



Quarterly

Newsletter

Pakistan Forest Institute, Peshawar



Chief Patron: Syed Said Badshah Bukhari
Director General

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NEWS OF FOREST EDUCATION DIVISION

HAKIM SHAH
Director Forest Education

The Forest Education Division, Pakistan Forest Institute Peshawar, conducted 49th Convocation and various other academic activities during April-June, 2012 as under:

A. 49th CONVOCATION OF PFI

The 49th Convocation of Pakistan Forest Institute, Peshawar was held on 25th April, 2012. Barrister Syed Masood Kausar, Governor Khyber Pakhtunkhwa and Chancellor University of Peshawar was the chief guest on the occasion. Mr. Wajid Ali Khan, Minister for Environment, Government of Khyber Pakhtunkhwa and Syed Said Badshah Bukhari, Secretary Environment, Khyber Pakhtunkhwa also graced the occasion. Prof. Dr. Amir Nawaz Khan, Dean Faculty of Sciences University of Peshawar represented the Vice Chancellor, University of Peshawar.



Governor Khyber Pakhtunkhwa presiding over the Convocation

Degrees were awarded to 12 and 28 passing out graduates of M.Sc Forestry and B.Sc Forestry courses, session 2009-11, respectively. Medals were awarded to outstanding students for their achievements.



Chief Guest awarding M.Sc in Forestry degree to a graduating student



Chief Guest addressing the guests and students

In his speech, the chief guest said that he was pleased to know that this was the first Convocation of PFI after its devolution to the province. He expressed concern at the fact that only 5% area of the country was under forest cover. He advised that all segments of the society should participate in making seasonal tree plantation campaigns successful. Addressing the passing out students, he congratulated them on achieving this cherished goal and for joining the distinguished group of forestry professionals. He especially encouraged women to seek forestry education.

In his vote of thanks, the Hon'ble Minister for Environment, Khyber Pakhtunkhwa said that we must take all steps to make our country and province green and prosperous by planting trees. He wished the passing out students success and rise in professional career.

In his welcome address, the Secretary Environment, Government of Khyber Pakhtunkhwa highlighted the achievements of Pakistan Forest Institute, Peshawar in forestry research and education and its contribution to conservation, development and sustainable management of forest resources throughout the country.

B. CULTURAL SHOW

An impressive cultural show was organized by the forestry students on the evening of 24th April 2012 in the lawn of B.Sc Forestry hostel. Forestry students belonging to all provinces/regions of the country presented their local cultures by singing folk songs and drama skit.

The chief guest of the event was Syed Said Badshah Bukhari, Secretary, Environment, Khyber Pakhtunkhwa. High ranking officers of Environment, Forest and Wildlife Departments from all provinces, AJK and GB attended the function. The chief guest and the distinguished guests appreciated the artistic talent of forestry students.



Student comperes of the function



Group photo of the Chief Guest and Minister for Environment with faculty and students



Guests watching the show



Forestry students presenting a cultural item

At the end of the show, shields were presented to distinguished guests acknowledging their contribution to the cause of forestry and environment. Graduating students were also awarded shields as a token of appreciation for their successful completion of courses.

The show was followed by a simple dinner.



A Distinguished Guest presenting college shield to a graduating student

C. ANNUAL SPORTS WEEK

Annual Sports Week of PFI forestry students was held from 22-3-2012 to 26-3-2012. M.Sc and B.Sc Forestry courses played football, cricket, volleyball and basketball matches against each other. Various Indoor games like badminton and table tennis and field athletics events were also held.

Syed Said Badshah Bukhari, Secretary Environment Khyber Pakhtunkhwa was the chief guest at the Prize distribution ceremony. He congratulated the winners and advised the students to fully participate in games to keep themselves physically and mentally fit. Winners of team events and individual games were awarded trophies and certificates.



Chief Guest awarding winner cup to a girl student

At the end of the ceremony, a Chir-Pine sapling was planted by the Secretary Environment, Khyber Pakhtunkhwa to commemorate spring tree planting campaign.



