

Agro-Bio Innovation & Incubation Centre

Susan Thomas, *Spicer Adventist University*

Spicer Adventist University has the potential of becoming number one with its initiative to provide a facilitating environment for start-ups. Various challenges have created the need for customized, innovative solutions, and the university is willing to analyze these with the end-users or target beneficiaries in mind.

The Division of Sciences aims at building the incubation center, which will provide services and support to the potential entrepreneur in developing his business idea and business plan, providing training and one-on-one assistance, boosting the chances of them arriving at an effective start-up creation. Additionally, it will be helpful in fulfilment of University objectives in social & economic development at the regional and national level by providing support for opening new, value-added businesses.

The center is aimed at creating entrepreneurs by way of utilizing the expertise of the university faculty members engaged in dedicated research and making tie-ups with industries. A compendium of project ideas further added pace to the efforts to instill young people's confidence in pursuing entrepreneurship.

Mission

The mission of the Agro-Bio Innovation & Incubation Centre is to facilitate innovation, skill development, and commercialization of agro-bio products by providing infrastructural, scientific, and technical support to students and the local community as well as 'work and earn' opportunities for economically disadvantaged students.

Strategic Goals

- Generate skill training and 'work and earn' opportunities at pilot plants to support economically disadvantaged students and create added value and sustainable jobs for locals.
- Specialize in physical incubation by providing infrastructure including Work stations, Laboratories, training room, Library, Internet facility, office space, and support systems necessary for the training of students and the local community.
- Provide technology transfer and opportunities for researchers at the Masters' and Doctoral levels.
- Provide a platform for Mentoring and Coaching to stimulate local entrepreneurship by inspiring and promoting ideas for innovative Biotechnology/Microbiology/Botany start-ups by individuals in the community, highlighting the importance of time value, as time is money.
- Focus on improving the environment in which innovation & entrepreneurship grow and nurture.
- Facilitate networking with financial consultants to enter target market, benchmark with competitors, and imbibe ideas for entrepreneurial success

- Link industries with academia and network with mentors, experts, consultants, and advisors.
- Promoting, supporting, strengthening, and revitalizing the food processing and related units
- Knowledge, skills, and attitude gained by trainees will help particularly unemployed youth and women entrepreneurs establish their small businesses or wealth creation.

Infrastructure

The Division of Science building, as well as the University farm grounds, provide ample room for the centre's operations, which include:

- Biotechnology, Botany and Microbiology Labs and the instruments
- Computer Lab with internet connectivity
- Division of Sciences lobby and balcony as workstations
- Auditorium/conference room
- Library
- Office space
- Training room
- Farmland

On-going Pilot Projects

Alumni have provided seed funding for the pilot initiatives, which will further develop the programs.

- **Mushroom Cultivation:** *Pleurotus florida* (Oyster mushroom) cultivation is being carried out both for sale as well as grow kits for the community to learn and enjoy the experience of growing mushrooms at home. The fast-growing oyster mushrooms of genus *Pleurotus*, having a complete ligno-cellulolytic enzyme system, can use a wide spectrum of agricultural wastes as substrate and has a high demand in the market for its medicinal value.
- **Hydroponics and Aeroponics:** Hydroponics is the art of gardening without soil. In the absence of soil, water goes to work providing nutrients, hydration, and oxygen to plant life. Hydroponics continues to be a timeless and dynamic method of water conservation and crop production. Aeroponic systems are a specialized version of hydroponics where the roots of the plant extend only in air and the roots are directly sprayed with a nutrient water mix
- **Aquaponics:** Aquaponics is a cooperation between plants and fish and the term originates from the two words aquaculture (the growing of fish in a closed environment) and hydroponics (the growing of plants usually in a soil-less environment). Entrepreneurs can utilize the innovation of this combination of ideas that will provide not only a hobby but also wealth creation.

The centre has successfully grown and marketed with profit some leafy vegetables in the hydroponics unit and Oyster mushrooms. Many of the Biotechnology and Botany Masters students have undertaken projects cultivating medicinal plants in these systems and experimenting with different species of mushrooms.