreme diversities from several perspectives: geographically, climatically, agriculturally and socio-culturally, encompassing the whole range from nomadism and subsistence farming to industrially organised agriculture. Also the division of tasks and decision-making power along gender lines varies greatly from place to place.

As a part of the efforts of the government to improve agriculture and agricultural education in Afghanistan, the National Agriculture Education College (NAEC) was established in Kabul in 2011, providing a two-year teacher-training programme (at the level of class 13 and 14). NAEC staff is conversant with current models of agricultural innovation and search for lecturing activities that combine insight of technical devices, technological practices and the social organisation after Leeuwis and Aarts (2011). In 2013 the faculty consisted of 30 teachers, 6 of whom were women.

NAEC graduates find employment as teachers in AHS, as a trainer of farmers' groups, assist the people in the area they live in, or continue their studies at university (Branderhorst, 2016).

NAEC has the ambition to act as a change agent for women in agricultural education in Afghanistan. This is reflected in their research agenda of 2015. One of the priorities formulated in this research agenda is *Gender*, with the aim of increased participation of female students (Sabri, Abdulrahimzai, Witteveen, & Dijkstra, 2015). As NAEC is working with a young and well-educated staff consisting of both men and women, they are in a position to fulfil this role of change agent in agricultural education for women in Afghanistan.

### **WOMEN'S PARTICIPATION IN AGRICULTURE AND AGRICULTURAL EDUCATION**

In many Afghan rural areas women are involved in most agricultural activities such as producing agricultural crops, processing, sorting and packaging of food, animal husbandry or tending animals, poultry. At household level, they are engaged in trade and marketing, making dairy production and supply of chain management. Although women participate actively in agriculture and livestock activities, there are regional differences in

the type of work they are involved in. As the socio-cultural settings result in a gender based diversity of the rural workforce a focus on access to agricultural education for women is required to gain full insight on the position of women in agriculture. In northern Afghanistan, for example, growing melons, tending small vegetable plots within the compound and chicken and sheep rearing seem to be more done by women than tending other crops and taking care of larger livestock (Grace, 2004). Tavva et al. (2013) add that in Nangarhar and Baghlan provinces (east and west of Kabul), women are more involved in livestock than in crop-related activities. Despite that worldwide most of the agriculture labour is done by women, little care is given to them (SOFA Team & Doss, 2011). Generally, little to no agricultural extension activities are directed at women (Grace, 2004), making it difficult for women to obtain new or more knowledge about agriculture.

Sabri et al. (2015) noted that although women play a very important role in Afghan agriculture, it is not seen as an occupation for women, which is in line with what Grace (2004) found. The limited recognition of the role of women in agriculture is not only linked to a discourse on gender roles, but also to the low social status of agriculture, at least in some areas. In northern Afghanistan, for instance, women working the land is perceived as an indicator of poverty, showing a stigma attached to working in agriculture (Grace, 2004).

The combined gender issues result that at present few Afghan girls receive an agricultural education. A report by Altai Consulting (2015) indicates that only 2% of AHS students are women. This condition feeds into a vicious circle, in which a lack of female students results in a lack of female teachers able to serve as a role model to educate the next generation of girls in AHS.

Educating women will increase the likelihood that women are able to sustain their own livelihood along with that of their family. There also is evidence of changes in power relations within and outside households (Kabeer, 2005). Afghan female students themselves report positive individual benefits like having life goals and knowing their own abilities as assets of following a higher education (Halim et al., 2015). A woman with an agricultural education or access to agricultural extension will be able to make more informed decisions on crop and livestock management, contributing to improved livelihoods. Nevertheless, Kabeer (2005) also warns that there are limits to the extent that education can contribute to empowerment and the decision making abilities of women.

Especially in societies like Afghanistan, which are characterised by an extreme form of gender inequality, not only access to education can be restricted, but also the lack of good examples and role models may inhibit girls and women in their empowerment. Halim et al. (2015) found that the presence of a role model within the family provides opportunities for girls to enter higher education. The importance of female role models is that they show other women and girls that it can be done, by knowingly and unknowingly encouraging potential female students (Foster & SeEVERS, 2002).

Therefore, recognizing the importance of women in Afghanistan's agriculture and the current lack of access to agricultural extension and education, it is important improve the access of girls and women to agricultural education in Afghanistan, which is in agreement with the arguments of Foster and SeEVERS (2002, 2004) that the presence of other women as fellow students, teachers and mentors help to break through restricted gender roles .

NAEC, in line with their ambitions, has an active policy for the intake of female students. A practical initiative that is currently in place is a three months preparatory course for

female students from general high schools as an introduction to agricultural education training.

