



LEVELLING THE FIELD

IMPROVING OPPORTUNITIES FOR
WOMEN FARMERS IN AFRICA



THE WORLD BANK





A WOMAN MAKES HER LIVING AS A CHICKPEA FARMER IN TULU BOLO, ETHIOPIA. TRAINING FROM A FARMER'S COOPERATIVE ON FARMING TECHNIQUES HAS INCREASED HER CROP PRODUCTION AND TRANSFORMED HER AND HER FAMILY'S LIVES.

PHOTO: MIKE TURNER

INTRODUCTION

African agriculture has the potential to spur growth, reduce poverty and transform millions of lives. Yet, suffering from a lack of investment and political attention, it has not realised this potential. Further hindering agricultural development and broader growth is a wide and pervasive gender gap in agricultural productivity, caused by numerous economic, cultural and institutional disadvantages faced by women farmers. Investing in women farmers and instituting policies that close the gender gap in African agriculture could yield enormous benefits, not only for women themselves, but also for their families, their communities and their entire countries. The UN Food and Agriculture Organization (FAO) has estimated that if women worldwide had the same access to productive resources as men, they could increase yields on their farms by 20–30% and total agricultural output by 2.5–4%, lifting between 100 and 150 million people out of hunger.¹ Furthermore, when a woman gains more control over her income, she gains more say over important decisions that affect her family, especially her children. Families where women influence economic decisions allocate more income to food, health, education and children’s nutrition, thus benefiting Africa’s next generation.²

While many African policy-makers, donor governments and development partners have turned their attention to the gender gap in African agriculture, their efforts could be enhanced by a better understanding of *which* factors matter, *how* they matter in different contexts and *what* policies can be effectively employed to bridge that gap. For too long, policy-makers have lacked high-quality, consistent data on agriculture, let alone sex-disaggregated data for the sector.³

