

---

[Working Paper No. 914](#)

Keep in mind

The series Working Papers on Economics is published by the Office for Economic Studies at the *Banco de la República* (Central Bank of *Colombia*). It contributes to the dissemination and promotion of the work by researchers from the institution. This series is indexed at Research Papers in Economics (RePEc).

On multiple occasions, these works have been the result of collaborative work with individuals from other national or international institutions. The works published are provisional, and their authors are fully responsible for the opinions expressed in them, as well as for possible mistakes. The opinions expressed herein are those of the authors and do not necessarily reflect the views of Banco de la República or its Board of Directors.

AUTHOR OR EDITOR

[Ligia Alba Melo Antonio José Orozco](#)

This paper assesses the efficiency of crop and livestock production in Colombia by using a sample of 1,565 households. The study considers households located in different production systems which differ in geography, climate and soil types. These conditions affect technical efficiency and thus render analysis under the same production frontier as inadequate. For this reason, stochastic metafrontier techniques are preferred, allowing the estimation of technical efficiency within each production system and between production systems in relation to the sector as a whole. Results suggest that households in some production systems could be benefiting from better production conditions due to advantages in the

---

availability of natural resources and climate as well as to more favorable socio-economic conditions. Additionally, we found that, in all systems, households with higher production have higher measures of technical efficiency. Thus, significant gains could be achieved in the sector through measures that contribute to improve the efficiency of households within their production systems and by policies that help reduce the technology gap in relation to the meta-frontier. These policies would bring positive impacts on the quality of life of small farmers and on the productivity of the sector.

The series Borradores de Economía is published by the Economic Studies Department at the Banco de la República (Central Bank of Colombia). The works published are provisional, and their authors are fully responsible for the opinions expressed in them, as well as for possible mistakes. The opinions expressed herein are those of the authors and do not necessarily reflect the views of Banco de la República or its Board of Directors.