After the completion of preparatory course female students need to pass NAEC entrance exam to enrol into the two years program. If the intake of female students would be limited to graduates of AHS, as is the case for male students, the possible intake would be more limited. Despite this provision, NAEC staff continues to struggle with challenges regarding the low number of female students enrolling.

The limited number of female students entering agricultural education reported by Altai Consulting (2015) aligns with the situation at NAEC. The total number of students at NAEC has been increasing since its' founding: both in numbers of students entering as well as well as the increasing number of graduates (see table 1). The number of female students increased during the first years, but in 2016 it decreased, both in actual numbers as in percentages.

**Table 1:**  
**Development of the number of graduates since the start of NAEC**

Year	Total no. of graduates	No. of male graduates	No. of female graduates	% of female graduates
2013	77	77	0	0
2014	172	153	19	11
2015	162	123	39	24
2016	224	194	30	13

In the analysis of the low intake of female students, NAEC distinguishes the following groups of potential female students: girls who are not allowed to study, and girls who are allowed to study, but do not have access to education.

The low status of agriculture contributes partly to the low number of girls interested in agricultural education, but also in some families more focus is paid to education for boys, as it is often the custom that their daughters change their households upon getting married and their income goes to another household.

Due to this fact, poor families are less interested to invest on their daughter's education. Low income still have a direct negative influence on participation in schooling at all levels (World Bank, 2012).

The on-going internal conflicts in Afghanistan also affect the education system at large where travelling is not always safe, or insecure / inaccessible for other reasons such as cultural practices and thereby inhibiting girls to use public transport. Although the reasons for not being allowed or not being able to study varies among families and areas, according to Halim et al (2015) the barriers female students encounter can be summarized as follows:

- ✓ **Social pressure and marriages at young ages:** It is estimated that 57% of girls are married before the age of 16 and at least 60% of marriages are forced (Momsen, 2010).
- ✓ **Economic barriers:** lack of financial resources
- ✓ **Family problems:** the men in the family discriminate against girls getting an education
- ✓ **Security and social problems:** insecurity in the country

The expansion of girl's education must be at the centre of a rights-based development strategy in Afghanistan (Visvanathan, Duggan, Wiegiersma, & Nisonoff, 2011). The report

by Altai Consulting (2015) illustrates that generally speaking, agricultural education for girls is welcomed as a good idea, but the biggest challenge is the safety.

For NAEC, lowering the above-mentioned barriers, and especially the safety barrier, also most families in rural areas of Afghanistan prefer female teachers to teach their daughters whereas the number of female teachers at agriculture high schools is below 2%. So, encouraging families to allow their daughters to get an agricultural education is one of the main challenges for NAEC.

### **ENHANCING WOMEN'S PARTICIPATION IN AGRICULTURAL EDUCATION IN AFGHANISTAN**

As is shown in the previous paragraphs, gender balance is important to consider in agricultural education in Afghanistan. There is a need for well-educated women working in agriculture who will be able to share their knowledge with other women and who are teachers in AHS or work as extension agents, for example with the Ministry of Agriculture, Irrigation and Livestock.

In the following sections three major alternatives are elaborated to enhance women's participation in agricultural education in Afghanistan:

- ✓ Targeted recruitment policies for the training of female agricultural teachers and extensionists;
- ✓ Gender sensitive curricula and learning environment;
- ✓ Distance education for rural girls and women farmers.

#### **Targeted Recruitment Policies for the Training of Female Agricultural Teachers And Extensionists**

To address the gender imbalance in Agricultural High Schools (AHS) of Afghanistan more targeted recruitment policies might be developed to increase women's participation at NAEC and at AHS.

In any of the AHS one female staff member is required to be in a leading role, to ensure that families rely on the management of schools and will be encouraged to send their daughters to AHS.

NAEC policies to enhance women's' access to agricultural education come with the ambition to support the presence of more female educators at AHS. The Deputy Ministry of Technical Vocational Education Training (DMTVET) responsible for the recruitment of more female teachers in agriculture high schools could implement positive action for female staff to further encourage other girls and women to attend the agriculture high schools.

At present there are many AHS in Afghanistan, approximately 1-2 in each district, but none have been dedicated especially for girls to get their education without any barriers. The government could be suggested to allocate one dedicated AHS for girls that should be taught by women or allocate special shifts for girls in AHS, so parents can allow their daughters to get education in the field of agriculture. Families could send their daughter to these schools without hesitation and their perception in regards to agriculture, as male activity will be changed. In this respect, a strong awareness spreading of agriculture education for Afghan women is highly recommended.

