UNIVERSITY OF HORTICULTURAL SCIENCES, BAGALKOT, KARNATAKA

Internship
on

Conceptual and Corporate Landscaping

Date: 2 to 21, June, 2022
@ Kempegouda
International Airport
Bangalore

Organizer

Coordinator: Dr. R. K. Mesta,
PI NAHEP-IDP UHSB
Co-coordinator: Dr. Pavan Kumar
Coordinator, NAHEP-IDP

Internship programme report on

"Conceptual and Corporate Landscaping"

Internship programme on conceptual and corporate landscaping was carried out for 14 final year undergraduate students at Bangalore International Airport Limited (BIAL) from 2nd June 2022 to 21st June 2022. On the first day of the programme inauguration was conducted in the presence of Mr. Prasanna Murthi Desai, Head BIAL, Dr. Raghavendra K. Mesta, PI NAHEP-IDP, Dr. Pavankumar and other IDP team members. After the inauguration, session on how safety precautions to be taken for the site visit in the airport premises was delt. Person protection equipments such as safety jackets, safety shoes, safety helmet, mask and safety glass are necessary to be wear during site visit at airport.

In nursery management and urban horticulture session importance of nursery, types of nursery, aims of nursery were delt. There are 4 nurseries at BIAL in which plants are propagated and grown to plant in various landscape area present in the airport. Scope of urban horticulture includes terrace gardening, roof gardening, kitchen gardening, indoor garden. Its demand is increasing over time because of non availability of less land with people in the cities. Various types of nursery plants such as shade loving, semi shade loving, big trees, growing under the various climatic conditions were seen.

Importance of land scaping, use of CAD in landscaping was studied during the internship. Landscape involves hardscape and softscape. In softscape selection of plant based on plant hight, plant habit, flower color, its size and shape, fruit color, its size and shape, spreading habit of the plants, trunk height etc. should be considered for selecting plants for landscaping. MAR (Main Axis Road) Project. This is one of the main projects of airport development. This project involves terra force blocks on each side of MAR. Major pest and diseases of landscapes and their management was explained by Mr. Sagar, team member of BIAL.

Pond management involves water harvesting, source of water and their management was studied during the internship. There were three types of ponds i.e. active pond, beautification pond and clean pond. Students visited Miyawaki forest in airport i.e. this is planting system developed by Miyawaki farm Japan. In this students recreated the sustainable multilayered indigenous forest. By mixing different media, fertilizer and planting in a very close spacing which consist of tree, shrubs and ornamentals plants. This type of planting reduces noise pollution and also maintains the temperature, humidity of surrounding environment.

Types of garden involves, sunken garden, arrival slot garden, grand water cascade, green walls and risk and challenges during maintenance were briefed to the students. Key features of these gardens involve customized automatic irrigation system, moisture level sensor, water reservoir, pump for recirculation, water level sensor and mobile alarm system. A green wall is comprises of plants grown in supported vertical systems that are generally attached to an internal or external wall. There are two types of green wall i.e. green facades and living walls. Green walls promotes natural cooling and reduces temperature, creates visual interest, captures airborne pollutants and filter particle matter, increases property values and biodiversity. Five key elements of interior landscaping are sunlight, media, irrigation, drainage and selection of right plants. The way these things are maintained in the garden are explained to the students.

Use of lawn and types of grass used in airside was explained to the students. Lawn helps to prevent soil erosion, ease the flight movement, and prevent the dust at runway, cheaper than concrete. Mainly *Cynodon dactylon* (Bermuda grass), *Festuca arundinacea* (Tall fescue) and *Stylosanthes hamata* (stylo hamata) are the most used grass types. On runway side bermuda grass is commonly use. Usually dibbing and hydro seeding method are commonly used for sowing grass. Different types of irrigation used in landscape are surface irrigation, localized irrigation, drip irrigation, sprinkle irrigation and subsurface irrigation. Type of irrigation depends on type of crop, climate, soil and topography. Water coming from rainwater harvesting and sewage water is used for irrigation. Sewage water is purified using irrigation pump, weather sensor, side's controller, LDE, flow sensor, soil moisture sensor and master valve etc.

Development of forest belt at the terminal end was explained by the Mr. Shreeshail, team member BIAL. There are two forest belts in the terminal. Eco-green Landscape Technologist (ELT) it stands for 34% of horticultural expertise and 12 year of non conventional greeneries with comprehensive capabilities in horticulture, vertical garden, green roof. They developed different walls they are living walls, bio-walls, green walls, green roof, hanging garden and biophilic spaces. Different media used for sowing are peat, sand, vermiculture, calcined clays, peat mass, baggase and coco coir.

Management of soil health in landscape was briefed to the students. A healthy soil must have 45% mineral, 25% water, 25% air and 5% organic matter. Soil must have high biological activity, good infiltration rate, ph ranging between 5.5 to 7.5 and soil should be loose. If the soil ph is <7, it is mainly due to Ca and Mg deficiency. If soil ph is >7, use ammonium based nitrogen fertilizer, use powdered sulphur in an extreme condition. Electronic conductivity helps to make the nutrients available to the soil. Bulk density is the measure of soil compaction. Bio enriched compost, neem seed grinded kernels, leaf compost, biofertilizers, liquid fertilizers, jeevamruta were used for enriching soil nutrient status.

On the last day of the internship valedictory session was organized during which certificates were distributed to the students by Mr. Prasannamurthy Desai, Vice-president of landscaping in BIAL.


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