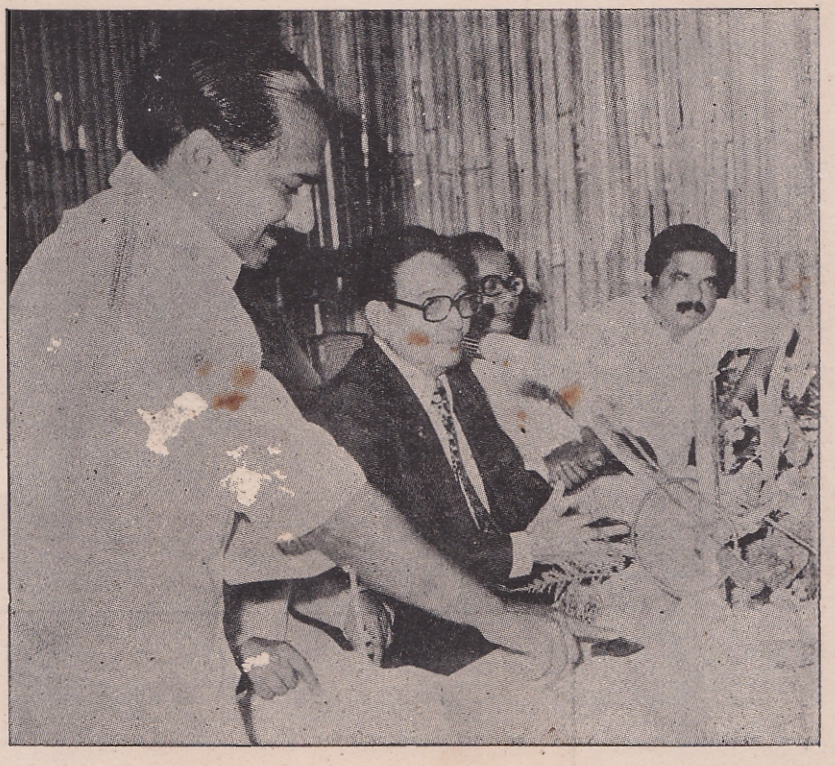
No. 4, June 1978

Kerala Forest Research Institute

NEWSLETTER



KERALA FOREST RESEARCH INSTITUTE
PEECHI-680 653 KERALA INDIA

NEWSLETTER No.4, June 1978

A DREAM COME TRUE

February 19, 1978 is a memorable day for those who conceived the Kerala Forest Research Institute, for those who are part of the Institute and for the Kerala public who will be benefited from the results of research in KFRI. Since its inception on 3 July 1975, KFRI went through the usual infant troubles and to the satisfaction of many of us, the dream came true as the inauguration of KFRI Campus at Peechi took place on 19 February 1978. From the crowded rooms of Patturaickal and Chiyyaram buildings, we moved to airy and spacious surroundings at Peechi. The move to Peechi has made us more confident as the buildings give us a sense of belonging. We hope the construction of other buildings will progress rapidly and by 1980 Campus will be fully developed.

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AGRI-FOR-FISH — A TRINITY

Forests are a trust to be used to meet the needs of the majority and not merely the desires of the few. The foresters will have to lead in displaying an awareness that we are not masters but only stewards of a valuable resource. Since our existing institutional and administrative structures are geared to serve the affluent, they must be redesigned to achieve the objectives of meeting basic human needs. A research institution like Kerala Forest Research Institute can help point the way.

The call for a new land-use order implicit in the concept of forestry for local community development has implications for policy and operations that merit careful attention of Institute's researchers. Forestry for community development will open land-use practices that employ various combinations of crops, forest trees and domestic animals in an integrated way. We must be aware of the complementarity between forestry, agriculture and fishery. The rivalry between these sectors have done harm in the past and we are now learning, the hard way, that integration of forestry,

agriculture and fishery as a trinity is imperative, if we are to progress.

