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Comprehensive Africa Agriculture Development Program (CAADP)

RWANDA

Strategic Options and Sources for Agricultural Growth, Poverty Reduction, and Food Security

Implementing the Comprehensive Africa Agriculture Development Programme (CAADP) as the centrepiece of a poverty-reduction strategy implies that agriculture and its individual subsectors must play a primary role as leading sources of pro-poor growth at the national and rural levels. Rwanda and the other African countries are not just seeking to accelerate growth but also to maximise and broaden the impact of such growth on poverty reduction. Successful implementation of the CAADP agenda therefore should be guided by a good understanding of the impact of sectorwide growth and growth within individual agricultural subsectors on income and poverty levels among different categories of rural households. In the present case, a better understanding of the possible equity implications of the current strategies under the Strategic Plan for Agricultural Transformation (PSTA) would allow the government of Rwanda to emphasise the options that are more likely to balance growth and maximise its poverty-reduction impact.

AGRICULTURAL SECTOR GROWTH AND POVERTY REDUCTION IN RWANDA

If the current PSTA strategy were to be successfully implemented to achieve the 6 percent CAADP target growth rate and were to be complemented by strategies to induce a comparable rate of growth in the nonagricultural sector, the contribution from growth in agriculture to poverty reduction would be about 50 percent higher than that from growth in the nonagricultural sector. For every 1 percent decline in poverty—rural and national—about two-thirds would be attributable to growth in the agricultural sector (see Figure 1).

While accelerated growth in agriculture as a whole may be the most promising poverty-reduction strategy currently available to Rwanda, such a strategy needs to recognise that not all subsectors contribute to agricultural growth and poverty reduction in the same way. The size of the contribution of individual subsectors is determined by their initial shares in income and employment and their potential for incremental growth. In Figure 2, the axis on the left and the bars show the projected contributions to agricultural GDP resulting from an additional 1 percent annual rate of growth in individual subsectors. The line and the axis on the right show the corresponding contribution to the reduction in the rate of poverty. The staples subsector and the roots and tubers subsector exhibit the highest levels of contribution to agricultural incomes and poverty reduction. An additional 1 percent growth per year to 2015 in either subsector would generate an incremental income of around US$80 million and US$10 million, respectively. The corresponding decline in the overall rate of poverty would be 3 percent in the case of the former sector and 0.5 percent in the case of the latter.

The long-term contributions (to 2020) of alternative growth strategies to poverty reduction are plotted in Figure 3. Each line depicts the decline in poverty that would be achieved if Rwanda were to choose a strategy focusing exclusively on the corresponding subsector(s) to achieve an overall agricultural growth rate of 6 percent. The top (baserun) line indicates the decline in poverty rates under the continuation of current trends across all subsectors, which would result in a modest reduction from the current 60 percent to slightly more than 50 percent. The second line from the bottom shows the outcome assuming continued successful implementation of the PSTA agenda across all subsectors, which would reduce poverty rates to 41 percent by 2020. The lines between these two denote the outcome of alternative, isolated strategies that would focus exclusively on single subsectors such as roots and tubers, livestock, cereals, or exports. These projected outcomes indicate that such efforts would lower the rate of poverty at most by an additional 1–3 percentage points compared to current trends, and thus would be less effective than a more comprehensive, sectorwide strategy in terms of reducing overall poverty levels.

The bottom line in Figure 3 illustrates the added contribution of stimulating growth in the nonagricultural sector to meet the 6 percent agricultural sector

Figure 1 – Contribution of Agricultural Sector Growth to Poverty Reduction at the National Level and in Rural Areas

