Diversity as a source of agricultural employment

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Great efforts have been made to recognise the value of nature's contributions to people. Many of the measures that have emerged include policy-level initiatives for the protection of biodiversity. However some of the most important links between nature and the well-being of the population - such as its role in rural employment- remain to be explored (Garibaldi & Pérez-Méndez, 2019)

The value of nature's contribution

Nature's contribution to people affects every aspect of human life. Ecosystems regulate multiple environmental processes, contributing to the quality of human life in material (for example, optimising crop yield) and non-material ways (for example, providing a sense of identity and belonging) (Díaz *et al* 2019). Some studies have explored the potential impact that the loss of these benefits would have on people's livelihoods and general well-being. One of the most relevant examples is the pollination service that supports the functionality of agroecosystems all over the world. It is estimated that in the absence of pollinators, 12% of the world's main crops would have an almost total loss in their production (Gallai *et al*, 2016). Even though nature's contributions are widely recognised in scientific literature, government policies usually do not reflect their value (Díaz *et al*, 2019), and there are still many dimensions to be analysed. Not enough attention has been devoted to understanding the relationship between biodiversity and unemployment, although this represents one of the most serious social problems worldwide (Kühn *et al*, 2018; Rifkin, 1995). Studies in this area are essential to support decision-making and the development of public policies with scientifically based information.

Employment in agriculture

Agricultural production is one of the most important economic activities in the world. It occupies almost half of the earth's surface and employs about a third of the human workforce (Kühn et al, 2018). Despite this great potential, rural employment around the world has declined considerably in the last few years, especially in emerging and developing economies (Kühn et al, 2018). Global tendencies show that demands for agricultural products have increased steeply while there has been a decrease of up to 75% in rural employment (Garibaldi & Pérez-Méndez, 2019). One of the main reasons is the use of agricultural techniques that favour monocultures and homogeneous landscapes, resulting in the loss of countless jobs, and causing serious environmental impacts. The agricultural sector's capacity to generate employment can be recovered, and even strengthened, by adequate management that integrates economic, social, and environmental dimensions. Ecological intensification incorporates these principles into agriculture through practices that increase the diversity and sustainability of productive landscapes. One of the most important procedures that has proven to have positive results in multiple socio-economic aspects is **crop diversification**.

Diversifying crops as an agroecological solution

Trend studies show that there is a positive correlation between agricultural diversity and the number of agricultural jobs, and that this situation neither competes with other economic sectors nor compromise crop yield (Garibaldi & Pérez-Méndez, 2019).

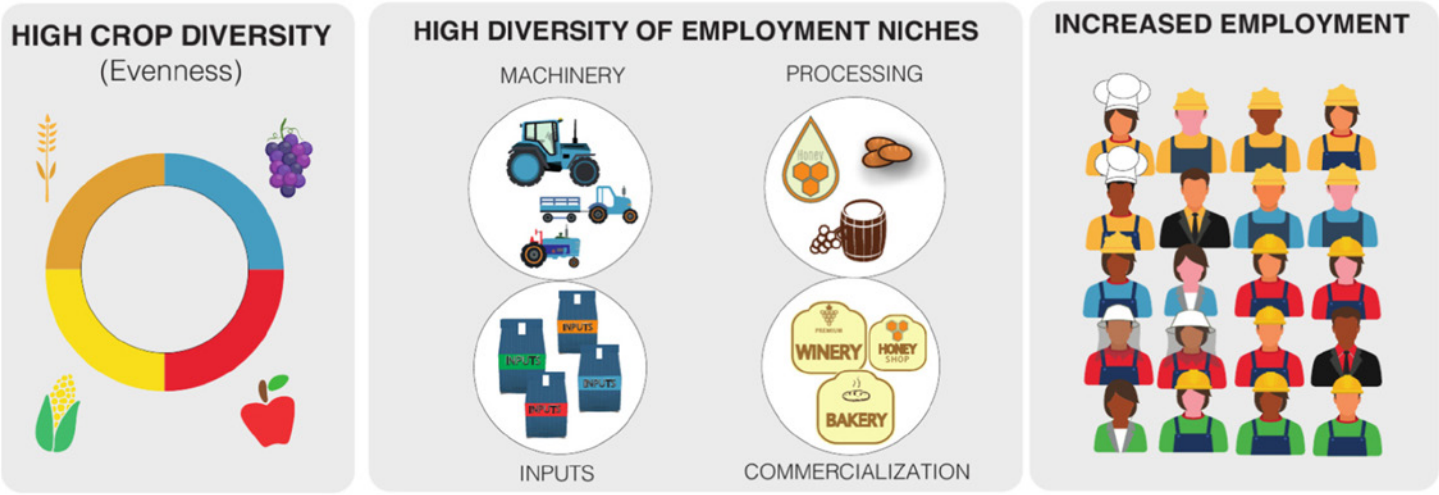
Farms that have greater diversity are important sources of rural employment because different crops will have their own requirements in terms of resources, techniques, and optimal moments for their development. Therefore, the variety of skills needed for their maintenance translates into employment opportunities for a higher number of people throughout the year (Garibaldi & Pérez-Méndez, 2019). As a result of diversification, farms will have a greater number of smaller crops evenly distributed, thus providing more heterogeneity to the landscape.

There are many other advantages of promoting crop diversification. For example, variety is added to the consumers' diet by preserving different crops that include indigenous species from each region. This is key for maintaining a healthy and complete nutrition. Also, additional jobs associated with agricultural production are indirectly created – for example, post-production food chains, beekeeping, and agro-tourism. These rewards are further increased when considering the environmental benefits of nature-friendly agriculture that turns productive landscapes into highly resilient, regenerative systems.

The importance of taking action

The loss of agricultural jobs is not followed by the incorporation of workers into other industries, because of the advance of of technologies that dispense with human labour. In some cases -such as occurs in Argentina - the lack of rural work has led workers to migrate to urban areas, where the shortage of opportunities derived in the creation of villages leads to worrying levels of unemployment (Neffa, 2018).

Ecological intensification policies that are relevant to peoples' needs, and consider the multiple advantages of increasing agricultural diversity, are crucial to make progress in the finding of solutions to this problem. In addition to higher employment, the benefits of this approach include improved human health, increased



It has been a good honey harvest
The beekeepers and farmers of Proyecto Apicultura Comunidad Neuvo San Lorenzo

production of nutritious food, and preservation of cultural heritage or traditions (Garibaldi *et al*, 2019). Policies must incorporate incentives so that small-scale producers can begin the transition process towards more diverse agricultural models and improve their living conditions. These measures must have clear goals at a local, regional and national scale, and offer tangible results that align with global initiatives such as the UN Sustainable Development Goals, for example, SDG 8 "Decent work and economic growth", and SDG 2 "Zero hunger". In an optimal scenario, the most favourable policies will consider agriculture as a comprehensive system that addresses national food security and provides well-being to rural populations through investment in ecological infrastructure and job creation (Garibaldi *et al*, 2019).

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