

An institutional assessment of the impact of access to land by the youth on adoption of resilience building farm practices in Kenya

Introduction

Low resource productivity that characterizes the agriculture and rural sector in much of the developing world has often been, in part, attributed to failure to secure participation in farming by the youth. While there is no consensus about the defining attributes of persons falling within the “youth” category, (<http://undesadspd.org/Youth.aspx>) the government of Kenya appears to classify the youth as men and women aged between 18 and 35 years (Ministry of Youth Affairs 2007). They are considered to be better educated, energetic and are likely to bear positive attitudes towards innovation. Securing of the involvement of the youth in agriculture is likely to promote use of resilience enhancing farm practices, increased resource productivity and participation into farm produce and also agricultural inputs and services markets to help diversify rural livelihoods. Yet there is rising unemployment among the Kenyan youth who number about 16 million and this is often blamed for insecurity, disillusionment and radicalization (Njagi 2014). Among most communities in Kenya, inappropriate arrangements for facilitating access to land for farming represents the first hurdle for intending youth to participate in agriculture. Lack of title deeds, for instance, can limit smallholder access to extension services and also, financial capital in form of credit needed for purchase of farm inputs. This often results in low rates of investment in water harvesting and soil fertility a management practices, resulting in poor yield, low soil carbon stocks, poor water retention, low income, poverty, and food insecurity. Consequently, the affected youth are discouraged from investing their time and other resources in farming. Thus, over the last three decades or so, governments and development oriented organizations in Africa and elsewhere have been implementing a wide range of schemes designed to help attract the youth into farming (Republic of Kenya 2012). The government of Kenya (Ministry of Youth Affairs 2007) has adopted a policy white paper and enacted legislation designed to guide investment in youth programs. The youth represent a significant proportion of Kenya’s smallholder community. These youthful farmers have been impacted by past and on-going initiatives implemented by the government, NGO and even the private sector in various ways. Few studies which reliably and systematically document the impacts of the “youth variable” on enhanced use of resilience enhancing farm practices have been reported. This paper aims at addressing this knowledge gap.

Kenya has experienced a relatively high population growth rate, currently above 2 per cent. Rising density of human settlement in the traditional farming lands, mainly in central and western Kenya has led to led to farm holdings that are too small to sustain livelihoods and consequent out migration into arid and semi-arid lands requiring adoption and application of resilience building farm practices. The agricultural research and extension communities have advocated smallholder adoption of integrated soil fertility management practices based on application of organic and inorganic fertilizers combined with appropriate rain water harvesting practices such as construction of tied ridges, water pans, micro-dams, etc. In rural Kenya, arrangements in which institutions that foster concentration of power over land use, investment decisions and participation in the land market, and the transfer of land in the family patriachs tends to limit inclusion of women and the youth. Where such institutions predominate, and where the household leadership is not progressive, incentive to invest in resilience building practices is likely to be adversely affected. Access to institutions which facilitate access to skills and information via extension services and also loan finance also come under influence of the type and quality of household leadership. Understanding how access to land might influence adoption of sustainable farm practices should be based on descriptions of modes of land acquisition, patterns of access and use and tenure arrangements. Differential access to extension services offered whether offered by the state or non-state actors may then be analyzed. Access to services can influence adoption of farm practices. Where appropriate farm practices are deployed, improvements in resource productivity and household income can be realized.

Objectives

The main goal was to investigate how the “youth in farming” variable and the institutions which facilitate access to land by the youth are likely to influence adoption of resilience building farm practices in semi-arid Kenya.

1. Specifically, the analysis sought to
 - a. To determine and document patterns of differential access to land for farming by the youth and non-youth
 - b. To profile differential patterns of access to extension and credit services and adoption of resilience building practices

Methods:

The methods adopted facilitated comparison of two subsets of small farm households i.e., those that are headed by persons falling within the youth (age 18-35 years) category versus the households whose leaders are aged over 35 years.