Chief Guest planting Chir-Pine sapling

D. WORLD BIODIVERSITY DAY

The United Nations proclaimed May 22 as the International Day for Biological Diversity to increase understanding and awareness of biodiversity issues.

World Biodiversity day was celebrated in collaboration with Environmental Protection Agency and IUCN at PFI Auditorium on 22nd May 2012. Mr. Wajid Ali Khan, Minister for Environment, Khyber Pakhtunkhwa was the Chief Guest of the occasion. A tableau show was organized by the students of Zarif Khan Memorial School depicting the scenes of balanced eco system and degraded eco system.



Chief Guest addressing the gathering



Secretary Environment, Khyber Pakhtunkhwa delivering his speech

A speech competition was also held among the students highlighting the importance of the day. The Secretary, Environment Department also highlighted the importance of the day and shed light on the responsibilities of human beings in new scenarios. Prof. Dr. Qibla Ayaz, Vice Chancellor University of Peshawar highlighted the importance of the day from the Islamic teachings and concluded his talk by saying that it is not only our moral obligation but religious obligation too to conserve the diversity on the surface of the earth.



Chief Guest awarding prize to a participant of the speech contest

E. SURVEY AND HILL FORESTS STUDY TOUR

Study tours is an integral part of forestry education at PFI. Hill tour of B.Sc

and M.Sc Forestry Session 2011-2013 was conducted from June 6th to 12th, 2012.

During the tour students visited Shinkiari, Balakot, Kaghan, Naran and Galiyat accompanied by the Director, Forest Education and Instructors.

At Shinkiari, students were briefed by Mr. Younas Khan SDFO about the management of Chir-Pine forests and its challenges. They were also briefed about different nursery techniques by Mr. Farukh Ser SDFO.

At Balakot, students were briefed by Dr. Bashir Hussain Shah, Consultant UNDP and, Mr. Javed Arshad, DFO Kunhar Watershed, about bio-engineering techniques for the control of Land-sliding and erosion.

At Kaghan, Mr. Taimur Ilyas SDFO briefed students about the management of temperate forests and shared his field experiences with the students.

Students also visited Saiful Malook National Park and Ayubia National Park where they were briefed by Mr. Nouman Khan, RFO and Mr. Salahuddin, RFO respectively, about the importance and management of National Parks, issues faced and the measures adopted for conservation of natural resources.



Director Forest Education delivering lecture to the students at lake Saif ul Maluk, Naran

Under the supervision of Mr. Asif Kamal, PD, URFS, Mr. Ahmad Zamir, LIF and Mr. Nizar Ali, AFE, Forest Survey tour of M.Sc and B.Sc Forestry courses, session 2011-2013 was conducted at PFI Field Station Shinkiari from 24-5-2012 to 5-6-2012. Lectures were delivered at the station and exercises/practical on Chain Survey, Open and Closed traverse, Contouring, Plane Table Survey and Road Designing were carried out in the field. Students completed the prescribed survey sheets during their stay at the station.

6. EXAMINATIONS

3rd Term annual examinations of M.Sc and B.Sc forestry courses, session 2010-12, were held from 25-5-2012 to 16-6-2012.

7. STUDENT OF DISTINCTION



Mr. Arifullah Awan s/o Mr. Muhammad Shuaib, a student of M.Sc Forestry session 2007-2009, qualified CSS 2011 examination by securing 1st position in Khyber Pakhtunkhwa. He has been allocated to Pakistan Administrative Service Group (formerly DMG) and is currently undergoing training.

UTILIZATION OF FRASH (*TAMARIX APHYLLA*) WOOD IN FURNITURE INDUSTRY

G.M.Nasir, Logging officer

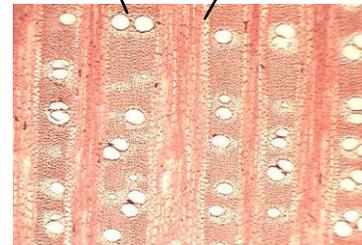
Frash (*Tamarix aphylla*) is a fast growing tree, common in the plains of Punjab, Sindh, Balochistan, and Khyber Pakhtunkhwa. It is extensively planted in sand dune areas of Thal desert and can withstand extreme temperatures, saline/soil and water conditions. The tree is an erect, medium to large sized and evergreen with non-spreading crown. It reaches up to a height of 10 to 18m and a diameter of 1m. The wood is whitish in colour with yellowish tinge, straight to twisted grained, medium coarse and uneven textured and moderately hard and heavy.