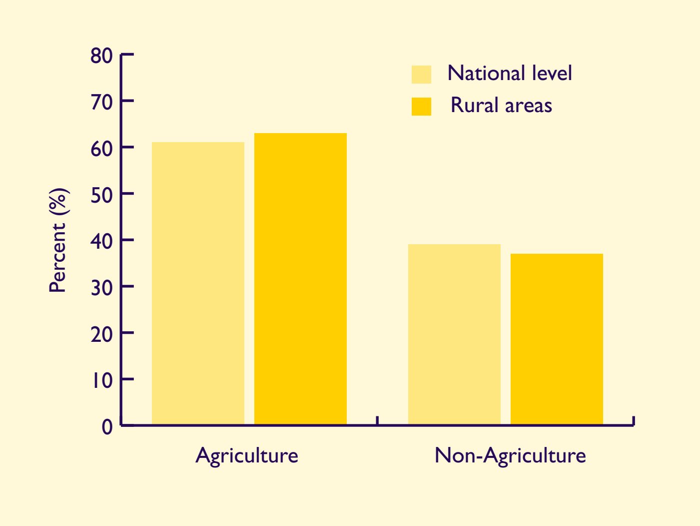
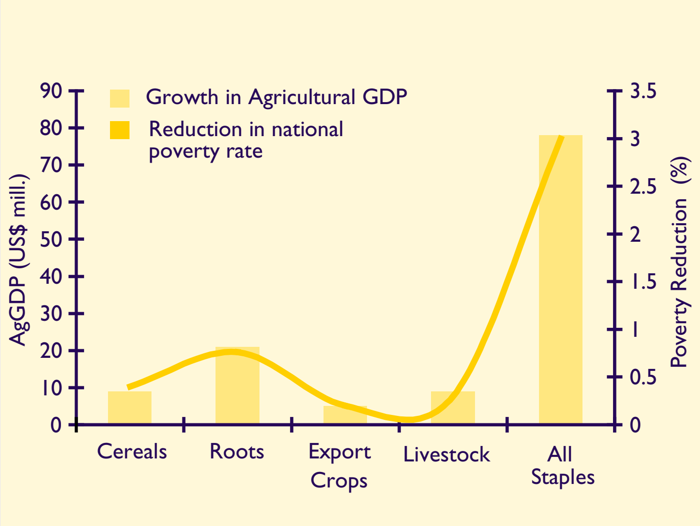


Figure 2 – Subsector Contribution to Agricultural GDP (US$ mill.) and Poverty Reduction (%)



growth under the PSTA and CAADP agendas, which would further reduce the overall poverty rate to less than 35 percent by 2020, almost meeting the Millennium Development Goal of halving poverty by 2015 (MDG1). It may be extremely difficult to actually achieve the very high rates of agricultural and nonagricultural sector growth that would be required to meet the poverty MDG by 2015, estimated at 9 percent and 7.2 percent, respectively (see Brochure 2: *Agricultural Growth, Poverty Reduction, and Food Security: Past Performance and Prospective Outcomes*). However, the above results indicate that Rwanda can make significant progress toward that goal by 2020—by ensuring successful and sustained implementation of the PSTA agenda, coupled with an effective strategy to stimulate growth in the nonagricultural sector.

An analysis of the alternative growth sources and poverty-reduction outcomes yields the following lessons with respect to efforts to successfully design and implement strategies to meet the CAADP growth target and achieve the poverty MDG in Rwanda:

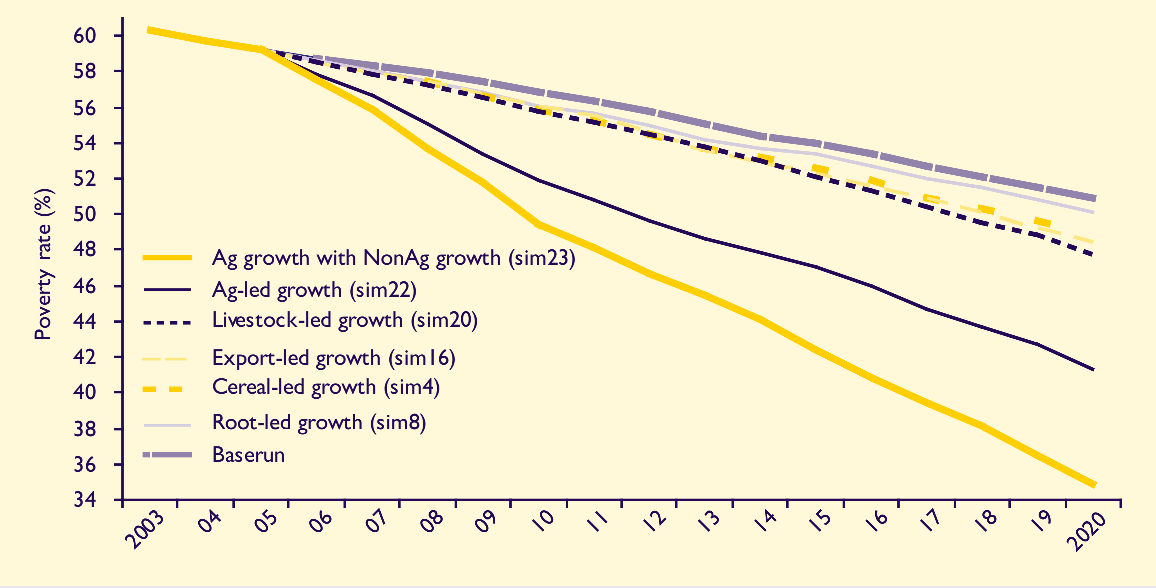
1. Agriculture will remain the main source of growth and poverty reduction in Rwanda during the next 10–15 years.
2. A continuation of past growth trends in the sector would only reduce the national rate of poverty by 6 and 9 percentage points compared to current trend levels (to 54 percent and 51 percent, respectively) by 2015 and 2020.
3. Isolated strategies targeting any of the major subsectors separately would lower the rate of poverty at most by an additional 1–3 percentage points.
4. Realising a comprehensive, agricultural sectorwide growth of 6 percent by successfully implementing the PSTA agenda across all major subsectors would reduce the poverty rate by an additional 7 to 10 percentage points (to 47 percent and 41 percent, respectively) by 2015 and 2020.
5. If, in addition, complementary strategies were implemented to achieve a similar rate of growth in the nonagricultural sector, the poverty rate could be reduced further to 42 percent and 35 percent by 2015 and 2020, respectively, and Rwanda would almost achieve the poverty MDG by the latter date.

POTENTIAL EQUITY EFFECTS RELATED TO GOVERNMENT GROWTH TARGETS UNDER THE PSTA

Impact of Subsectoral Growth on the Reduction and Distribution of Poverty among Household Categories

Planned strategies under the PSTA are projected to generate strong growth across all subsectors and for all rural household categories. The distribution of growth and its impact on poverty is shown, however, to vary significantly among categories. Incomes are projected to increase relatively faster among male-headed households, households producing export crops, and households with greater access to cropland, as compared to female-headed

Figure 3 – Poverty Outcome by 2020 of Alternative Growth Strategies



households, households that do not produce export crops, and households that have less than 0.3 ha of cropland. Since the latter groups of households tend to have initially lower incomes than the first set, the differences in income growth rates are likely to lead to a widening of the income and poverty gaps between the two, as indicated in Figures 4 and 5.

Possible Equity Effects and How to Address Them under Current PSTA Targets

Implementation of the PSTA should take these potential equity effects into consideration. The purpose here is not necessarily to achieve equal outcome but rather to raise the overall level of income gain and poverty reduction by maximising the gains among household groups at the lower end of the spectrum. This can be done by emphasising in the design and implementation of programmes those subsectors that contribute more immediately and to a greater extent to income growth and poverty reduction among the categories of households that would otherwise lag further behind.

The benefit from future agricultural growth may vary among groups of households due to the following factors:

1. the importance of individual subsectors as a source of income and employment for different household groups;
2. the scope for incremental growth in individual subsectors, given technological, market, and other conditions affecting demand and supply; and
3. the initial distribution of growth among individual agricultural subsectors, and the fact that growth in some subsectors affects growth in others through adjustments in demand, supply, and price conditions.

The importance of individual subsectors as sources of income growth and poverty reduction among key household groups is depicted in Figure 6. The graphs illustrate the implications of export-crop adoption and access to cropland for long-term growth and poverty-reduction and also take into account the gender aspects that are involved. The various graphs confirm the predominance of the agricultural sector as a source of income growth for households in the rural areas.