#### **Gender Sensitive Curricula and Learning Environment**

To address the gender imbalance in the AHS of Afghanistan, care needs to be taken of the curricula: they need to be encouraging to both male and female students. When stimulating the participation of female students, it requires specific attention in the entire

curriculum to prevent social inequalities to be reproduced within the school system for example by gender stereotyping (Kabeer, 2005). Mutekwe and Modiba (2012) conclude from their research that what students unconsciously learn at school about gender roles, depends on ideologies that are embedded in their curriculum.

They refer to the roles that are ascribed to men and women textbooks and other learning materials, in examples teachers use, references that are used in visual materials, etc. Gendered and patriarchal ideas are subtly transmitted through the school system, influencing students in their ideas about their future (agricultural) occupation.

Next to the attention for the curriculum and the educational material, the attitudes of the teachers are also very important (Ifegbesan, 2010). Ifegbesan (2010) found that teachers can be unaware they hold a gender bias, but still act differently towards male and female students. To assist teachers in overcoming gender biases, they should have access to gender-neutral learning materials and be able to receive support in dealing with gender-sensitive issues. Also, gender-sensitive issues should be part of the curricula itself, to make students aware of these issues as well. Whereas NAEC is employing female staff, gender is included as a separate subject in the curricula and awareness is shown regarding the importance of female role models in agricultural education, thereby operationalizing a gender-sensitive learning environment.

#### **Distance Education for Rural Girls and Women Farmers**

Considering the apparent obstacles, both physical and socio-cultural, for increasing female participation in formal agricultural education at AHS and NAEC in Afghanistan, NAEC searches for countervailing strategies to reach remote women in agriculture. NAEC staff sees distance education as one of the promising options to countervail barriers for girls and women to access agricultural education.

There are several definitions that can be used for distance education (Keegan, 1980), but the common ground of these definitions is a physical separation of the teacher and the learner contrasting conventional education, which is very much based on a classroom interaction between teacher and learner. To bridge such a separation between the student and the teacher in distance education and to find alternatives for the classroom interaction is a challenge for NAEC.

In designing a curriculum which is suitable for distance education, NAEC-staff has to consider several issues: at first the student and teacher perspective: both students and teachers will have fundamentally different setting than in a traditional classroom education. With the different setting, also the pedagogy and, related, the use of media will be different than in a conventional classroom.

A well-thought out design of curricula and teaching methodologies, that aligns with the existing curriculum will inspire and feed into a future-proof system of distance education. For example, the fieldwork, which is an important methodology in the current NAEC curricula, and considered as an innovation in Afghan education, will prove a challenge to organise for the women who are interested in distance education.

All the above have to become operational in a context where issues of security, limited options for digital multi-media alternatives and socio-cultural barriers, similar to formal education are prevalent.

However, a recent report on the design of a Digital Farmer Field School in Sierra Leone exemplifies a strategy of using ICT-supported extension activities in areas with limited connectivity and limited electricity supply, targeted at functional illiterate people.

(Witteveen, Goris, Lie, & Ingram, 2016). This innovative way of thinking inspires a search, in absence of conventional possibilities, for other strategies of learning and teaching.

In Sierra Leone, the designers had to develop learning materials that could be used in a setting of collaborative learning without direct external support. The innovative design, resulted from a design-process that put the users at the starting point: what do they want and need to be able to learn.

An important feature of this design process in Sierra Leone is the framework for responsible innovation, by (Stilgoe, Owen, & Macnaghten, 2013). The core elements of this framework (anticipation, reflexivity, inclusion and responsiveness) provided guidance to the process of developing an innovative form of distance education.

Also a context of user experience and user interface design enhanced a focus on capabilities of the end users as defining conditions for the learning design.

## CONCLUSION

The important role of women in afghan agriculture and the rural economy is not yet reflected in their participation in agricultural education. Targeted recruitment policies for the training of female agricultural teachers and extensionists, gender awareness among teachers and a gender sensitive curriculum in AHS and at NAEC are key factors in providing an empowering education and in stimulating girls and women to seek a profession in agriculture.

Distance education could provide a solution for reaching out to female students in Afghanistan who otherwise cannot overcome the barriers they face in entering further education. Distance education may overcome the needs and concerns of the potential female students and their families, as these are very real in current Afghanistan especially considering the ongoing problems of safety. The specific needs of Afghan women in agriculture have to be taken into account when designing a curriculum for distance education towards becoming an agricultural teacher or extensionists. For a methodological design of an agricultural distance education curriculum the experiences in Sierra Leone with designing a Digital Farmer Field School (Witteveen et al., 2016) may provide an inspirational foundation also for the perspective on responsible innovation applied (Stilgoe et al. (2013). The competences of NAEC staff for designing distance education curricula may require further training on innovative learning design, practice on technological skills. Rethinking the curriculum and institutional consequences on distance education will be a challenge, which is worthwhile to investigate further.

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