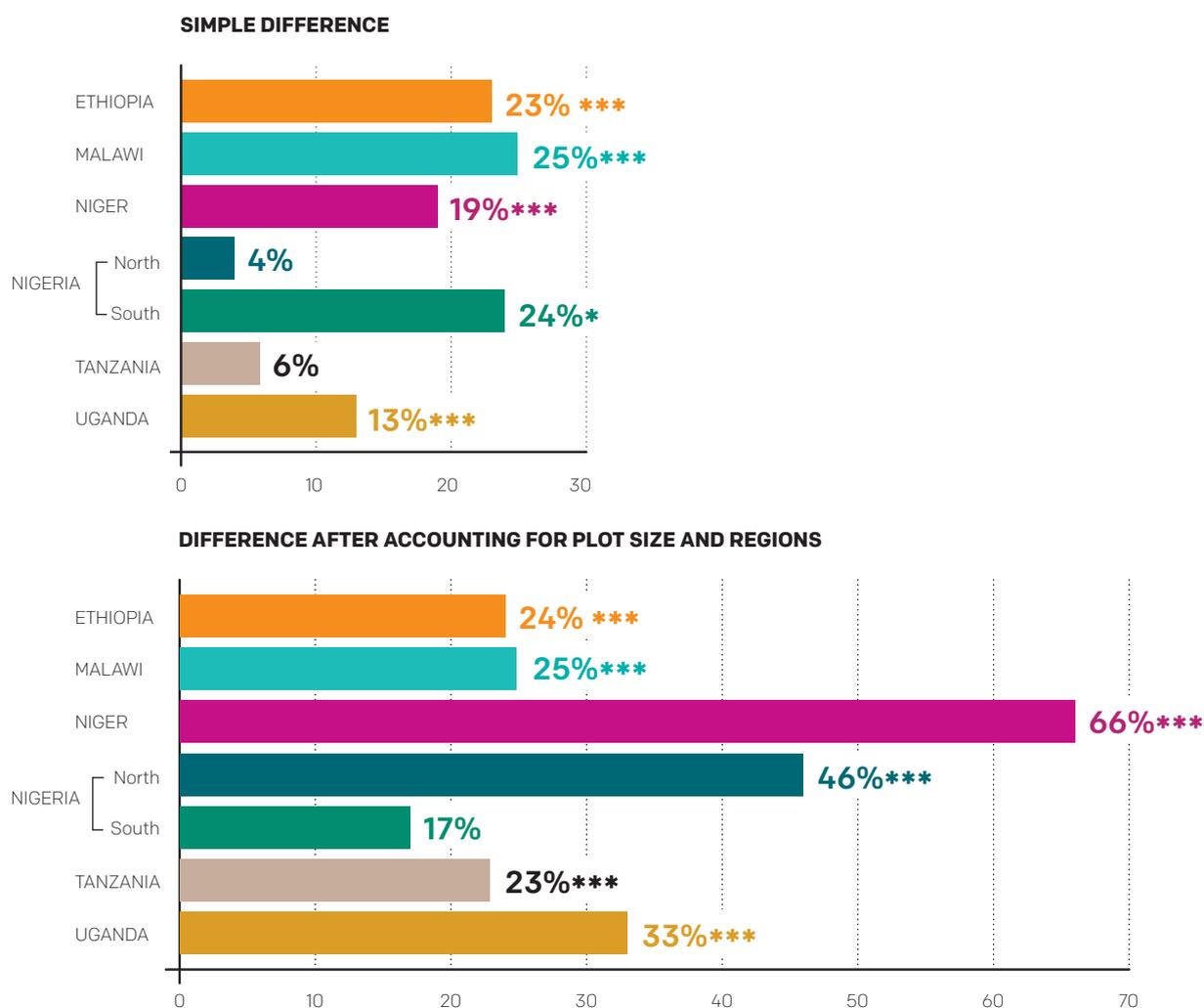
This report, “Levelling the Field: Improving Opportunities for Women Farmers in Africa”, offers new evidence and fresh insights on the factors that account for the gender gap in six African countries: Ethiopia, Malawi, Niger, Nigeria, Tanzania and Uganda. Drawing on data collected by national statistics offices with assistance from the Living Standards Measurement Study – Integrated Surveys on Agriculture (LSMS-ISA) programme, and applying an established statistical method in a new way, the report allows for richer, more detailed analyses of gender dynamics in agriculture. By identifying the precise factors responsible for the gender gap in each of these six countries, it suggests specific policy proposals to address the main constraints that women farmers face and generate benefits for the economy as a whole. These findings and policy recommendations are outlined in the following pages.

KEY FINDINGS

1 Women farmers consistently produce less per hectare than their male counterparts.ⁱ

This report, profiling six countries that comprise more than 40% of sub-Saharan Africa's population, presents the clearest evidence to date attesting to the breadth and depth of the gender gap in African agriculture. A simple comparison of average male and female productivity shows that the gaps range from a low of 13% in Uganda to a high of 25% in Malawi.ⁱⁱ This suggests that in Malawi, for instance, male-managed plots produce on average 25% more per hectare than female-managed plots. A more refined measure of these gaps, accounting for differences in plot size and geographic factors, reveals a starker picture: When comparing women and men with similar-sized plots in a similar context, the gender gaps range from 23% in Tanzania to a strikingly large 66% in Niger.ⁱⁱⁱ

FIGURE 1: Gender Gaps in Agricultural Productivity, by Country



Note: The symbols */**/** denote statistical significance at the 10%, 5% and 1% levels respectively.

ⁱ The terms “women farmers”, “female farmers” and “female plot managers” are used interchangeably throughout the full report and indicate women who make important managerial decisions about a given plot of farmland. The full report provides more information about this definition.

ⁱⁱ The gaps in Tanzania and northern Nigeria are statistically insignificant based on a simple comparison.

ⁱⁱⁱ The gap in southern Nigeria is statistically insignificant with this refined measure, probably due to a relatively small sample size.