Frash wood is also known as "Ghaz" in Khyber Pakhtunkhwa and "Phurwan" in Punjab. In order to fulfill the demand and keep the price of furniture products affordable to common users, Frash wood is being used for manufacturing of furniture articles as substitute of the Shisham wood since it is comparatively cheaper and easily available in the market and possess desirable properties like medium density, moderately hard, not difficult or easy to saw and work, finish to a smooth shiny surface etc. Although, Frash wood does not possess brownish colour like Shisham rather whitish with yellowish tinge which is changed into Shisham-like by applying the brown color superficially on the wood before polishing of the product.

To meet the requirements, utilization of Frash wood in furniture industry is a good step but, the wood is non-durable and need preservative treatment before utilization in order to increase the service life. Based on the anatomical structure as shown in figure, in Frash wood higher percentage of the wood volume is

occupied by parenchymatous cells in the form of longitudinal or axial parenchyma around the vessels and broad to very broad wood rays composed of transverse or ray parenchyma. These parenchymatous cells contain plant food material susceptible to insects and fungi that derive this food material or utilize the wood as food for their nourishment and cause defects in wood such as superficial or deep staining spoiling the decorative value of the wood or small or large sized holes affecting the strength of the wood.

long. parenchyma wood rays



Microscopic structure of Frash wood

It is therefore, recommended that prior to utilization, the Frash wood should be preserved with chemicals to make it toxic to causal organisms and cover the risk of defects development. Further, after processing, the wood should be properly seasoned in order to minimize the development of seasoning defects like twisting, cupping, bowing, splitting etc. and reduce the wood waste. By following these practices, quality of Frash wood and ultimately of the products manufactured from it can be improved.

KARANJ (*PONGAMIA PINNATA*) FOR WASTELANDS

SANAM ZARIF SATTI
Bio-Chemist

Pongamia pinnata belongs to the family fabacea (Papilionaceae). It is also called *Derris indica* & *Pongamia glabra*. It draught is a medium sized evergreen tree with a spreading crown and a short bole. The tree is planted for shade and is grown as ornamental tree. It is one of the few nitrogen fixing trees producing seeds containing 30-40% oil. The natural distribution is along coasts and river banks in lands and native to the Asian subcontinent. It is also cultivated along road sides, canal banks and open farm lands.

Self reliance in energy is vital for overall economic development of our country. The need to search for alternative sources of energy which are renewable, safe & non polluting assumes top priority in view of the uncertain supplies & frequent price hikes of fossil fuels in the international market. Among the many species, which can yield oil as a source of

energy in the form of biodiesel, *Pongamia pinnata* has been found to be one of the most suitable species due to its various favourable attributes like its hardy nature, high oil recovery and quality of oil, etc. It can be planted on degraded lands through Joint Forest Management (JFM), farmer's field boundaries, Wastelands / fallow lands.

The seeds are largely exploited for extraction of a non edible oil commercially known as 'Karanja oil' which is well organized for its medicinal properties. The yield of fruit varies from 9 to 90 kg per tree for different age trees. There is no systematic organized collection of seeds. Mixture seeds consist of 95% kernel and is reported to contain about 27.0% oil. The yield of oil is reported to be about 24 to 26.5% if mechanical expellers are used for the recovery of oil from the kernels, but it is only 18-22% from village crushers. The crude oil is yellow orange to brown in colour which deepens on standing. It has a bitter taste and disagreeable odour, thus it is not considered edible.