Graphs a, c and e of Figure 6 also highlight the role of the staples subsector as the single most important contributor to income growth and poverty reduction among female-headed households and households without export crops or significant access to cropland. These households tend to have lower average incomes, higher rates of poverty, and are projected to enjoy slower growth under current PSTA targets (see Figure 4). The importance of the staples subsector is also evident among the remaining set of households (see Graphs b, d, and f in Figure 6). However, the latter are relatively more diversified and would benefit equally strongly from growth in the livestock and export crop subsectors. Moreover, this set of households would enjoy a much higher rate of growth among current PSTA targets (see Figure 4).

The importance of the livestock subsector for households with less access to land has important operational

Figure 4 – Projected Rates of Income Growth Among Rural Households under PSTA Targets, 2005–2015

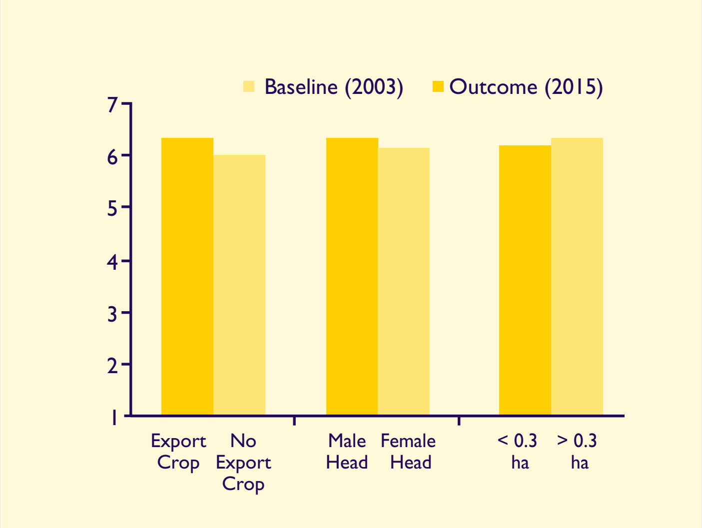
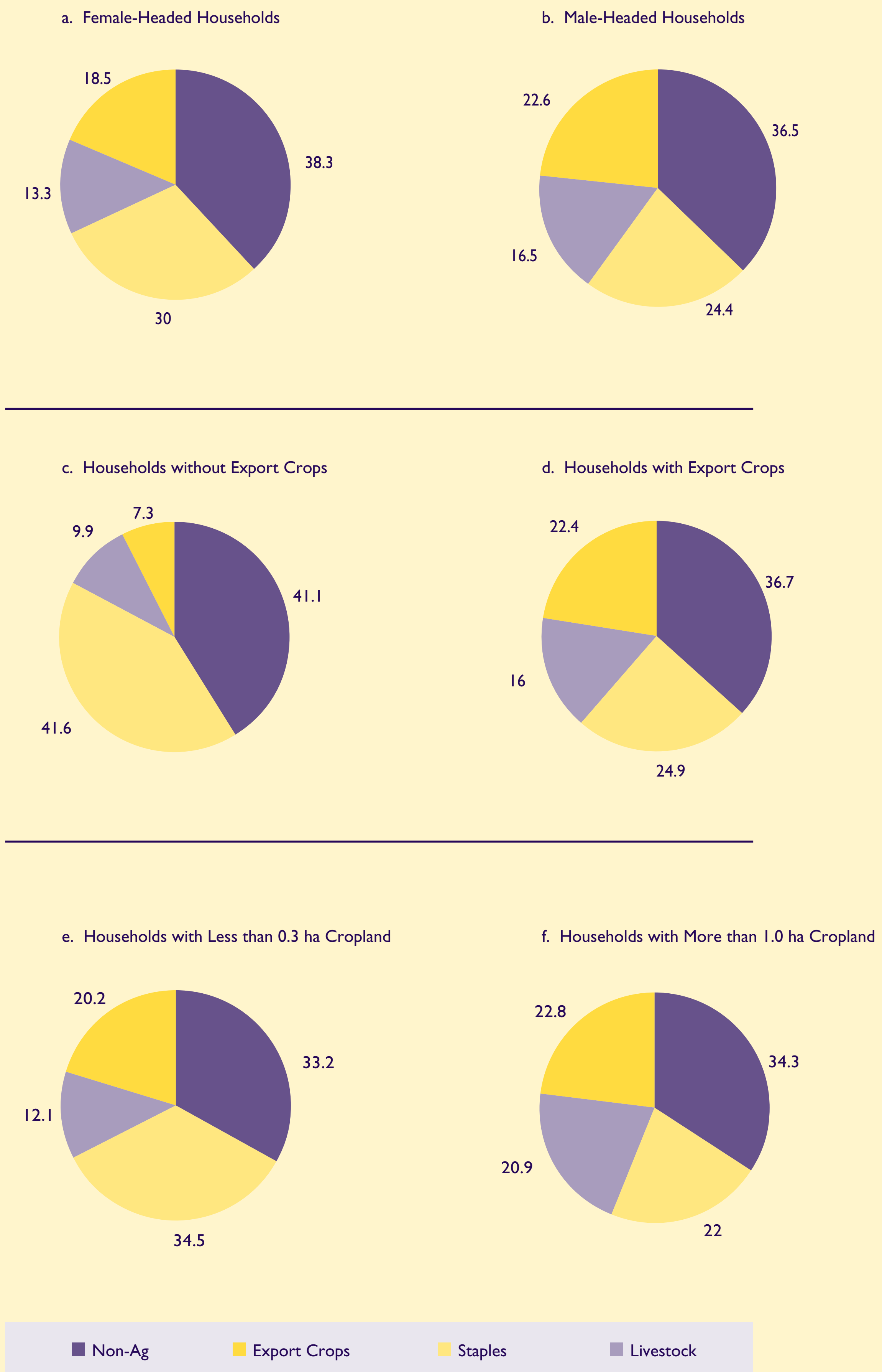