2**The gender gap is caused by more than unequal access to inputs; women also face unequal returns to the inputs they have.**

Previous research highlighting the gender gap in agriculture has focused exclusively on women's access to key inputs, such as fertiliser, agricultural information and farm labour, concluding that if women had better access, they would be equally productive. The methodology in this report looks not only at the quantity and levels of resources that women use, but also assesses the returns that they receive from these resources, or how well these resources actually translate into increased agricultural productivity. In doing so, the report reveals that in many countries, even when women have access to the same amount of inputs as men, equal access does not achieve the same effect in terms of agricultural productivity. This novel insight points to broader norms, market failures or institutional constraints that alter the effectiveness of these resources for women. For example, women in Ethiopia and Uganda benefit less than men, in terms of increased agricultural productivity, from extension advice that their households receive, suggesting that current agricultural extension programmes may be better attuned to the needs of male farmers. These crucial new findings will empower governments and development organisations to better tailor policies and programmes to those issues and constraints that are most critical to the livelihoods of women farmers in their countries.

3**Focusing on the key drivers of the gender gap in individual countries can both enhance gender equality and foster economic growth.**

Women farmers face numerous disadvantages, such as barriers to accessing credit and lower levels of education, though not all of these disparities contribute equally to the gender gap, if at all. This report provides evidence on the principal factors behind the gender gap, as well as the relative importance of these particular factors. For example, in Malawi, women use lower levels of agricultural inputs on their plots, including fertiliser and extension services, than men, and this difference accounts for more than 80% of the gender gap in productivity in that country. The report also shows that not every factor matters in each country. By focusing political attention and marshalling resources to tackle the specific issues identified in their respective countries (see Table 1), policy-makers, practitioners and development partners can begin to address gender equality and help usher in greater productivity and growth. This report reveals the following to be key drivers of the gender gap in the six countries analysed.

**Labour poses the main barrier to achieving equality in productivity across all the countries profiled. To address this inequality, African governments and donors must do more to develop effective policies and programmes to help female farmers overcome this barrier.**

Agriculture in Africa depends heavily on manual labour, supplied by farmers' households, families and communities. Yet women farmers face many difficulties in mobilising extra help to work on their farms, and these challenges begin in the home. On average, female farmers tend to live in smaller households with fewer men, possibly due to widowhood, migration or divorce. Consequently, women farmers across Ethiopia, Malawi, northern Nigeria, Tanzania and Uganda have fewer household members to provide labour on the farm or support in the home. Even after taking into account household size, female farmers in Malawi, Niger, southern Nigeria and Tanzania deploy fewer household male labourers on their plots. Further, in all these countries except Nigeria, these male labourers generate lower returns for female farmers relative to male farmers. Female farmers also face challenges in hiring effective outside labour. These findings suggest that women may not be able to afford to pay as much as men for effective farm workers; that cultural norms may mean that these labourers work harder for a male supervisor; and/or that women's time constraints (due to their household roles) may affect their ability to supervise their farm labourers. Indeed, women typically assume a larger role in child-care and household responsibilities than men, which is likely to restrict their ability to work on their own farms or manage their labourers. Men, meanwhile, tend to have greater control over how to allocate family labour, including that of younger household members. For these reasons, having a larger proportion of children in the household (relative to adults) reduces women's productivity more than men's in Malawi, Niger, southern Nigeria and Uganda.

Despite the fact that female farmers across all six profiled countries face these types of labour challenges, evidence on policies aiming to help women overcome these barriers is rare. For these reasons, African governments and donors must prioritise attention in this area and develop effective programmes that help women farmers hire outside labour, use tools and equipment that reduce the amount of labour they require on the farm, and access community-based child-care.

¹⁹ Statements explaining the returns findings in this section and in the full report assume that all other variables are held constant. The full report provides more information on the variables controlled for in the individual studies.

➤ Differences in the use of, and returns to, fertiliser and other non-labour inputs matter for the gender gap.