(Abstracted from the keynote address by Dr. D.L. Umali of FAO during the inauguration of KFRI Campus at Peechi).

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TERMITE CONTROL IN EUCALYPTUS PLANTATIONS — NEW RECOMMENDATION

In March 1977 issue of the Newsletter we recommended interim methods for control of termites attacking Eucalyptus plantations. Based on continued field experiments at Varavur and Kondazhi (Trichur Div.) we have now been able to simplify the methods. The 1977 recommendation consisted of mixing an insecticide dust with the bag-soil followed by treatment with an insecticide dust or liquid after the bagged plants are planted in the field. The latter treatment was recommended to prevent damage by surface-feeding termites. Experiments have now revealed that damage due to surface-feeding termites is negligible. The second part of the treatment of 1977 recommendation can therefore be dropped without the risk of serious economic damage. In addition, experiments have shown that drenching the bag-soil with an appropriate dose of insecticide in the liquid form will give effective protection against termites. This treatment is much simpler than mixing insecticide dust with soil.

1978 KFRI Recommendation

Principle

After the seedlings transplanted into polythene bags have become established, drench the soil with a water emulsion of aldrin EC at the rate of 0.12g a.i. (active ingredient) per bag of soil (bag size 18m x 12cm) as a preventive measure against termite attack.

Materials required

1. A 30% emulsified concentrate (30 EC) of aldrin.
2. A watering can of about 5 litre capacity. A small watering head with fine holes is necessary to ensure a narrow and fine spray. Mark the 5 litre level if the can is of larger capacity.

3. A small plastic or glass measuring cylinder marked at 20ml (20ml is equal to about two-thirds of a liquid ounce).

Preparation of the insecticide solution

To 5 litres of water in the watering can add 20ml of aldrin 30 EC and stir with a stick. The resulting milky, insecticide-water emulsion is now ready for use; this will be referred to as 'diluted insecticide solution'.

Method of application

The treatment can be done any time after the seedlings have become established in the polythene bags; the best period is between the second and fourth week after transplanting.

Before applying the insecticide, it is necessary to ensure that the soil is dry enough to absorb the entire quantity of the diluted insecticide solution. This can be achieved by carrying out the treatment on the evening of a sunny day and by skipping the regular watering in the morning. Ensure that the top edge of the polythene bag projects above the soil level sufficiently to hold the insecticide solution. Examine each of the bag and lift the polythene collar up if it remains folded or drooping. If the bags are stacked too far apart, bring them closer to reduce the empty space between bags.

Mark off each bed of bagged plants into groups of 100 and proceed as follows. Sprinkle 5 litres of diluted insecticide solution per 100 bags as evenly as possible. After the entire bed has been covered, repeat drenching with another 5 litres of the solution per 100 bags. Each bag will thus receive about 100ml of the solution. The drenching is done in two steps to facilitate absorption of the solution by the soil and prevent overflow from the bags. When the insecticide solution is poured over the seedlings, some spillover is unavoidable. The unavoidable wastage has been taken into consideration in arriving at the recommended dosage.

The recommended dosage is based on actual field tests. While some variation of the dosage above or below that recommended is permissible, very high doses are likely to retard the growth of seedlings and very low doses will lower the effectiveness of the treatment.

Quantity of insecticide and cost

The treatment will require 1 litre of aldrin 30 EC per hectare of plantation which will cost about Rs.35/-. The cost of labour is negligible as the treatment can be made as part of the regular watering operation.

Other insecticides

EC preparations of other insecticides such as heptachlor and chlordane may be effective but we have not tested them so far by the present method of application.

Earlier recommendation still applicable

Mixing aldrin or heptachlor dust at the rate of 0.09g a.i. per plant with the bag-soil as recommended in our March 1977 Newsletter is an effective treatment against termite attack although the present recommendation is preferable because of the saving in labour. If stocks of insecticides obtained for the last year are left unutilised, the 1977 recommendation may be followed. If so, the second part of the 1977 recommendation, i.e. post-planting treatment in field, can be omitted.

