

INTRODUCTION

1.1 Description of the Host Institution

INAGRO is known well as the short for Integrated Agro Village, or also known as PT. Intidaya Agrolestari. The company has a substantial 76 hectares of land for agricultural production that includes horticulture, competent and remarkable seeds and fertilizers, and fishery. INAGRO is located in Ciseeng, Bogor, Indonesia, and was established in the late 1990s, where at the time, it was one of the exceptional durian nurseries in Indonesia. Over the years, without replacing the essential values, INAGRO keeps moving forward in upholding and improving the agricultural sector and biodiversity by devoting current technology and innovation to farming and becoming a learning platform for agriculture. INAGRO has developed two sectors responsible for each area: agribusiness and agritourism.

The agribusiness sector revolves around the improvement of seeds and plant production. Several approaches are considered, such as the hydroponic approach for vegetable farming, improving the production and cultivation of prime seeds and fruits with highly intensive treatments and nurseries for the success in demand and distribution in dynamic markets. Furthermore, INAGRO strives to imply more advanced approaches yet sustainable for the environment. The application of the sustainable biotechnology approach is practiced to improve the growth and values of the plants.

INAGRO has become a pioneer in developing environmentally friendly fertilizers that take advantage of the ability of mycorrhiza, fungi that can improve plant growth and make them less susceptible to diseases or stress from drought. Besides that, INAGRO also uses the wastes from the agribusiness activities to produce organic compost and the sustainable cultivation system of black soldier fly maggots as the feed for livestock. Moreover, INAGRO facilitates a competent laboratory to conduct plant tissue culture to produce prime quality seedlings and plants and less susceptible to plant diseases, including but not limited to horticulture plants, flowering, and ornamental plants.

Through this, INAGRO also contributes to the research studies and cultivations of different kinds of plants with better values.

INAGRO also has improved and established more facilities and resources to support the company to become an integrated agriculture learning and training center to improve the well-being of society, which is the main essence of the agritourism sector. While the audience market of agritourism varies from the agriculture policies maker and human resources to young and teenage students, kids and families. The agrotourism sector provides an engaging and refreshing environment for visitors to learn and relax at the same time. The learning and training center covers educational activities such as seminars, urban farming, waste management programs, hands-on rice farming practices, and workshops on plant tissue culture for students. On the other hand, INAGRO also offers tourism activities to promote visitors' well-being, such as outbound, INAGRO zoo visiting, and arts and crafts.

1.2 Vision and Mision

1.2.1 Vision

The vision of INAGRO is to be an integrated platform for sustainable agricultural practices and learning which can be promoted and implemented in daily life, therefore improving the quality of well-being of humans and the environment conjointly.

1.2.2 Mission

1. Implementing the practice of sustainable agriculture and farming in the production and development of good quality products
2. Sharing the knowledge and practice of sustainable agriculture and farming with a learning and training center programs

1.3 Organizational Structure

INAGRO has in total six departments, as shown in **Figure 1** The departments include Operational Department, Finance and Accounting, Human Capital Management, Information and Technology Department, Legal Department, and Agribusiness Department. All the departments operate synchronously under the outstanding leadership and supervision of Angelique Aryanto as the Managing Director and Santo Zen as the Director of INAGRO. The other departments have each other managers responsible for supervising all the activities and necessities in each department. However, it is essential to note that all the departments operate and work hand in hand to achieve the company's success.



Figure 1. Overview of the Organizational Structure in INAGRO.

The agribusiness department is divided into five divisions or units under Sanjaya Mulya Waani, as shown in Figure 2, which consists of Livestock Agribusiness Division, Fishery Mycorrhiza Division, Gardening Division, and Tissue Culture Division.