The oil is used as fuel for cooking and lamps. The oil is also used as a lubricant, water-paint binder, pesticide, and in soap making and tanning industries. The oil is known to have value in folk medicine for the treatment of rheumatism, as well as human and animal skin diseases. It is effective in enhancing the pigmentation of skin affected by leucoderma or scabies.

Indigenous production of *Pongamia* oil will save foreign exchange worth of several million dollars & also generate employment opportunities in rural areas.

CAPACITY BUILDING OF FOREST EDUCATION DIVISION PFI, PESHAWAR

**ASIF JAH,
Project Incharge/APOF**

Apropos of the efforts and keen interest of the Government of Khyber Pakhtunkhwa for the development of Forest Education, a project titled as "Capacity Building of Forest Education Division" was commenced at Pakistan Forest Institute, Peshawar with the following main objectives:

- Enhance and improve the existing quality of education system in forestry.
- Produce well-prepared forestry professionals with better outlook to face the emerging challenges of natural resource management.
- Train forestry graduates for soil conservation measures and vegetation establishment.
- Enhance the learning capacity of forestry students and trainees.
- Enhance teaching skills of faculty and improve training facilities and teaching aids.

Accelerando of the project towards its goal has the following achievements so far:

Two training courses arranged from 15th June 2012 to 30th June, 2012 on the following subjects:

- i. Soil Conservation Techniques
- ii. Forest Stand Planning



Inaugural address by DG, PFI

The same training courses were conducted at Pakistan Forest Institute, Peshawar and Pakistan Forest Institute, Field Station Shinkhari Distt. Manshera respectively.

Twenty nominees from Government of Khyber Pakhtunkhwa PFI and Sindh Forest Department participated in each course. In inaugural address the Secretary Environment / Director General, Pakistan Forest Institute, Peshawar told about importance of Soil Conservation Techniques. He added that productive land is the source of human security and all the participants, therefore, must have consummate soil conservation techniques and appropriate onward implementation of the same skills as soil conservation is a pre-requisite for self-sufficiency, employment creation and hydal power generation.



**Prof. Dr. Farmanullah of KPK
Agriculture University delivers lecture
about soil conservation techniques**

Regular classes started with experienced resource person from Pakistan Forest Institute, Peshawar, Khyber Pakhtunkhwa Agric. University, Peshawar and Forest Department. Mr.Hakim Shah, Director Forest Education Division, Pakistan Forest Institute, Peshawar told about the scope of the courses, Dr. Farman, Dr. Jamal, Mr. Asad Ullah delivered lectures about Soil Conservation Techniques. The field visit was arranged to acquaint the participants with different Soil Conservation Techniques in Kunhar Valley Distt. Manshera. Dr. Bashir Hussain Shah UNDP

expert conducted the visit and showed different Soil Conservation Techniques in the field.



**Dr. Bashir Hussain Shah UNDP expert
telling about soil erosion control**

The 2nd course was arranged at PFI, Field Station, Shinkhari Distt. Manshera. The Secretary. Environment / Director General, PFI inaugurated the training course on Forest Stand Planning. He gave a brief overview of the training contents. Later on he explained in detail about the forest stand planning with special reference to Pakistan scenario and told about the scope of new concept in Pakistan. He advised the trainees to take keen interest in the course and group works to be acquainted with forest stand planning and the skill during the course for the source conservation sustainable development.

Experienced resource persons, Mr.Iqbal Swati, Mr. Asghar Khan, Mr.Hakim Shah, Mian Mohammad Shafiq, Mr. Asad Ullah, Malik Sagheer and Mr.Anwar Ali delivered lectures on forest stand planning.

To achieve the 3rd objective of the project, field work on Soil Conservation Techniques started at PFI, Field Station, Shinkhari by using various soil conservation techniques such as lose stone check dam and planting suitable trees and grass species.



**Site selection for construction of check
dam at PFI Field Station Shinkhari**

Work on the establishment of Forestry student's nursery has been started for the reforestation of the catchments and to meet the demands of local vicinity. Besides such activities, provision of teaching aids, furniture and improvement of out-dated sound system of main Auditorium are some of the fast-paced movements towards achievements of the goals of the project in progress.