Care in handling insecticides

All insecticides are poisonous.

The EC formulation has a high concentration of insecticidal chemical; therefore avoid contact with skin. Wash with soap if the EC spills over skin.

Do not allow any person with cuts or wounds to handle insecticides.

Do not re-use the original insecticide containers; burn or bury them. Destroy all disposable containers used to dispense the insecticides.

After handling insecticides, wash hands and face with soap.

Store insecticides out of reach of children.

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TEAK YIELD OF NILAMBUR DIVISION

Data pertaining to thinning at various stages of teak growth and final felling yield useful information. At Nilambur, the usual schedule of operation is mechanical thinning at 4th and 8th year and silvicultural thinning at 12th, 18th, 28th and 40th year and final felling at 60th year. Table (p.6) shows the yield from teak plantations (average of a few plantations worked during 1974-75 to 1976-77). Note that the data do not relate to the same plantation over the whole rotation period and hence have only indicative value. Based on the data, the Mean Annual Increment of Nilambur Division is $4.6m^3$.

FORESTS FOR WHOM?

Although substantial progress has been made in recent years in the development of forestry and forest industries in tropical countries, there is ample evidence that the fruits of this development have not had much more than a marginal beneficial effect on the lives of the people. In many instances, crude exploitation masquerading as development, has clearly had a detrimental effect. There is no reason, other than an historic one, why large scale industrial forestry projects should be pursued to the almost total exclusion of forestry for community development, particularly when the rightful owner of the exploited forest resource is often the local community. The principal historic reason is that the forests of the tropics have served in the past simply as sources of cellulose for the industrial nations of the world. The patterns of exploitation, marketing systems, forest law, and even education built up during that epoch, and frequently reinforced by contemporary bilateral and international aid programmes continue to exercise a dominant influence in post-colonial societies in the tropics. All goods and services, other than industrial cellulose, which the forests provided to local communities from time immemorial were called, and are called today, minor forest products — a description meaningless to millions of native people for whom such products are frequently the very basis of a traditional way of life, and for which no other substitutes are as yet available.

(Excerpts from Roche, L. 1977. Forestry and the community. Commonwealth Forestry Review 56: 299-315).

Average yield per hectare from teak plantations of Nilambur Division

Operation	Timber in m^3		Firewood in tonnes		Number of Poles by class				
	Teak	Miscellaneous	Teak	Miscellaneous	I	II	III	IV	V
1	2	3	4	5	6	7	8	9	10
1st mech. thinning, 4^{th}_y	-	-	-	-	-	-	-	29	282
2nd mech. thinning, 8^{th}_y	-	-	-	-	-	-	10	234	220
1st silv. thinning, 12^{th}_y	-	-	-	-	-	1	8	86	59
2nd silv. thinning, 18^{th}_y	0.2	-	1.2	-	1	7	20	60	16
3rd silv. thinning, 28^{th}_y	0.9	-	1.5	-	4	13	23	22	3
4th silv. thinning, 40^{th}_y	4.3	-	4.0	-	8	16	17	7	-
Final felling, 60^{th}_y	84.6	2.8	16.8	2.0	11	-	-	-	-
TOTAL:	90.0	2.8	23.5	2.0	24	37	78	438	580

ROSEWOOD WORKING GROUP

First meeting of the Working Group on rosewood (Dalbergia latifolia), constituted under the Danish India Project on Tree Improvement (DIPTI), was held at Forest Research Laboratory, Bangalore on 3-4 April 1978. Following are its salient recommendations: (i) a preliminary survey in all the rosewood bearing States to identify the morphological variations in order to select plus trees; (ii) raising of clonal seed orchards in selected areas; (iii) standardisation of nursery and planting practices to raise plantations and augment natural regeneration; and (iv) standardisation of vegetative propagation and study of tissue culture.

