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Session I: Competition and Poverty

- Contribution from Ecuador -

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The attached document from Ecuador is circulated to the Latin American and Caribbean Competition Forum FOR DISCUSSION under Session I at its forthcoming meeting to be held on 28-29 September 2023 to be held in Quito, Ecuador.

Mr. Paulo Burnier, Senior Competition Expert – Paulo.Burnier@oecd.org.

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Session I: Competition and Poverty

– Contribution from Ecuador[*] –

This document presents some aspects identified within the analysis carried out by the Superintendence of Economic Competition during the development of its Market Study on the country´s agri-food chains (to be published in September 2023) regarding how market factors[1] and competition could have effects on employment and poverty in the agricultural sector. In this sense, a brief description of the agricultural sector is presented, including its relevance and evolution in the last years; likewise, the characteristics of the use of seed (in its different categories) by farmers are described, as are the employment and wage data of people who develop their economic activity in this sector. Additionally, the paper presents the limitations of the analysis performed and the research findings.

It is important to mention that the market study on the agri-food chains of the country began in July 2002 and has the following objectives: i) Identify how competition is working in the markets of the most relevant agri-food products in Ecuador; ii) Establish the risks that could currently exist for competition in those markets; and iii) Define pertinent recommendations to mitigate the possible risks, and in turn, improve the levels of competition in the sector. Another relevant problem in the study has been the analysis of how commercialization costs are established in each of the links of the value chain (that is, from producers to final consumers).

Regarding the use of certified seed in agricultural production and its relationship with productive performance, there are some aspects that discourage the use of this type of seed, such as low availability, lack of coverage for national production (in planted hectares), and the concentration of the seed market, among others.

Although, due to the limitations of the available information on the use of the seed and its performance, it has not been possible to establish a causality between the use of certified seed and its impact on employment conditions in the sector; the causality criterion of these factors has been considered by the respective sectorial governing entities in the past, which have pointed out that high levels of production performance are directly related to the use of improved and certified seed and hence are relevant characteristics of the agricultural sector that cannot be ignored in public policy.

[*] This contribution was written by Andrea Pedrera from the Superintendence of Economic Competition.

[1] There have been considered as market factors: Access to supplies, production, production costs, and commercialization costs.

1. Background

1. The Superintendence of Economic Competition, in accordance to its powers that have been conferred through the Organic Law for the Regulation and Control of Market Power, since July 2022 began to carry out a Market Study for the Agri-food Chains of the Country (hereinafter "Market Study"), to be published in September 2023, which aims to identify how competition is working in the markets of the most relevant agri-food chains in Ecuador[2], and hence establish the risks that could currently exist for competition in those markets; as part of the Market Study, it is planned to define pertinent recommendations to mitigate or eradicate these possible risks in order to improve competition among economic operators in the sector.

2. For the Market Study, the following products were selected for analysis: i) Cereals (wheat and rice); ii) Legumes (*chola* potato, tomato, and onion); and iii) Meat (beef, chicken, tuna, and eggs). Regarding the concept of the agri-food chain, it is understood as the set of economic activities that add value to products through a series of stages that go from primary production to the consumer, incorporating packaging, industrialization, distribution, and commercialization. As detailed in this part, the following sections describe the processes developed by the Superintendence to obtain data, the analysis carried out, and the main results obtained.

2. Analyzed issues

3. The problem of the agricultural sector that this document addresses, as part of the topics that were reviewed in the Market Study, is related to the use of certified seed in agricultural production in Ecuador and its relationship with the performance, employment and poverty in the sector. For this analysis, the concept that was used is that the lower the use of certified seed, the lower the crop performance would be, which might affect the social and economic conditions of the families that are dedicated to agriculture. At the same time, it was associated the criterion that in Ecuador, the low use of certified seed could be related to its low availability (that is, a little coverage for national production) and the concentration of the commercialization of this supply in few companies.

3. Data Sources

4. The Market Study, in relation to the seed analysis, used the following sources of information: i) Detail of the production and commercialization of basic, certified, and registered seed by the National Institute of Agricultural Research (INIAP for its spanish acronym); ii) Report on the issuance of labels for the commercialization of seed by the Ministry of Agriculture and Livestock (National Agrarian Authority); and iii) Records of economic operators related to the agricultural inputs sector, regarding the importation and commercialization of seeds of the selected products.[3]

[2] There were selected eight (8) agri-food chains, which were prioritized based on their importance in the national production, nutritional contribution, and weighting in the basic food basket, all based on the results of the "Food Balance Sheet" of the Ministry of Agriculture and Livestock (MAG), excluding those foods on which the Superintendence has carried out previous studies between 2019 and 2022.