Data

The principal source of data used here was a household survey conducted in the semi-arid parts of Makueni, Machakos and Tharaka-Nithi Counties in Kenya by the KARI/McGill Food Security Research Project titled: *Innovating for Resilient Farming Systems in Semi-Arid Kenya* (INREF). The survey was carried out in Tharaka North and Tharaka South Sub-counties, (Tharaka Nithi County), Mwala and Yatta Sub-counties) and Makueni, Kathonzi and Makindu Sub-counties (Makueni County). Within each of these sub-counties, sub-locations were randomly selected from lists of ALL sub-locations. Within each of the sub-locations thus selected, lists of ALL households were drawn up, and from these lists, random samples were drawn, weighted by the sub-location's population as proportion of the combined population of ALL sub-locations. The survey covered 1258 smallholder households. Field work and data preparation for this survey took place over the period 2012-2013. Data and information capture were implemented via use of a structured questionnaire administered by enumerators who in turn were supervised by researchers and agricultural extension staff from the Kenya Agricultural Research Institute (KARI) and the Ministry of Agriculture. After adjusting for non-responses, the remaining sample was divided into the youth (age of the household head within the 18-35 year range) and non-youth, comprising households headed by persons whose ages were 36 years or more.

Analytical Procedures

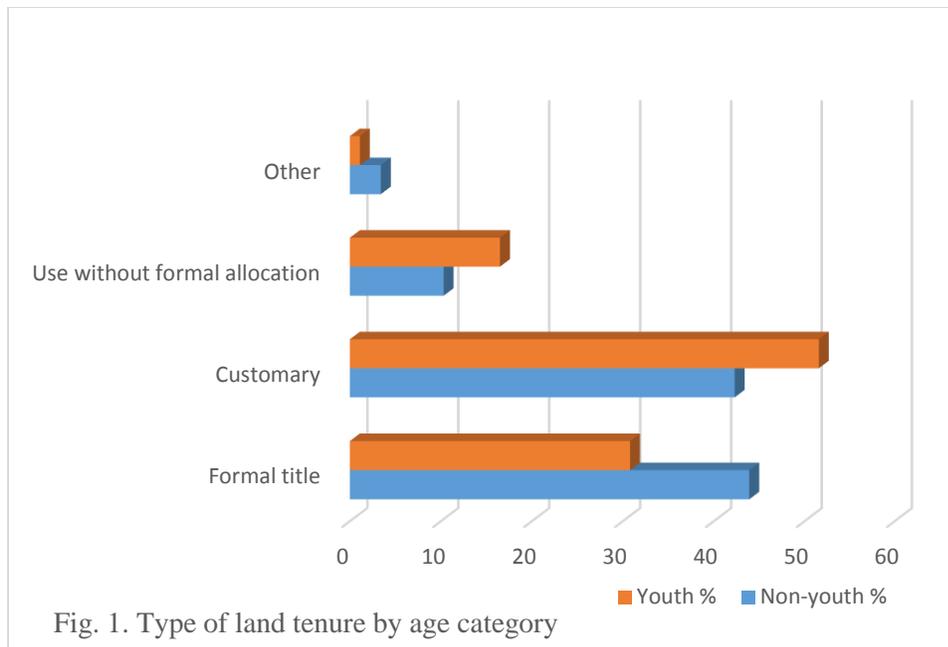
Descriptive statistics and cross-tabulations were extracted and are presented.

Results

Results of the survey appeared to concur with the widely held view that the youth are better educated and hence more likely to espouse more enlightened attitudes towards innovation. The youth headed households represented 24 per cent of the sample. Mean ages of the household heads were 30.6 years (youth) and 55.3 (non-youth). On average, the youth had 11.1 years in formal education compared to 10 years of formal education by non-youth.

Differential access to land for farming

In terms of land owned by the average household, the acreage owned by the youth (11.1 acres) was not significantly different from the acreage owned by non-youth (11.6 acres). However, differences in type of land tenure are significant (Fig. 1.). The most prevalent tenure type is "customary," followed by "owned with title." While the "use without formal allocation" tenure type offers the least security of investment in long term improvements, it is still significant. The non-youth dominate in the "owned with formal title" category, while the youth dominate in the "use without formal allocation" and "customary" categories. The latter indicates that most of the youth still operate on land owned by other people e.g., parents. In the three counties, the results show that land is acquired mostly through inheritance and to a lesser extent, purchase. Minor avenues to land acquisition such as by letter of allotment by the government are also followed. Some 84 percent acquired land through inheritance compared to 72 percent of the non-n youth. The percentage of the non-youth who acquired land through purchase (25 per cent) is about twice as high as the percentage of the youth who acquired land through purchase (14 per cent).



