

VERTICAL FARMING SYSTEM

A farming innovation for a limited area of land

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The farming of today is faced with numbers of issues. These are about availability and cost of land, finding the farm hand, higher cost of production inputs, changes in climatic conditions, fluctuating prices of agricultural commodities, the category of packages of technology to be adopted, and age of agripreneur. The term agripreneur refer to the person who invested in agriculture with the goal of producing animals, crops, or both intended for market. These are the farmers who are investing their money and aiming for a profit in return. They are not a typical farmer who considers their undertaking more on the “way of life rather than integrating business on it.”

The Philippine market is confronted with the availability and price of rice. A suggested retail price is implemented to control the prevailing rate in the market. Aside from the so-called hoarding of rice grain, the other issues can be pointed out into the economic development. The rapid development in the city is expanding towards nearby municipalities. This development can be classified into commercial, residential, and industrial. However, the first-two classes dominated that converted more extensive areas of prime land into subdivisions and later on emerges the malls in the proximity. With such development, these lands producing hundreds of sack of rice were all gone with the snap of fingers. It led to the movement of farming from highly productive to idle and somewhat low productivity lands which significantly affect the supply of rice in the market.

The development mentioned above tended to shoot-up the price of land in the areas where development is taking place. There are numbers of agripreneur who still venture in buying this piece of land for various purposes. One of this is to engage in farming to produce their food and one way of relieving them from stress due to various reasons. They have limited capital but willing to venture with consideration to calculated risks. The dilemma is not only observed in areas as the center of development but even in far-flung areas. Thus, farming limits to those with existing land and with more substantial capital to purchase farmland. Those who have limited area are seeking packages of technology on how to maximize the available area they have.

Along with development in urban areas and the conditional cash transfer of the government to needy Filipinos, agripreneurs are in a dilemma in finding for farm hands. Most of the farmhand in rural areas is entice to work in construction rather than confining themselves in farm work due to the level of daily compensation. It triggers to increase dramatically the costs of hiring a farm hand that may not be viable for start-up projects.

The packages of technology to mitigate the potential effect of climate change to production level are limited. Marginal farmers are considered resilient in a sense to mitigate the consequences but not at all times. The participation of various stakeholders is necessary for developing technologies to counter the losses due to unpredictable climatic conditions. The mitigating measure should not rely on one person, institution or government agency to work for it. What is important is the participation of those who are involved in the industry.

In addition to packages of technology, it can be further classified according to the financial capability of the agripreneurs to invest. In the Philippines, this can belong to high- and marginal farmer level; however, there are lacking technologies for those belonging in the middlelevel. The agripreneurs belonging in the classification are the professional, retirees, overseas Filipino workers (OFW's), and others who are unable to provide large capitalization for facilities and equipment and don't have the pleasure to time to personally perform the daily routine of activities in the farm. There were OFW's claimed that they incurred more significant losses in investments due to adopting technologies inappropriate for their level.

The cost of production is significantly affected by the costs of inputs as claimed by the agripreneurs. The costs involved keeps on increasing, but the prices of finish products are fluctuating. It is aggravated by the presence of intermediaries who earned more than the producers. Hence, credit assistance and market linkages must be considered in this case to improve the level of the bottom line of agripreneurs and making the products more affordable to consumers.

The age of the agripreneurs can be another consideration. Numbers of retiree go into farming to augment their pension and one way to getting rid the boredom of being sedentary. They are mentally sharp but physically weak in doing the routinary tasks. These are the agripreneurs who cannot work diligently under the heat of the sun. The reality in Philippine agriculture lies in the fact that the average age of Filipino farmers is near 60's. They are still productive if given a chance to have technologies most suited to them.

With this, the Central Philippine University through the College of Agriculture, Resources and Environmental Sciences in collaboration with other colleges, develop the VERTICAL FARMING SYSTEM. These are packages of technology that answer the perceived problems at present and in the future in Philippine agriculture. It is a complete package that brings profit and relieved the agripreneur from stressful routinary tasks. To those who wanted to know more about these packages of technology, please contact 09183867826 or 033-329-1971 to 79 local 1096 for guidance. Interested would-be adopters can also visit our technology demonstration area at the CPU Research and Development Learning Area at the back of CPU High School and the University Shop.

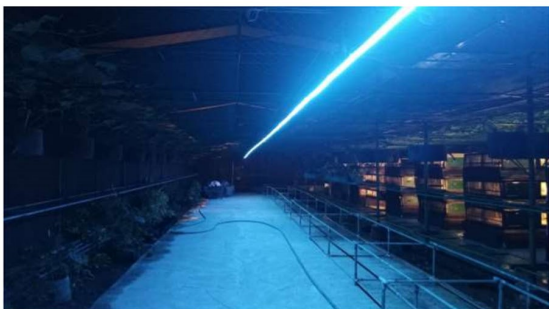


Figure 1. The art and science merging in the POT's for Vertical Farming at CPU

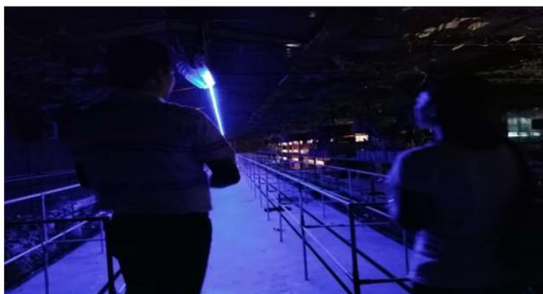


Figure 3. Ruth Villanueva from Dipolog City with Project Leader Jaime Cabaries Jr. discussing the significance of vertical farming system and the possibility of bring such technology in her home town

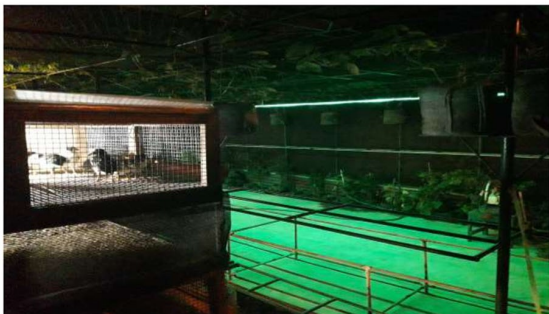


Figure 2. The mixed farming that used to integrate native chicken with crops



Figure 4. Norlito Ibañez of DA-PRDP with his staff visiting the techno-demo area and discussing with Project Leader Jaime Cabaries Jr. the possibility of disseminating the technologies to their beneficiaries



Figure 5. The first few fruits of ampalaya in the techno-demo farm