



# Prioritizing investment in Paraguay's agriculture is vital for recovery

## Paraguayan agriculture: Is this a sector in demise?

Between 2010 and 2019, the Paraguayan economy grew significantly, with important contributions from the agriculture sector. The economic contraction resulting from the pandemic was below initial expectations, in part due to the resilience of the primary sector. However, the participation of the primary sector is declining, and not as a result of a structural change arising from productivity growth. The agriculture sector has significant structural problems.

Lack of investment in productive infrastructure, technical assistance, credit, access to inputs and modern equipment has affected productivity levels, primarily in family farming.

Projections point to an economic recovery, but what could be the drivers of this new growth? In view of the importance of agriculture, and as poverty in Paraguay continues to be primarily a rural problem, new investments in the sector should contribute to the sector's development and to economic recovery with improved well-being.

## Without fiscal space, how and where should investment be made?

Fiscal space to finance public investment in the infrastructure required by the agriculture sector is limited. Not only has the level of public investment been low, but agriculture does not seem to feature prominently in future investment plans, despite the sector's potential and importance. As such, it is essential that all public investment in agriculture prioritizes the most cost-effective sectors economically and socially.

FAO has developed scenarios to evaluate the impacts of new public investment in productive infrastructure amounting to 0.25 percent of GDP (1 798 trillion in 2014 PYG) during the period 2023–2025, when this investment is allocated to different agricultural sectors. The scenarios extend through 2030 and the results are compared with a base scenario in which there are no changes in public policy.

Although the simulated investment is modest, it does promote productivity. In the short term, investment that promotes the



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## KEY MESSAGES

- ▶ An additional investment in agriculture of 0.25 percent of GDP per year will lead to significant macroeconomic and sectoral impacts.
- ▶ In the short term, investment in sectors that produce inputs for household consumption will have the most favourable impact in terms of household consumption and rural poverty.
- ▶ In the long term, investment in export sectors or sectors with strong production linkages will generate the most favourable impact in terms of private consumption and GDP.

production of the products most prevalent in households' food basket generates the most favourable impacts in terms of increasing private consumption and reducing rural poverty. In the long term, the most positive impacts in terms of private consumption and GDP growth result from investing in export-oriented sectors or in those sectors which have strong production linkages. It is assumed that the government has the capacity to finance the investment using external resources. The results using other sources of financing are less encouraging in terms of spurring recovery.

## Sectoral ranking and cost-effectiveness

Table 1 shows the ranking of agricultural sectors according to the impacts of allocating the new public investment to each sector on four indicators: private consumption, GDP, agrifood GDP and rural poverty. Silviculture leads the ranking due to its intensive use of natural capital, which promotes investment and the growth of physical capital stock. Fruit production is also relatively high in all four dimensions. Soy production and family farming (which is related to soy production) are high in terms of the impact in all dimensions, except rural poverty. Investment in cassava and corn have high impacts in terms of reducing rural poverty.

**TABLE 1. Sectoral ranking according to the impact of public investment in productive infrastructure on private consumption, GDP, agrifood GDP and rural poverty**

No.	Private consumption	GDP	Agrifood GDP	Rural poverty
1	Silviculture	Silviculture	Soybean	Rice
2	Cattle	Soybean	Silviculture	Silviculture
3	Fruits	Cattle	Wheat	Fruits
4	Soybean	Fruits	Family farming	Cassava
5	Family farming	Family farming	Corn	Corn
6	Wheat	Wheat	Fruits	Family farming
7	Rice	Sugar cane	Cattle	Cattle
8	Corn	Corn	Rice	Soybean
9	Sugar cane	Rice	Sugar cane	Wheat
10	Cassava	Poultry	Cassava	Sugar cane
11	Poultry	Cassava	Poultry	Poultry

Source: Sánchez, M.V., Cicowiez, M. & Molinas, J. 2022. *Inversión pública productiva en la agricultura para la recuperación económica con bienestar rural: un análisis de escenarios prospectivos para Paraguay*. Economía del desarrollo agrícola de la FAO – Estudio técnico 19. Rome, FAO. <https://doi.org/10.4060/cc2341es>

Table 2 shows the cumulative change in each indicator for the period 2023–2030 in the scenarios in which investment is allocated to each sector included in the ranking. For example, the cumulative gain in terms of private consumption is between 1 511 and 2 948 trillion in 2014 PYG, depending on the sector. The cumulative gain is equivalent to between 0.8 and 1.6 percent of the GDP of the base year (2014). The indicators presented in the table can be expressed with respect to the amount of the public investment in order to obtain cost-effectiveness indicators. As such, for the most beneficial scenario in terms of national poverty (rice), the number of poor individuals drops to 3 083 for each additional trillion guaranies of public investment. In other words, the average annual cost of lifting an individual out of poverty is between PYG 25.6 million (corn scenario) and PYG 49.5 million (poultry scenario).

## Policy implications

The importance of Paraguayan agriculture, and of family farming within the sector, should not simply be stated as a fact and taken for granted. Rather, it should be bolstered with renewed support for the sector. Investing in a sector such as agriculture in Paraguay ensures that the sector's contribution will grow in terms of economic growth, job creation and poverty reduction. Small increases in public investment aimed at eliminating productive bottlenecks will increase the well-being of the Paraguayan people. The next step would be to act on the basis of this evidence.

**TABLE 2. Results of public investment scenarios in productive infrastructure in agriculture sectors, cumulative for 2022–2030 (absolute percentage deviation with respect to base scenario)**

Item	Sugar cane	Soybean	Rice	Corn	Wheat	Cassava	Fruits	Cattle	Poultry	Family farming	Silviculture
Private consumption (trillion PYG)	1 990	2 623	2 815	2 640	2 729	2 519	2 927	2 948	1 511	2 636	3 345
GDP (trillion PYG)	1 870	2 483	2 076	1 995	2 193	1 750	2 382	2 784	1 456	2 284	2 834
Agrifood GDP (trillion PYG)	535	1 295	949	1 186	1 342	761	1 099	1 048	255	1 251	1 386
Poverty (number of individuals)	-50 633	-61 394	-68 683	-70 375	-65 905	-63 953	-68 666	-66 056	-39 995	-67 970	-75 451
Rural poverty (number of individuals)	-22 667	-32 887	-36 991	-41 867	-34 431	-33 724	-37 193	-28 032	-13 745	-39 463	-36 702
Private consumption (%)	0.15	0.20	0.21	0.20	0.20	0.19	0.22	0.22	0.11	0.20	0.25
GDP (%)	0.10	0.13	0.11	0.10	0.11	0.09	0.12	0.14	0.07	0.12	0.15
Agrifood GDP (%)	0.13	0.31	0.23	0.28	0.32	0.18	0.26	0.25	0.06	0.30	0.33
Poverty (%)	-0.42	-0.51	-0.57	-0.58	-0.55	-0.53	-0.57	-0.55	-0.33	-0.56	-0.63
Rural poverty (%)	-0.35	-0.51	-0.57	-0.64	-0.53	-0.52	-0.57	-0.43	-0.21	-0.61	-0.56

Source: Sánchez, M.V., Cicowiez, M. & Molinas, J. 2022. *Inversión pública productiva en la agricultura para la recuperación económica con bienestar rural: un análisis de escenarios prospectivos para Paraguay*. Economía del desarrollo agrícola de la FAO – Estudio técnico 19. Rome, FAO. <https://doi.org/10.4060/cc2341es>