Household access to agricultural information

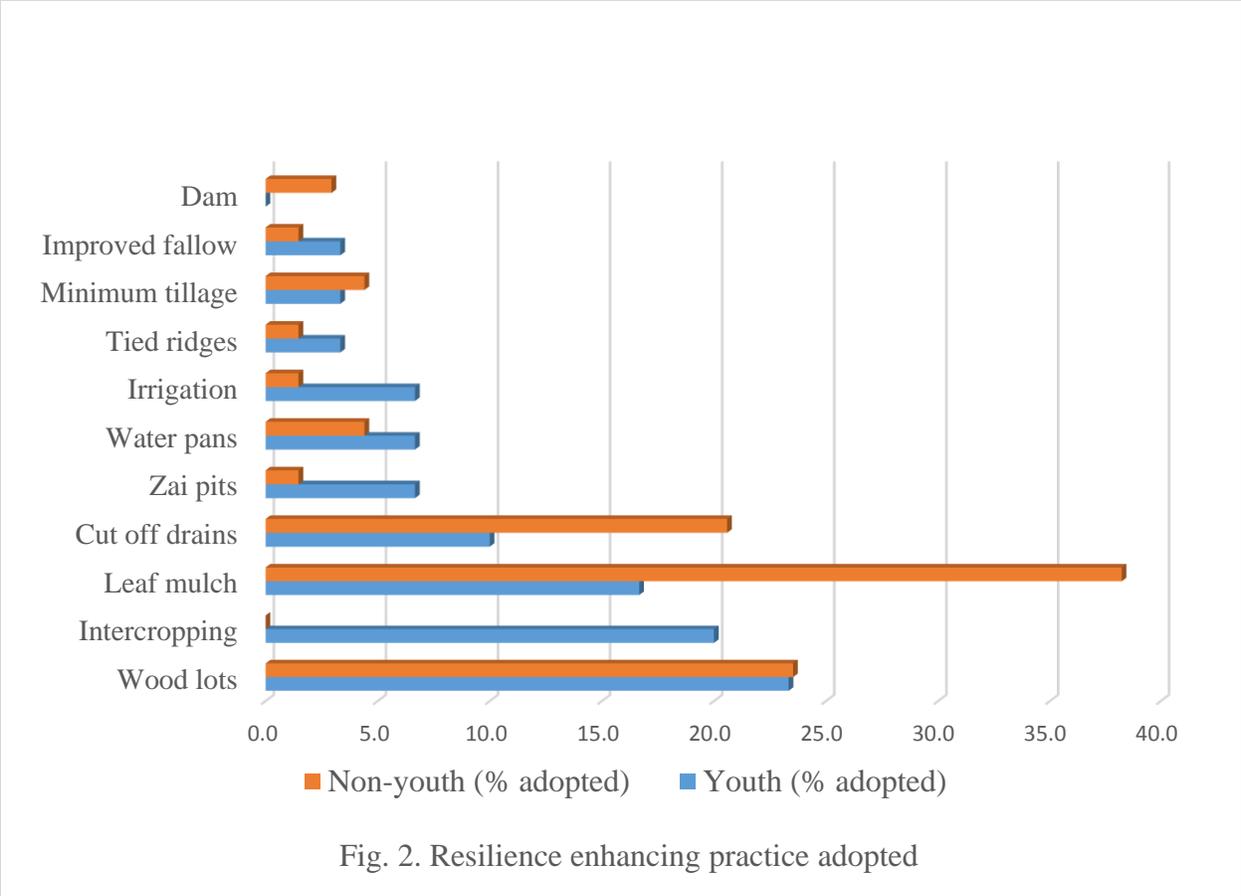
The study sought to determine the difference if any, between the youth and non-youth in the way they acquired information they need for use in farming. This would be indicated by the number of contacts between the farmer and members of the extension services of the Ministry of Agriculture and also, the NGO sector. Results show that on average, the youth made 1.4 contacts with the Ministry of Agriculture extension during 2012, compared with 1.2 contacts by the non-youth. This result indicates that the youth are more likely to seek out extension advice they need. The mean number of contacts with NGO based extension agents however, was 0.73 (youth) and .78 (non-youth).

