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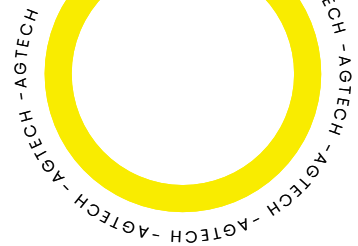
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Feeding the world in the upcoming years: Increasing productivity in Latin America using Asian agriculture technology





Food production should increase by 70% to feed a growing and demanding population by 2050 and the most effective way to do it is utilizing technology. Agtech is a necessity to avoid hunger in the world where the arable land is limited, decreasing the number of hectares available per capita available every day.

In other words, each available hectare has to produce more every year to satisfy the increasing demand and in a more sustainable way


9.1 billion BY 2050

Actually, the estimates are that the world population will reach 9.1 billion people by 2050, increasing urbanization rates, which has a direct effect on rural labor supply and the scarcity of natural resources. Agriculture is facing challenges such as the shortage of water, the price and availability of energy from fossil fuels, and climate change, when the highest possible productivity is required to meet the demand.

Hence, there is a growing opportunity to find solutions that become more efficient and sustainable the already existing cultivated areas

According to the Food and Agriculture Organization of the United Nations, 80% of the growth in agricultural production in developing countries worldwide will be linked to higher yields, leaving the other 20% to the expansion of the land area. Therefore, the Technological Agriculture sector takes an important role in the development of a management strategy that collects, processes, analyzes and combines data to support faster decisions according to the estimated variability and heterogeneity of the crop. This makes it possible to improve the efficiency in the use of resources and the quality, profitability, and sustainability of agricultural production.

Farming can involve many complex variables, some of which vary over inches of land, as well as minute to minute. This complicates making reliable predictions and farmers end up doing it the way "granddad did", usually overusing resources and products, says Bruce Maxwell, a plant ecologist at Montana State University. The results often leave many farms in difficult financial situations, excessive pollution, less affordable and healthy food, and the depletion of farmland. Using tools such as global positioning, satellite images, geographic information systems, humidity sensors, drones to apply fertilizers or pesticides at a fixed and varied rate, weed control, and other M2M Smart Agriculture practices provide the adequate insights for better decision-making. As a result, farmers avoid wasting products, save costs, and can better monitor the land, livestock and animals, and indoor horticulture, taking faster action in case of diseases.

 **People who work in stressful industries might dream at times with the simpler life of a farmer, if only they knew what they would be getting into.**

In addition, Agtech tools reduce the hard labor and saves time to farmers, facilitating remote work which gives them a better quality of life and attracts young farmers to continue being part of the supply chain. Some of the green practices in sustainable farming include weather stations that measure wind and temperature, satellite imagery that can measure crop size, density, and color which indicates maturity, and soil sensors that report on moisture. Others use Artificial Intelligence to obtain the nutritional information while harvesting and tractors that can adjust and measure variations in the number of seeds. The doors are opened for innovation in the sector.



Feeding the world in the upcoming years:

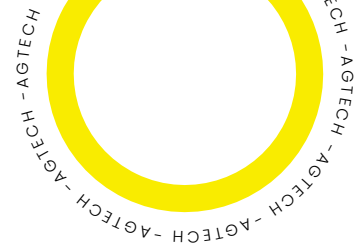
Increasing productivity in Latin America using Asian agriculture technology

Latin America's Agtech scenario



As the interest in the sector keeps on growing and many startups emerge, there is still no Agtech unicorn in the region, despite the fact that the largest reserve of arable lands in Latin America and it is a global supplier of Ag commodities and specialties. In particular, the region has a young population compared to Europe and North America and its millennials are adept with technology. Moreover, the COVID-19 pandemic marked a before and after in the innovation of this business. Biosecurity measures and the rules of the game established by the new agricultural labor accelerated digitization of farm operations.

According to the Inter-American Development Bank, the southern region has more access to capital and technology, while the central and Andean region rely on smallholder agriculture. There is an open opportunity to automate cycles of production processes especially in countries like Colombia, México and Perú. Including more than 500 million farmers in the world into the market would boost the economy and help to control the crisis. For instance, foreign companies like Yapu Solutions and Agros are betting on the region with their traceability analysis and management software and financial system, respectively, to overcome the lack of confidence in the small producer who does not have access to traditional financial institutions.



Colombia is the second most biodiverse country in the world with great agronomic potential since its location and geography build a rich climatic cocktail that allows a wide variety of crops all year long. However, the field is the sector with the least adoption of technological tools and data analysis. Currently there are 9,813,123 people involved in agricultural practices of which 44.7% are multidimensionally poor, according to the National Statistics Department. This figure triples urban poverty and the internet connection indicators in rural areas remain low. Fortunately, the pandemic accelerated the digital incursion because the country suffers from a disjointed supply chain and is behind in connectivity matters. Almost 70% of the road network is in poor conditions (around 142,284 kilometers of tertiary roads) and the transportation time to take food to the urban areas interferes to position the country in high levels of competitiveness.

Besides, 85% of the agricultural production units in the country do not have information at the time of cultivation, 84% of the agricultural units do not have updated machinery for agricultural use, and 83.5% of the farmers do not receive technical assistance for the development of their activities. Also, 12% of the peasants are illiterate, creating the urgent need to educate our farmers and the future opportunity to work directly with producers.