Women have unequal access to a variety of productive inputs,⁴ and this report also demonstrates the importance of unequal returns to those inputs. Indeed, differences in input use and returns contribute to the gender gap across all the countries profiled. In Malawi, Niger, northern Nigeria and Uganda, women use lower overall levels of fertiliser than men, which reduces their relative agricultural productivity. In Ethiopia and Tanzania, gender differences in returns to fertiliser contribute to the gap, suggesting that female farmers in these countries use lower-quality fertiliser, apply the input incorrectly or use it at the wrong time. African governments and donors should support programmes that encourage women to apply higher levels of fertiliser and other non-labour inputs to their plots, and to secure better-quality fertiliser.

➤ Even after a woman accesses farm land, other associated challenges can limit her productivity.

Access to, and control of, land are critical for agricultural investment and rural household welfare. Yet statutory and customary land tenure systems often disadvantage rural women, who are less likely to control land than rural men, and women's insecurity of tenure reduces their investments in their land, thus undermining their productivity. The analysis in this report can shed only partial light on complex issues related to land access and control. Nevertheless, it suggests that a number of factors relating to land (beyond access itself) can help explain the gender gap. One of these challenges relates to land size. In Ethiopia and Tanzania, women receive lower returns than men to an extra hectare of land. This could be due to lower quality of the land, but it could also be due to women's relative difficulty in managing farm labour or the application of other inputs across larger tracts of land. African governments must focus on strengthening women's land rights in order to begin to address these issues undermining women's productivity.

➤ Agricultural extension and information does not improve female farmers' productivity to the same degree as that of male farmers.

Knowledge and training in farming methods and techniques are critical for both women and men, but women farmers tend to have less access to this information, and particularly information attuned to their needs. Women farmers tend to receive second-hand information from husbands and friends if they are not the head of their household. Furthermore, they may not attend training activities due to household responsibilities or mobility constraints, and they may not be able to interact effectively with male extension agents due to cultural norms.⁵ In fact, this report shows that women in Ethiopia and Uganda benefit less than men, in terms of increased agricultural productivity, from some sources of extension advice that their households receive, suggesting that current agricultural extension programmes may be better attuned to the needs of male farmers. Female farmers in Malawi, meanwhile, belong to households that receive less technical guidance on agricultural production and marketing, which contributes to the gender gap. Policy-makers in these countries should consider better tailoring extension services to women's needs and spreading agricultural knowledge through other mechanisms, perhaps including women's social networks.

➤ The gender gap in education, prevalent in previous decades, continues to affect women farmers today.

Although countries across Africa have recently made great strides in achieving gender parity in schooling, the gender inequalities of previous decades continue to have an impact on the gender productivity gap today. Differences in schooling between male and female farmers translate into differences in agricultural productivity in Uganda and, to a lesser degree, Malawi. Policy-makers in these countries should therefore strive to raise the education levels of adult female farmers to help close the productivity gap.

➤ Improving women's access to markets and enabling female farmers to shift into high-value commercial agriculture both show promise.

In Malawi, women farmers are less likely to cultivate export crops, such as tobacco, than men. This difference contributes substantially to the country's gender gap because these export crops command a higher market value than traditional staple crops. Yet in Malawi, northern Nigeria and Uganda, female farmers enjoy higher returns than male farmers from switching into high-value agriculture. Policies that leverage this advantage can therefore enhance gender equality and boost agricultural growth.



A SMALLHOLDER FARMER IN UGANDA.