[3] It should be noted that as of the cut-off date of this document, the information delivered by economic operators was still incomplete.

5. On the other hand, in relation to employment and its conditions, the following data sources were used: iv) The National Survey of Employment, Unemployment, and Underemployment; and v) The statistical registry of employment registered in social security (IESS) elaborated by the National Institute of Statistics and Censuses (INEC). Additionally, the temporality of the collected information covers the period from January 2017 to June 2022.

4. Limitations in the analysis

6. Regarding the limitations in the analysis, it should be noted that although for the Market Study information was requested from both public entities of the sector and private operators, the agricultural sector presents a high degree of informality, and therefore, on this portion of the market there is not enough data, whether in quality or quantity. For example, within the Market Study, there is no information on the production and commercialization of common seed because it is not regulated or controlled by the National Agrarian Authority; thus, it was not possible to have labor information on people who are not affiliated with the mandatory social security insurance, beyond knowing their participation in total employment.

7. Another important limitation in the analysis was that the National Agrarian Authority does not have updated cadastres on the farmers that carry out activities in the reviewed sectors. The last census was carried out in 2000.

5. Analysis in the sector

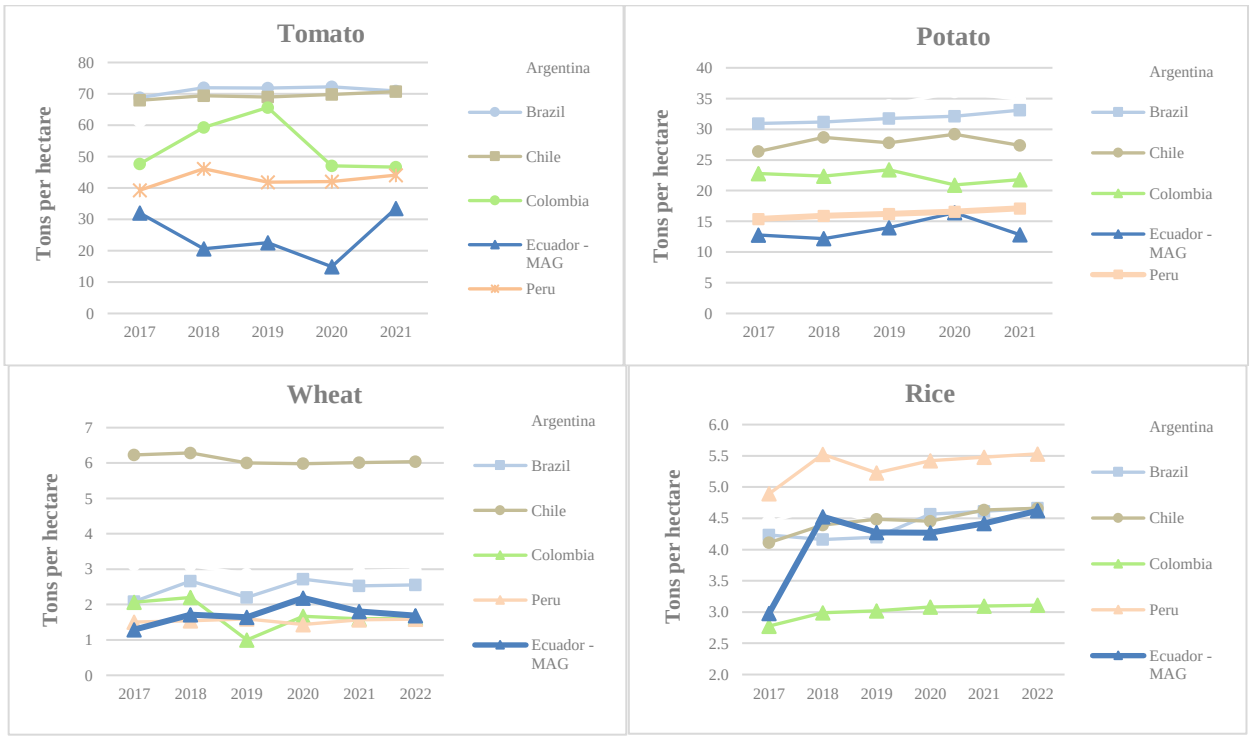
8. This section briefly describes the agri-food sector, for which it should be mentioned that this sector has vital importance for the Ecuadorian economy, given that, for example, it represented an average the 8.04% of the Gross Domestic Product (GDP) during the period from 2017 to 2022. On the other hand, in relation to employment, this sector generated 32.2% of the total jobs in relation to the economically active population (EAP), which means that it generated around 1.5 million jobs by December 2022.