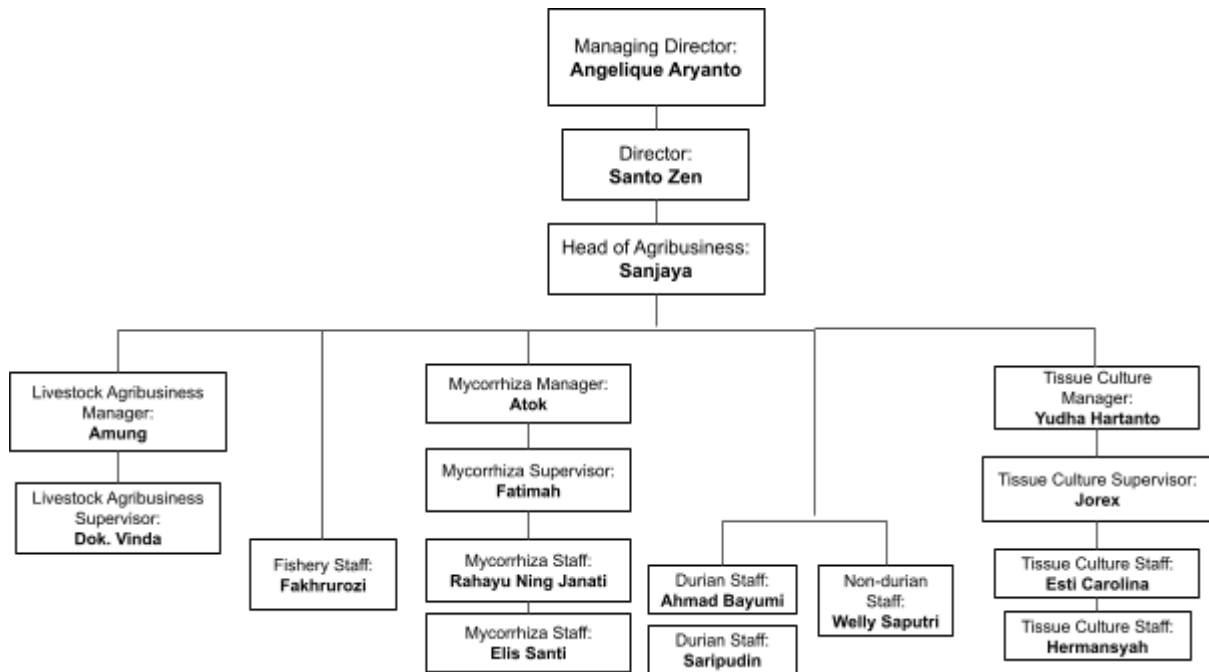


Figure 2. Overview of the Organizational Structure of Agribusiness Department.

1.4 Description of the Department

The internship program was completed in the Agribusiness Department of INAGRO, specifically in the Tissue Culture Division. The Agribusiness Department heavily relies on improving and optimizing agricultural products through plant tissue culture method, mycorrhiza fertilizers production, organic compost production, and potted fruit plant cultivation.

The tissue Culture Division in the Agribusiness Department was renovated for reestablishment in 2017. The unit is under the leadership and supervision of Yudha Hartanto as the Tissue Culture Manager and assisted by Jorex Momongan as the Laboratory Supervisor, and Esti Carolina. The division has been developing and gaining a good reputation in the agriculture business, with its primary aim is to produce a large number of plants with an evenly distributed size that is grown in an intensive and controlled environment. The tissue Culture Division has a competent and complete laboratory and facilities to support the tissue culture activities, such as a good condition planting laboratory with laminar airflow cabinets, clean and proper incubation rooms to store the plantlets in

desired environmental conditions, and media storage rooms, media preparation laboratory rooms, and greenhouse for the acclimation and plantation of the plantlets.

The main activities of the Tissue Culture Division are to do the sequels of plant tissue culture procedures, starting from media formulation and preparation to develop suitable media for various interest plants in INAGRO. The plant initiation in the laboratory from the mother plant to form callus induction continued with intensive care and storage. Then the subculture for the plant multiplication to achieve a significant number in production and marketing, where the plantlets in the cups are already available to be marketed, depends on the market. The next step is acclimation and plantation, which transfers the plantlets from cups or bottles into the grown medium in the greenhouse with special care to avoid stress on the plants. In addition, these activities are supported by the availability of complete material and equipment used along the process.

Currently, Tissue Culture Division mainly focuses on the planting on the banana plant's cultivation that is started from the plant initiation in the laboratory, subculturing, acclimation, and plantation in the greenhouse. However, by working parallelly, the division aims to expand the development of various plants, including but not limited to fruits and horticulture plants such as different kinds of local bananas, cantaloupe or melon, coconuts, and also flowers, and ornamental plants such as Venus flytraps (*Dionaea* spp.), pitcher plants (*Nepenthes* spp.), *Aglaonema* spp., *Monstera* spp., roses, chrysanthemum, and also leatherleaf ferns (*R. adiantiformis*). The flowers and ornamental plants have been a significant interest in Tissue Culture Division because they have unique values with a potential segmented market.