Adoption of resilience enhancing practices

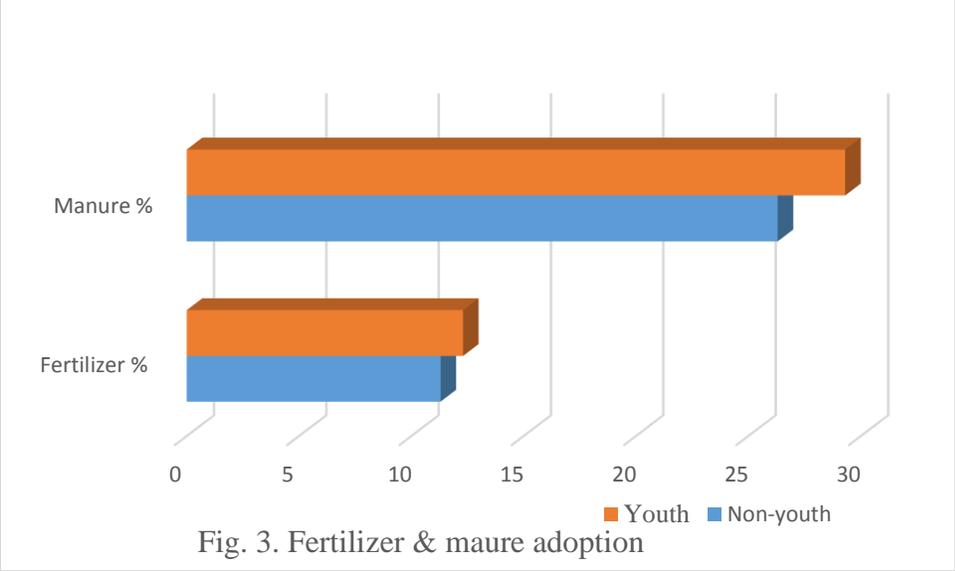
Implementation of many of the resilience enhancing practices often requires investment of relatively large amounts of labor and money. Returns to capital invested is rarely realizable within the same season, and the risk may be substantial given the lack of advantage during seasons with enough rainfall. These practices if implemented will have the net effect of improving the capacity of the soils to retain rain water and use efficiency of fertilizers applied, thereby enhancing resilience of farming systems. Special skills for laying out, construction and maintenance of field structures may be needed. Support for the youth to to expand the area under especially tied ridges and zai pits is desirable. Figure 2. shows that the practices adopted to an appreciable extent were mulching, woodlots, cut-off drains and inter-cropping. These were followed by zai pits, irrigation and water pans. Practices or innovations requiring lumpy investment like woodlots, cut-off drains were dominated by the non-youth. Adoption of intercropping, zai pits, tied ridges and water pans were dominated by the youth. Figure 3. Indicates that the youth out-performed the non-youth in adoption of fertilizers and also Farm Yard Manure (FYM).

Household income by age category

All households, youth headed or otherwise, derived their income from diverse sources. The dominant sources of farm income were sales of livestock (Youth: 49 percent; non-youth 50 percent); crop sales (youth 38 per cent; 34 per cent non-youth) and sale of fruits and vegetables (14 per cent youth; 16 per cent non-youth).



Overall, the non-youth earned more agricultural and also non-agricultural income than the youth. The youth derived only 33 percent of their household income from the farm, compared to 50 per cent the non-youth derived from the farm.



Conclusion

In conclusion, it may, in the light of the main findings of the study reported in this presentation, be fair to state that on-going investment in the upgrading of the land offices all over Kenya is a worthwhile contribution to sustainable rural livelihoods even

in the semi-arid midlands. The non-youth dominate in the “owned with title” category while the youth dominate in the “use without formal allocation” and in the “customary” category. This seems to have discouraged investment in longer term land management structures such as cut-off drains, micro-dams, and tree planting. This poses the question: how should interventions to facilitate security of tenure over the categories of land the youth are using? The study found this to be true for permanent investments such as tree planting and rain water harvesting structures. This did not apply to the use of productivity enhancing practices such as fertilizers and seed of improved crop varieties. Other policy options may well yield higher returns.

Acknowledgement

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References

Ministry of Youth Affairs. 2007. Kenya National Youth Policy. Sessional Paper No. 3., July 2007. Government Printer, Nairobi Kenya.

Njagi, John 2014. Kenya rolls out measures to tackle youth unemployment. Sunday Nation. Nairobi Kenya.

Republic of Kenya. 2012. Land Act. Government Printer Nairobi Kenya.

United Nations undated Definition of youth. <http://undesadspd.org/Youth.aspx>