9. Regarding the crop conditions in Ecuador, there were comparisons of the performance per hectare at the national level with other countries in the region, considering crops such as tomato, potato, rice, and wheat (products analyzed in the referred study)[4], from which it was observed that Ecuador is ranked among the last positions in all products; the yields for potato and tomato are lower than those of the neighboring countries with which the comparison was made, while the performance registered for wheat and rice is close to the average of the compared countries[5]. See graph No. 1.

[4] In the Market Study, other products that are part of the production chain are also reviewed, but due to the scope of this document, they have not been considered for the analysis.

[5] The comparative analysis has not considered the main producing countries worldwide, not countries from other geographical regions or continents, due to the differences in the conditions of the productive land and climate, among others.

Graph 1. Productive yields



Note: Elaboration: National Direction of Market Studies
Source: OECD - Crop production, World Bank

10. As previously mentioned, this document intends to analyze the relationship between the type of seed used and the performance, employment, and poverty in the sector; in this sense, it should be first noted that the country recognizes the '*conventional*' and '*non-conventional*' seed production qualification systems:

- The *non-conventional* is a system "practiced by natural or legal persons, groups, communes, communities, peoples, or nationalities that generate peasant seed that in turn includes native and traditional seeds"[6].
- Meanwhile, the *conventional* system is based on seed certification, which is subject to State's regulation. In this system, among other regulations, it is established that any natural person, public, private, or community legal entity that is dedicated to the production, commercialization, import, or export of certified seed and crops must register with the National Agrarian Authority. Likewise, the commercialization of certified seeds that are not registered in the national seed registry is prohibited. The same does not happen with common or improved seeds, for which there is no registration or regulation.

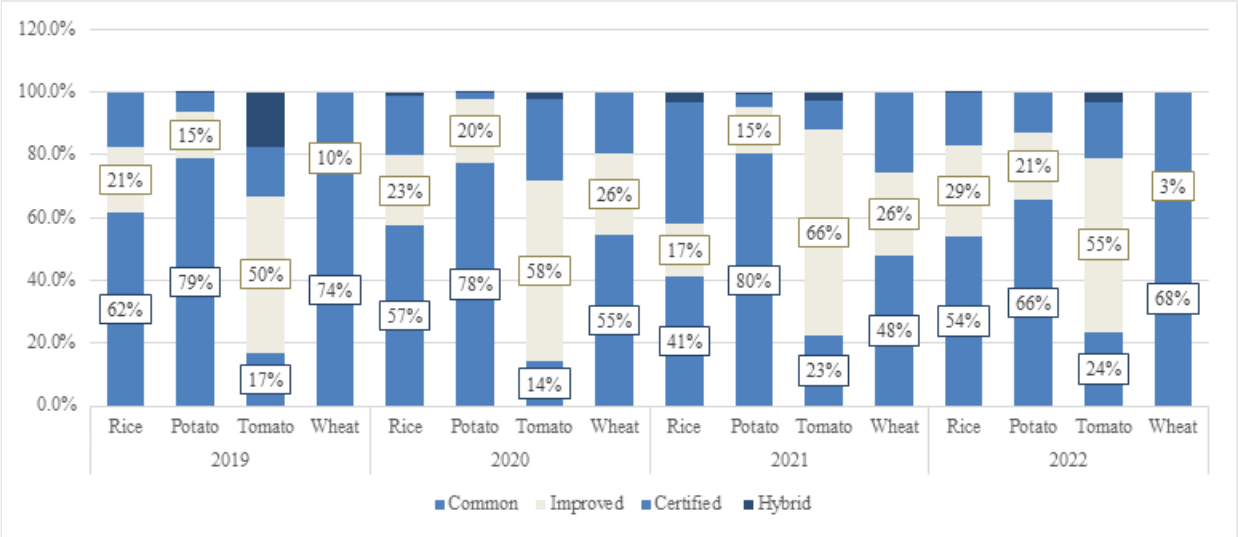
11. Regarding the use of seed in Ecuador, it was possible to observe that the main used categories are the 'common' and the 'improved' (which come from the non-conventional system): the common category is the one that has the greatest use, and that has not received any genetic treatment, while the improved seed, although it is the result of a research process that allows the generation of seed in which the best characteristics of a crop have

[6] Ibíd., Art. 25.

been concentrated, unlike certified seed, has not undergone a legalized production and multiplication process that can ensure its genetic identity and high quality.