Figure 5 – Projected Gaps in Poverty Rates Among Rural Households under PSTA Targets, 2005–2015

Figure 6 – Projected Contribution of Individual Subsectors to Income Growth and Poverty Reduction among Key Household Groups (%)



implications for the PSTA agenda, as does that of the export subsector for households with more access to land. Finally, the strong contribution of the nonagricultural sector highlights the importance of complementing current PSTA subsector targets with strategies to stimulate growth in that sector.

The implementation of the PSTA agenda needs to reflect these dynamics in order to ensure that the income and poverty-reduction benefits of future agricultural growth are widely shared and its potential equity effects are neutralised. If the design and implementation of future programmes under the PSTA agenda are carried out such that they take into consideration the subsectoral and geographic distribution of vulnerable households, it should be possible to balance out the income and poverty-reduction benefits of these programmes and thus avoid outcomes such as the ones projected in Figure 5. For instance, programmes that emphasise the staples and livestock subsectors in areas with a high concentration of female-headed households and a limited access to land would result in more balanced growth and poverty outcomes across households.

The following lessons can be drawn regarding the design and implementation of programmes to stimulate growth and reduce poverty under the PSTA agenda:

1. Agriculture remains a key source of growth and a major contributor to poverty reduction nationally as well as across all individual rural households.
2. The realisation of current government targets under the PSTA agenda is projected to stimulate growth across agricultural subsectors and for all household categories.
3. The distribution of growth and its impact is expected to vary considerably across household groups, with differences in annual growth rates of income of up to 0.3 percentage points in favour of less vulnerable households.
4. As a result, the poverty gap between those households and other, more vulnerable household groups is shown to potentially increase by up to 10 points under current PSTA targets.
5. The staples and livestock subsectors are major sources of future growth and contributors to poverty reduction among the most vulnerable household categories, accounting for 20-40 percent of the projected income growth among this group.
6. Consequently, the implementation of the PSTA agenda needs to emphasise these two subsectors in areas with a high concentration of the most vulnerable household categories so as to better balance out and broaden the impact of growth and poverty reduction.
7. The nonagricultural sector can potentially play a critical complementary role, including in the case of the most vulnerable households.

Based on research by the International Food Policy Research Institute (IFPRI) in collaboration with experts from Rwanda. Supported financially and logistically by MINAGRI, MINECOFIN, the Department for International Development (DFID), the Food and Agriculture Organization of the United Nations (FAO), the Government of Belgium, and the World Bank.

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