The Gini coefficient, a common indicator of inequality, is also higher in rural areas than in the rest of the national geography, however, the capacity of the sector was already demonstrated. Agricultural products, food and beverages exports grew 6.9% during the pandemic, showing resilience and potential despite the global health crisis. According to the World Bank, the growth of agriculture can be up to four times more effective than other sectors in raising the income of vulnerable populations, contributing to the Sustainable Development Goals 1, 2 and 3.

Focusing on agriculture enhances the economic and social growth of the country and can also allocate human resources in lamentable conditions from the Venezuelan migration. There is an enormous space for Agtech companies to develop in Colombia.

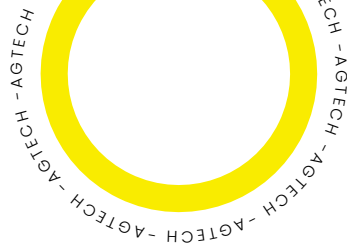
During the Agtech meeting organized by Forbes magazine in Salinas (California), experts reached the conclusion that the solution of the field is found in the digitization of its technology, the internet of things, and the automation of processes. Indeed, it is what companies like VIT and Advector are doing in Colombia. But for digital technology to reach the field, the first thing that is needed is connectivity and investment is required for all of this. M2M Smart Agriculture is just one piece in the Agtech game. Farmers need access to capital and financial services, especially because turnover takes a long time in agriculture. This is where companies like Agrapp play an important role. Furthermore, not only fintech is needed in the supply chain, but farmers also need to calculate returns seasonally and things can go wrong while being exposed to outdoor risks, which is why insurtech is just as important.

After having the products, the logistics and e-commerce companies are undoubtedly needed for them to reach the consumers. Big Agtech players in Colombia are Frubana in logistics, and Siembraviva and Agrizon in e-commerce, the marketplaces of produce and agriculture supplies for farmers. And above all, Agtech startups need access to incubation, acceleration, and mentors, which is where companies such as Latin Leap contribute to the ecosystem.

In this sense, Colombia needs to increase scalability and crop productivity by leveraging innovation and cutting-edge technology to face the transformation challenge faced by global agriculture. During the 5G revolution, the country cannot be left behind digitizing the countryside. The high dropout rates related to agricultural activities make technology the only alternative to improve people's life. It is crucial to contribute to the improvement of conditions in the countryside and make it more profitable to avoid the necessity of illegal crops for farmers to subsist. Apart from all the rest, it is also a path for a more peaceful country. All of this makes Agtech in Colombia a breeding ground for innovation and growth.



The case for Colombia is worth a closer look



Opportunities in Agtech

for an Asia- LATAM
collaboration



At first glance, Latin America and Asia appear to be two vastly different regions separated by geography, language, and culture. These perceived differences have hindered many Asian businesses from even considering Latin America when scouting for new markets to expand to. Nevertheless, the shared similarities between these two emerging economies highlight the potential for Asian tech solutions to address problems in Latin American society and scale in the region. Both are emerging markets, whose cultures have traditionally developed around agriculture.

While Southeast Asia is a hub for innovation and technology, the experience can be easily transferred to solve Latin American challenges in agriculture and successfully replicate between Latam countries due to their similarities. As a matter of fact, Asian companies such as Dimuto have proven to fit in the market with their solutions in logistics. Furthermore, in countries like Singapore, the number of high-tech vegetable and fish farms using vertical farming technology has increased dramatically. The Singaporean Government' strategy to produce 30% of its nutrition needs (vegetables, fish, and eggs) by 2030 and incentivize research to create new technologies that enable high-density farming is the opportunity to expand the knowledge and satisfy the food demand in the world. Other Asian countries like Japan, China, and South Korea, have already increased their share of controlled-environment farming using indoor plant factories, a form of "Smart farming" to address the effects of climate change.

About Latin Leap

For more information on Latin Leap, visit our website at <https://latinleap.vc/>.



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Latin Leap is a unique Venture Capital Studio that aims to soft-land purpose-driven tech scale-ups in Latin America. With a focus on tech scale-ups from Asia, Latin Leap provides a full suite of soft-landing services to facilitate expansion in the Latin American region. Latin Leap's viable soft-landing model connects expanding businesses to the relevant corporate, public sector, media, and talent networks in Latin America while helping them navigate regulatory procedures and localize their operations - particularly crucial in the healthcare space, which is intrinsically very local.

Latin Leap is an official in-market consultant for Colombia of Enterprise Singapore and a proud member of the Singapore Venture Capital Association. With strong roots in the Singaporean start-up ecosystem, Latin Leap is in a prime position to serve as a gateway to Latin America for Southeast Asian tech companies looking to set foot in the region.

Internationalize your business and expand your network with us!

Latin Leap is looking to partner with promising tech scale-ups that are ready to embrace the vibrant Latin American market, as well as fellow investors and venture capital studios that want to participate in the exciting market growth in Asia and Latin America.

Whether you are a tech company seeking to internationalize in the Latin American region, or a venture capital firm looking to expand your network and portfolio of companies, we would love to hear from you! For healthtech start-ups specifically, reach out to us at accelerate@latinleap.vc and for any other start-ups, reach out to us at contact@latinleap.vc.

Co-Authors:



Maria J. Zamorano



Pablo Casabianca



Stefan Krautwald