12. Regarding the products analyzed in the Market Study, for wheat and potato crops, the use of *common seed* is the most representative in almost all periods (2017 to 2022), while for rice and tomato, both *common* and *improved seeds* are mainly used as a whole; it should be noted that the use of certified seed (which ensures its genetic identity and high quality) participation shares range from 0% to 30% of the planted surfaces. See graph No. 2.

Graph 2. Percentage of seed use by category



Note: Elaboration: National Direction of Market Studies
Source: ESPAC - INEC

13. On the other hand, the values of the crops that used *certified* seed close to 30% of the total hectares planted correspond to the following products:

- *Rice*, which is one of the most representative crops of the country (rice is the second largest transitory crop with 35.6% of the total hectares of this type of crop) and whose performance is close to the average of the countries on which the comparison was made; and
- *Tomato* is a crop for which there is no initial phase seed production by INIAP[7], but the supply of seed for the cultivation of this product entirely comes from import processes.

14. Given the low use of *certified* seed in crops, within the Market Study its production and commercialization processes were reviewed, and it was evident that, according to the regulatory framework, the production and commercialization of basic seed have been made solely by the State[8].

[7] That is, the one that is used for the multiplication process (basic and registered).

[8] The basic seed is the one obtained from the genetic or plant-improved seed, submitted to the certification process, maintaining the highest degree of identity and genetic purity and complying with the established standards, and used to produce registered or certified seed.

15. On the other hand, in relation to registered and certified seed, labels have been granted for its commercialization, mainly to private operators, except for wheat, in which case the only producer and marketer of seeds is INIAP. Likewise, the National Agrarian Authority was requested to indicate how the seed production and commercialization policy is currently managed, to which it indicated that the "[…] demand for seed and consequently its production planning are focused on the availability of seed in initial categories; in this case, the initial categories producers work based on the demand of certified seed producers"[9].

16. It should be noted that in the seed production chain, INIAP is the one that produces and commercializes the basic and registered seed categories to the multipliers[10], so they are the ones who continue with the multiplication and commercialization process to the producers[11]. In this regard, it was observed that INIAP commercialized seed for its multiplication, mainly (around 50% of the production) to three (3) companies in the case of rice, nine (9) in the case of potatoes, and two (2) in the case of wheat.

17. On the other hand, in relation to the production of certified seed (which is commercialized to the producer), it was possible to show that the supply, during the period from 2017 to 2022, was distributed to a small number of companies. For example, in the case of rice, seven (7) companies received tags from the National Agrarian Authority to commercialize the different categories of seeds, of which three (3) companies accumulated more than 80% of the total number of tags issued; in the case of potato seeds, tags were granted to fourteen (14) companies, of which two (2) companies accounted for 60% of the tags issued[12].

18. Given that, until the cut-off date of this document, the Market Study is still in the process of being prepared, complete information is not available on the main economic operators that commercialize seeds in their different categories of the analyzed products. However, within the period from 2017 to 2022, it has been possible to identify that the kilogram of rice seed had an average price between USD 1.28 and USD 1.61 by private operators, while INIAP commercialized this product in the year 2022 at an average price of USD 1.15, which was 23% lower than the one of the private sector in the same year (USD 1.48). Regarding the kilogram of potato seed, this had an average price between USD 0.58 and USD 0.96 by private operators, while INIAP commercialized this product in 2022 at an average price of USD 0.75, that is, 16% lower than the private sector in the same year (USD 0.96).

19. Regarding the employment generated by the sector, it was identified that agricultural activity on average represents 31% of the total national employment, that is, it generates approximately 1.5 million jobs per year. However, it is also evidenced that the rural area (to which agriculture belongs) registers around 71% of informal employment. For this last category, there is no information on wages or working conditions.

[9] MAG, Office No. MAG-MAG-2023-0419-OF, April 14, 2023

[10] The multipliers are natural, legal, public, private, or community persons who are duly registered seed producers and have complied with their quality analysis.

