



IISR

Indian Institute of Sugarcane Research Lucknow

Courses

1. Agro-technology for Maximizing Sugarcane Production
2. Protection Technology for Sustaining Sugarcane Productivity
3. Manufacturing and Storage of Jaggery

Contact Person:

Dr R L Yadav

Director

Indian Institute of Sugarcane Research

PO Dilkusha, Rae Baraeli Road

Lucknow 226 002 Uttar Pradesh (India)

Phone:

+91-522-2480726

Fax:

+91-522-2480738

E-mail:

iisrin@w1.vsnl.net.in

The Institute was established in 1952 for conducting research on fundamental and applied aspects of sugarcane culture as well as to co-ordinate the research work done on this crop in different states of the country.

The Institute has 6 divisions, viz Crop Improvement, Crop Production, Crop Protection, Plant Physiology and Biochemistry, Agril. Engineering and Social Sciences. In addition, there are 4 sections, viz Radio Tracer Lab, Economics and Statistics, Jaggery Unit and ARIS Cell. The Institute has a large farm (190 ha) and several research support facilities. For seminar, group meetings and training, there are well equipped auditorium, conference hall and seminar rooms. It has guest house and farmers' hostel.

1. Agro-technology for Maximizing Sugarcane Production

In all the sugarcane growing countries, land resource is a limiting factor. In order to increase sugarcane and sugar productivity, the only alternative is to increase the sugarcane productivity and effectively sustain high sugar varieties. A number of technologies have been developed and perfected at this Institute which can be gainfully employed by sugarcane growing countries. For example, agro-techniques for low input conditions, marginal lands, waterlogged and drought conditions, late planted conditions etc.

Training Programme

It consists of lectures on various subjects, practical classes using laboratory techniques, field visit, study tour to sugar factory and sugarcane research stations, seminar by trainees, preparation of project report, etc.

Faculty

There are about 90 scientists in the Institute having vast experience in various fields of sugarcane cultivation.

- Course Director** : Director
- Duration** : 4 weeks (15 October to 15 November 2009)
- Course fee** : US \$ 1,500 per trainee (exclusive of travel, boarding & lodging)
- No. of trainees per course** : 5-20
- Accommodation** : This will be provided at a very reasonable cost at the Institute's guest house
- Eligibility** : Graduate or higher level preferably in Agriculture; Research and Development personnel in sugar industry.

Course Contents

- Scenario of sugarcane and sugar production in India
- Three-tier seed programme
- Intercropping in sugarcane, germination and tillering management, weed management in sugarcane, biological N-fixation, integrated nutrient management, organic manuring in sugarcane, water management, sugarcane ratoon management
- Sugarcane cultivation in rainfed areas, sugarcane cultivation in waterlogged areas
- Sustainable sugarcane-based production systems
- Amelioration of micro-nutrient deficiency in soil and plant
- Forage crops in sugarcane-based cropping systems
- Weather interaction in sugarcane production system and post-harvest sugarcane management
- Mechanization of sugarcane cultivation



2. Protection Technology for Sustaining Sugarcane Productivity

The climatic conditions, which favour sugarcane growth, also support build-up of diseases and insect pests in the crop. To sustain sugarcane productivity, management of these diseases and insect pests is a primary requirement. The Institute has developed a number of protection technologies for containing the problem. These technologies can be gainfully employed by sugarcane growing countries. For example, integrated disease management, disease-free seed production, integrated pest management, biocontrol of insect-pests, integrated weed management, etc.

Training Programme

It consists of lectures on various subjects, practical classes using laboratory techniques, field visit, study tour to sugar factory and sugarcane research stations, seminar by trainees, preparation of project report, etc.

Faculty

There are about 90 scientists in the Institute having vast experience in various fields of sugarcane cultivation.

Course Director	: Director
Duration	: 4 weeks (15 October to 15 November 2009)
Course fee	: US \$ 1,500 per trainee (exclusive of travel, boarding & lodging)
No. of trainees per course	: 5-20
Accommodation	: This will be provided at a very reasonable cost at the Institute's guest house
Eligibility	: Graduate or higher level preferably in Agriculture; Research and Development personnel in sugar industry

Course Contents

- Current scenario of sugarcane disease—red rot, smut, wilt. Grassy shoot disease (GSD). Leaf scald and ratoon stunting, mosaic stubble decline, Nematodes
- Integrated management of sugarcane diseases
- Current scenario of insect pests of sugarcane. Cane borer and their management, *Pyrrilla* and sucking insect-pests and their management, sub-terranean insect-pests and their management, scale insects and their management
- Rodents and their management
- Insecticides in the management of insect pests
- Biological control of sugarcane insect-pests and Integrated pest management in sugarcane
- Three-tier seed cane production



3. Manufacturing and Storage of Jaggery

Manufacturing of jaggery from sugarcane has been as old as human civilization. Even at present about 30% of sugarcane produced is processed for jaggery manufacturing. Jaggery in different forms, is an eco-friendly and natural sweetener which is used as energy producing food and sweetening base by rural and urban masses. It contains common cane sugar as well as glucose, fructose and minerals like calcium, iron and phosphorus coupled with micro-nutrients like copper, zinc and manganese and also serves as good source of vitamins. Improved technologies have been developed and perfected for producing quality jaggery and different jaggery based value added products which can be fruitfully utilized by different sugarcane growing countries in the world for the benefit of the mankind. Some of the examples are the technology for production of solid jaggery, granular jaggery, juice concentrate, chocolate and snacks etc.

Training Programme

It consists of lectures on various aspects, practical classes, operation and maintenance training, field visits, study tour to local jaggery manufactures and jaggery research centres, seminar by trainees, evaluation and preparation of project report, etc.

Faculty

There are about 50 scientists having vast experience on various aspects of production and processing of sugarcane for manufacturing of jaggery and related products.

Course Director : Director

Duration : 1 month
(15 November to 15 December 2009)

Course fee : US \$ 1,500 per trainee
(exclusive of travel, boarding & lodging)

No. of trainees per course : 5-20

Accommodation : This will be provided at a very reasonable cost at the Institute's guest house

Eligibility : Graduate or higher level preferably in Agriculture; Research and Development personnel in sugar industry

Course Contents

- Sugarcane and jaggery production in India
- Agronomy of sugarcane suiting to the requirements of jaggery production, harvest and post-harvest management of sugarcane, post-harvest losses
- Scenario of juice extraction, evaluating techniques of juice extraction, clarification and concentration, properties of cane juice and juice products, heating and concentration techniques
- Development of efficient furnaces, striking point device and development of semi-automatic jaggery plant
- Development of processes for different forms of jaggery and value-added products
- Storage and packaging of jaggery, feasibility of cold storage and economic analysis