PHOTO: USAID

TABLE 1: Factors that Widen the Gender Gap in Agricultural Productivity

		Ethiopia	Malawi	Niger	N. Nigeria	S. Nigeria	Tanzania	Uganda
LAND	Land Size	Orange	Grey	Grey	Grey	Grey	Orange	Grey
	Other Land Characteristics*	Orange	Teal	Orange	Light Grey	Light Grey	Grey	Grey
LABOUR	Household Size	Teal	Teal	Orange	Diagonal (Teal/Orange)	Grey	Teal	Teal
	Household Male Farm Labour†	Grey	Diagonal (Teal/Orange)	Diagonal (Teal/Orange)	Grey	Teal	Diagonal (Teal/Orange)	Orange
	Household Female Farm Labour†	Grey	Grey	Teal	Grey	Grey	Orange	Orange
	Hired Farm Labour†	Grey	Grey	Orange	Teal	Grey	Orange	Teal
	Time Spent on Farm Activities	Diagonal (Teal/Orange)	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey
	Ratio of Children to Adults within Household	Grey	Orange	Orange	Grey	Orange	Grey	Orange
	Improved/Purchased Seeds	Grey	Teal	Light Grey	Grey	Grey	Light Grey	Teal
NON-LABOUR INPUTS	Pesticide/Herbicide Use†	Grey	Teal	Grey	Grey	Teal	Orange	Teal
	Fertiliser Use (Organic or Inorganic)†	Orange	Diagonal (Teal/Orange)	Diagonal (Teal/Orange)	Teal	Grey	Orange	Teal
	Irrigation	Grey	Light Grey	Light Grey	Light Grey	Light Grey	Grey	Grey
	Farm Tools & Equipment	Orange	Teal	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey



Levels of factor found to widen the gender gap



Returns to factor found to widen gender gap



Levels and returns to factor found to widen gender gap



Factor included in country analysis but not found to widen the gender gap



Factor not included in country analysis

Note:

Only statistically significant factors (10% significance threshold) that widen the male-female gap reported.

* Number of plots managed and plot-level slope, elevation, soil quality, ownership and documentation.

† Includes both use and intensity of factor use (quantity/value per hectare or acre).

4**2014 offers an historic opportunity for African policy-makers, donor governments and development partners to move the agenda forward and commit to concrete policy action to redress the gender gap in African agriculture.**

In many African countries, agricultural policy has not distinguished between men and women farmers and their different needs. The persistent gender gap, documented in this report, underscores the fact that a shift in thinking is long overdue: Existing agricultural policies need to become better attuned to the issues that undermine the productivity of female farmers, and new policies and programmes must be designed and implemented to meet their needs. Without sufficient attention to increasing women's productivity, an opportunity for growth in agriculture will remain unexploited, and broader development efforts will be hampered.

The African Union has declared 2014 to be the "Year of Agriculture and Food Security", bringing much needed attention to the sector's potential to transform the continent. As part of this historic year, African governments should make a new, robust commitment to narrow the gender gap in agriculture and should unveil this commitment at the African Union Summit in Equatorial Guinea this June.

To make progress in narrowing this gap, African leaders should consider the ten policy priorities and options, detailed in this report, to address the particular challenges in their countries (see Table 2). These policy priorities are informed by the report's new and comprehensive evidence of the main drivers of the gender gap. Based on the best available research and impact evaluation evidence, they provide both *promising* interventions, for which existing evidence indicates a high potential for success, and *emerging* interventions, which may benefit from further testing.

Meanwhile, given the limited knowledge of effective policies to date, donors and development organisations can play a catalytic role in supporting African governments to close the gender gap in agriculture by taking the following measures:

- Create a "challenge fund" to support the piloting and scaling up of effective policies to support female farmers and close the gender gap.
- Support national agriculture plans with clear attention to the differing needs of male and female farmers.
- Consider this report's findings in relation to donor programmes and continue to use gender analysis to inform the design of programmes and collect sex-disaggregated data as part of the monitoring and evaluation of programme impacts.

These steps will mark an important turning point for Africa's women farmers towards the opportunity and equality they rightfully deserve.

TABLE 2: Ten Policy Priorities for Narrowing the Gender Gap in African Agriculture

■ Promising policy option (based on available evidence)
■ Emerging policy option (based on available evidence)