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P L A C R O S Y M - I

First Annual Symposium on Plantation Crops (PLACROSYM - I) was held at Rubber Research Institute of India, Kottayam, from 20 to 23 March 1978. This symposium was organised by Rubber Research Institute of India, Central Plantation Crops Research Institute, Central Coffee Research Station, Tea Research Station (UPASI), Research Wing of Cardamom Board and Indian Society for Plantation Crops. The theme for this year was Agronomy, Soil Science and Crop Physiology.

There were six sessions: soil fertility evaluation; soil fertility and crop response; soil and water management; crop physiology; inter and mixed cropping; and economics, farm management and crop survey. To the researchers in forestry, such symposia are of special interest because the methods used in plantation crops research would be applicable in our research, as most of the plantation crops are of perennial nature.

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K F R I BITS

BOTANY: A preliminary country report on South Asian Dipterocarpaceae pertaining to Bangladesh, Burma, India, Nepal and Sri Lanka was submitted to the FAO in December 1977. This study is sponsored by FAO.

ECONOMICS: Report - Availability of wood raw material for plywood industry (Kerala-Karnataka). Federation of Indian Plywood and Panel Industry sponsored this study.

Shri. C.T.S. Nair attended the Working Group on Rosewood held at Forest Research Laboratory, Bangalore, on 3-4 April 1978.

ENGINEERING: Second Phase construction is progressing satisfactorily. The buildings under construction are: Vehicle Shed & Seed Store, Wood Technology, Forest Utilisation & Extension, Botany & Genetics, Silviculture & Wildlife, Soil Science & Ecology, and Corridor. Third Phase, consisting of Staff Hostel, Auditorium and Staff Quarters is in the embryonic stage.

KFRISA: Kerala Forest Research Institute Staff Association was born in October 1977. Welfare of the staff is its motto.

LIBRARY: A mini-bibliography on Elephant (32 references) has been prepared from the documents available in the Library. Please contact our Librarian for copies of the bibliography. Journal articles can be duplicated on request at nominal cost.

NILAMBUR SUBCENTRE: Subcentre is active now as silvicultural and soil studies are being conducted there.

SOIL SCIENCE: Dr. T.G. Alexander attended the First Annual Symposium on Plantation Crops held at Rubber Research Institute of India, Kottayam, from 20 to 23 March 1978.

STATISTICS: Study on wood and bark volumes of Eucalyptus trees in Kerala — KFRI Publication 2.

WHO JOINED US: George Mathew - Entomology; K.C. Chacko - Silviculture; M. Balagopalan - Soil Science; K.K. Abdul Kabeer and K.S. Gopalan - Engineering; M.B. Dasan, K. Girijavallabhan, E.M. Mohammed, M.C. Mohandas, C. Radhakrishnan, A. Ramakrishnan, P.A. Sankarankutty and S. Shahul Hameed - Administration.

WHO LEFT US: Dr. P.W. Amin - Entomology; K.M. Mohammed - Silviculture, after an year of deputation from the Kerala Forest Department; Dr. M. Padmanabhan - Soil Science.

WILDLIFE: This Division is functioning at Thekkady since March 1978 to study the ecology of Thekkady Wildlife Sanctuary with special reference to wildlife.

COMMUNICATION GAP

Foresters must rely on two sources for information to make important decisions - their own experience and research results. Although research findings provide important management information, many useful research results have not been put to practice. On the other hand, researchers may not be aware of current management problems and information requirements. There is clearly a need, heightened by the increasing complexity of available information and management decisions for more effective communication between these groups. If useful research results are to be put into practice more effectively, communication between foresters and researchers must be improved. Although there is no general way to close this communication gap, it may at least in part be bridged by closer forester-researcher cooperation and more effective presentations and publications.

(Abstracted from Burkhart, H.E. and Sullivan, A.D. 1977. Communications among researchers and practitioners. Forestry Chronicle 53: 325-27).