[11] The INIAP may only produce certified seed in case of a shortage of these types of seed under authorization from the National Agrarian Authority.

[12] The case of wheat is not discussed because, as already mentioned, only INIAP was producing and commercializing seeds for this crop.

20. In relation to the salaries received by people who work in the sector, according to the information available in the Statistical Registry of Employment in Social Security (REESS), the activities related to the analyzed products[13] occupy positions 260, 294 and 367 out of 425 activities[14], which means that, all are below the average wages at the national level. The salaries of the analyzed sectors have a range from USD 461 to 591 until December 2022; in this regard, it should be considered that the basic salary in Ecuador on that date was of USD 425.

6. Research findings, conclusions, and final notes of the analysis carried out

21. This section details the main preliminary findings regarding the analysis carried out in relation to the problems related to the use of certified seed in agricultural production in Ecuador and its relationship with performance, employment, and poverty in the sector. In this line, it should be noted that although within the Market Study it was not possible to collect enough information to carry out econometric tests that would allow the identification of the causality of the factors that have been exposed in the document, the Ecuadorian Agricultural Research Entity (INIAP) has evidenced on more than one occasion the positive impact on yields that the use of *certified* seed has, this being the increase in productivity per hectare of a crop.

22. According to INIAP, the use of quality seeds guarantees better results in terms of genetic purity, physical purity, and health, which must be monitored during crop development[15]. Additionally, it indicates that the high levels of production performance of this crop are directly related to the use of *improved* and *certified* seed[16]. Among the main findings of the analysis carried out within the framework of the Market Study are:

1. Currently, the percentages of use of certified seed in relation to *common* or *improved seed* are minimum, ranging from 0% to 30%.
2. Although in certain periods of time the percentage of use of *certified* seed increases, these growths are not sustained over time but, on the contrary, are sporadic, and consequently there is no information that allows a real analysis of the impact that its use has on the performance and conditions of employment in the sector.
3. The current seed production capacity in its initial phases (the one produced by INIAP)[17] would not be able to supply all the crops in the country after the multiplication process.
4. The production and commercialization of certified seed correspond solely to private economic operators and are concentrated in a few operators. As mentioned, in the case of rice, seven (7) companies received labels from the National Agrarian Authority to market the different categories of seeds, of which three (3) companies

[13] Crop of cereals (except rice), legumes and oilseeds, crop of rice, and crop of vegetables and melons, roots, and tubers.

[14] Considering as one (1) the economic activity that registers the highest salaries.

[15] National Institute of Agricultural Research, Potato Seed Tuber Production Manual, page 7.

[16] According to the data provided in the Potato Seed Tuber Production Manual for the year 2020, 25 924 hectares of potatoes were planted in Ecuador, with an average performance of 15,75 Tm/ha, one of the highest performances.

[17] Initial phases are understood to be the production of basic and registered seed to be commercialized to multipliers for their reproduction.

accumulated more than 80% of the total number of tags issued. In the case of potato seeds, tags were granted to fourteen (14) companies, of which two (2) companies accounted for 60% of the tags issued.

5. The commercialization prices of certified seed by the private economic operators are between 16% and 23% higher than the commercialization prices of the INIAP. This comparison has been made in the periods in which INIAP has commercialized this type of seed because, as explained above, the commercialization of certified seed is given by private operators, and consequently, the quantities that INIAP commercializes are marginal.

6. During all the periods analyzed, the salary levels of the sector were below average, without considering its informal portion, which could further decrease the average salary.

23. Based on the exposed results and under the premise that the results cannot be conclusive by virtue of the limitations detailed for the analysis, it can be evidenced that in what represents the reality of the sector of the analyzed products, employment issues and informality have not been noticeably modified. Additionally, it should also be noted that it has not been possible to identify that there are long-term State programs or policies that promote structural change in the use of seed as an axis to modify the performance and crop conditions, and that in this way, on how the growth of the sector and the quality of life of the people who carry out this activity could be improved, which (as mentioned) is a goal of the country's food sovereignty. There have not been observed policies in the production of seeds that promote competition in the sector; rather, on the contrary, it is observed that the State provides a small number of operators with supplies (seed in initial phases) for multiplication seed. In this regard, the State itself has not entered this market in such a way that it can supply producers at lower prices and, with this, possibly generate competitive pressure on economic operators that multiply seed. Finally, no studies have been found on the impacts generated in practice by the use of the different categories of seeds.