KEY DRIVER	POLICY PRIORITY	POLICY OPTION
LAND	1. Strengthen women's land rights.	Formalise land rights through registration to increase women's tenure security.
		Expand co-titling and individual titling for women.
		Reform family and inheritance law to protect women's rights.
LABOUR	2. Improve women's access to hired labour.	Offer women farmers financing to hire farm labour.
		Task agents with helping women farmers to find labour.
	3. Enhance women's use of tools and equipment that reduce the amount of labour they require on the farm.	Provide women farmers with financing or discounts for hiring or purchasing machinery.
		4. Provide community-based child-care centres.
NON-LABOUR INPUTS	5. Encourage women farmers to use more, and higher-quality, fertiliser.	Provide women farmers with financing or price discounts aligned with their cash flow to encourage the purchase of fertiliser.
		Certify small bags of fertiliser for use by women.
	6. Increase women's use of improved seeds.	Provide flexible financing for seeds.
		Help women better identify and obtain good-quality seed.
INFORMATION	7. Tailor extension services to women's needs, and leverage social networks to spread agricultural knowledge.	Train extension agents to target female farmers and be more responsive to their agricultural information needs.
		Bring agricultural training and advice to women's doorsteps through farmer field schools and mobile phone applications.
		Identify female volunteer farm advisors to spread information within women's social networks.
ACCESS TO MARKETS	8. Promote women's cultivation of high-value/cash crops.	Promote women's cultivation of high-value/cash crops.
	9. Facilitate women's access to and effective participation in markets.	Provide market services through information and communications technology (ICT).
		Channel existing groups to access market opportunities.
HUMAN CAPITAL	10. Raise education levels of adult female farmers.	Raise education levels of adult female farmers.

For the full report, go to: www.one.org/gendergap.

ENDNOTES

INTRODUCTION

1. FAO. 2011. "The State of Food and Agriculture 2010–2011: Women in Agriculture: Closing the Gender Gap for Development". <http://www.fao.org/docrep/013/i2050e/i2050e00.htm>
2. E. Kennedy and P. Peters, 1992. "Household food security and child nutrition: the interaction of income and gender of household head". *World Development* 20(8): 1077-1085; E. Kennedy and L. Haddad. 1994. "Are preschoolers from female-headed households less malnourished? A comparative analysis of results from Ghana and Kenya". *Journal of Development Studies* 30(3): 680-695; J. Hoddinott and L. Haddad. 1995. "Does female income share influence household expenditure patterns?". *Oxford Bulletin of Economics and Statistics* 57(1): 77-96; D. Thomas. 1997. "Incomes, expenditures and health outcomes: evidence on intrahousehold resource allocation". In L. Haddad, J. Hoddinott and H. Alderman (eds.). "Intrahousehold Resource Allocation in Developing Countries". Johns Hopkins University Press, Baltimore, USA; L. Haddad. 1999. "The earned income by women: impacts on welfare outcomes". *Agricultural Economics* 20(2): 135-141; A. Quisumbing and J. Maluccio. 2000. "Intrahousehold Allocation and Gender Relations: New empirical evidence from four developing countries". IFPRI. Washington, DC; L.C. Smith, U. Ramakrishnan, A. Ndiaye, L. Haddad and R. Martorell. 2003. "The Importance of Women's Status for Child Nutrition in Developing Countries". Research Report No. 131. IFPRI. Washington, DC; C.R. Doss. 2005. "The effects of intrahousehold property ownership on expenditure patterns in Ghana". *Journal of African Economies* 15(1): 149-180.
3. C. Carletto, D. Jolliffe and R. Banerjee. "The Emperor Has No Data! Agricultural Statistics in Sub-Saharan Africa". <http://mortenjerven.com/wp-content/uploads/2013/04/Panel-3-Carletto.pdf>

KEY FINDINGS

4. A. Peterman, A.R. Quisumbing and J. Behrman. 2014. "A Review of Empirical Evidence on Gender Differences in Nonland Agricultural Inputs, Technology, and Services in Developing Countries", in A. Quisumbing, R. Meinzen-Dick, J. Behrman, T. Raney, A. Croppenstedt and A. Peterman (eds.). "Gender in Agriculture and Food Security: Closing the Knowledge Gap". Springer (in press), Dordrecht, The Netherlands.
5. A.R. Quisumbing and L. Pandolfelli. 2010. "Promising Approaches to Address the Needs of Poor Female Farmers: Resources, Constraints, and Interventions". *World Development* 38, 581-592.

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