

No.2-1/2015-TBOs/OS
Government of India
Ministry of Agriculture
Department of Agriculture & Cooperation
(Oilseeds Division)

Krishi Bhawan, New Delhi
Dated 5th November, 2015.

To

Director,
ICAR-CAFRI, Gwalior Road,
Jhansi-284003.

Subject: Proceedings of the National Workshop on "TBOs: Way Ahead" jointly organized by DAC&FW, GoI and ICAR-CAFRI on 15-16 October, 2015 at CAFRI, Jhansi-regarding.

Sir,

It is to forward a copy of the proceedings of the National Workshop on "TBOs: Way Ahead" jointly organized by DAC&FW, GoI and ICAR-CAFRI on 15-16 October, 2015 for printing and circulation among participants at your level. You are requested to print the same as early as possible and send 50 copies of the proceedings for its circulation at our level.

Encl: a/a.

Yours faithfully



(Dr. Anupam Barik)

Add. Commissioner(OS)

Copy to:

✓ Programmer (OS), DAC&FW-for uploading in NMOOP website.

Proceedings of the National Workshop on “TBOs: Way Ahead” jointly organized by DAC&FW, GoI and ICAR-CAFRI on 15-16 October, 2015 at CAFRI, Jhansi

A two-days National Workshop on “**TBOs: Way Ahead**” was jointly organized by Department of Agriculture, Cooperation & Farmers’ Welfare (DAC&FW), Ministry of Agriculture, Cooperation & Farmers’ Welfare, Government of India and ICAR-Central Agro-Forestry Research Institute (ICAR-CAFRI), Jhansi, UP at Jhansi during 15-16th October, 2015. List of participants is annexed (Annex. I).

The Inaugural Session was presided over by Dr. Arvind Kumar, Vice Chancellor, Rani Lakshmi Bai Central Agriculture University, Jhansi and Ex-DDG, Education, ICAR. Dr. Anil Kumar, Director, ICAR-CAFRI welcomed the dignitaries and delegates participating in the workshop and thanked DAC&FW for choosing ICAR-CAFRI as the venue of the national workshop. Dr. Anupam Barik, Addl. Commissioner, DAC&FW in his opening remarks gave an overview of vegetable oil production scenario in the country and the need for its enhanced production to reduce the huge burden on foreign exchequer spent in the import of vegetable oils. He said that the Government of India is aiming to provide thrust on Tree Borne Oilseeds (TBOs) through the implementation of Mini Mission-III of National Mission on Oilseeds and Oil Palm (NMOOP).



Release of Book of Papers on TBOs



Inaugural session

The chairman in his address emphasized on the need for a concerted effort for holistic development of TBOs by concerned stakeholders involving various Ministries and Departments and with constant monitoring by an apex body of inter-Ministerial/ inter-

Departmental group. He suggested that the success of the Technology Mission on Oilseeds (TMO) should be brain-stormed and lessons learnt from it may be replicated in NMOOP. He said TBOs are important not only for vegetable oils but also for production of bio-fuel for environmental safety through appropriate blending with fossil fuel to reduce pollution. According to him a strong research and development network on TBOs is necessary to build on the material developed under NOVOD Board supported R & D projects.

The Book of Lead Papers and relevant literature on TBOs (English & Hindi version) were released during the session. A small exhibition on TBOs was organized for the benefit of participants. A field visit was also organized to the experimental blocks of ICAR-CAFRI where Jatropha, Neem, Karanja and Mahua plantations were shown to the participants.



Exhibition on TBOs



Field visit

In the Technical Session I on “TBOs – An Overview” chaired by Dr. Arvind Kumar, VC, RLBCAU, Jhansi, 4 presentations on were made. Dr. Anupam Barik, ADC (OS) presented an overview of TBOs programme implemented by 12 states under MM-III of NMOOP. Informing that TBOs have huge potential in other states as well, he urged more states to come forward to implement the TBOs programme for which sufficient funds are available under the Mission. He also elaborated on the pattern of assistance available for TBOs under MM III of NMOOP.

In the crop specific presentations made by eminent experts working on Karanja, Wild Apricot and Mahua, detailed account of technologies/findings developed so far viz. collection of germplasm, identification of high seed and oil containing genotypes through multi-location

evaluation, quality planting material with grafted seedlings, area expansion undertaken with quality planting material etc. were presented.

In continuation of the crop specific achievements, work carried out on Olive, Neem, Jatropha and Cheura were presented in the Technical Session II chaired by Dr Anupam Barik, ADC (OS), DAC&FW. The work done on Olive and the significant achievements made by ROCL, Rajasthan, a state owned company, was appreciated as a model worthy of adoption in other TBOs as well in potential states. Considering huge unexploited potential for domestic as well as industrial uses of Neem, a network on it having strong interface with industry was suggested. High oil and active ingredients containing lines in Neem identified by NBRI, Lucknow and superior varieties/hybrids in Jatropha namely A 9-1, JJ 34-6 and JJ 21-8 developed by JNKVV, Jabalpur were highlighted. The selection of candidate plus tree (CPT) and standardization of propagation technique have been undertaken in Cheura at Kumaon University, Nainital. An incentive of Rs. 500/- per seedling provided by the State Government for planting and after care of Cheura through Van Panchayat is an encouraging step.

The Technical Session III on “Development Efforts on TBOs” was chaired by Dr R. K. Tewari, Programme Leader, ICAR-CAFRI. In the session, success stories on Olive and Jojoba in Rajasthan state, promotion of TBOs in degraded forest lands in Uttar Pradesh and TBOs programme at ICAR-CAFRI were highlighted with suggestions to create centres of excellence on individual TBOs and formation of dedicated working group for each TBO. Change in Forest Laws to increase introduction of fruit species in the forests upto 60-70% from the existing 20% together with assured procurement and MSP were advocated. The package of practices of TBOs may be included in the Forest work plan of respective states to take up plantation of TBOs in forest areas. Involvement of Joint Management Committee (JMC), Corporate Sector and SHGs along with farmers in a PPP mode may help complete the entire chain from production to processing, value addition and marketing.

State representatives of Rajasthan, U.P, Tamil Nadu, Mizoram, Madhya Pradesh, Uttarakhand and Maharashtra presented their views and suggestions in an interactive session with the states. During the interaction issues such as non-availability of quality planting material in required quantities, lack of storage facilities, lack of assured market, utilization of bunds for TBOs plantation, lack of standard package of practices, inadequate

collection and processing centres and necessity for involvement of community plantation in TBOs were brought out.

In the Plenary Session presided over by Dr. S.K. Dhyani, Ex- Director, ICAR-CAFRI, the proceedings of three technical sessions were presented by the respective rapporteurs.



Plenary session



Group photograph

The following recommendations/action points emerged from the deliberations during the workshop:

- The EC-NMOOP, the apex body, may include representatives of other Ministries/Departments dealing with TBOs for policy formulation, constant guidance and monitoring of the programme, suggest policy changes and necessary course correction. **(Action: OS Div).**
- More States having potential for TBOs should come forward to implement the TBOs programme under MM-III and submit AAP in a proactive manner. **(Action: MM III States).**
- Documentation and utilization of technologies/findings/material developed under R&D programme supported by NOVOD Board from 2004-05 to 2014-15. **(Action: CAFRI, Jhansi).**
- Exposure visits of extension functionaries and farmers of MM III implementing states to ROCL, Rajasthan for replication in other TBOs in their respective states. **(Action: MM III States).**

- Identification of potential TBOs and their appropriate areas/districts/blocks in their respective states to DAC&FW to facilitate focused assistance by Gol. **(Action: MM III States).**
- TBO specific brain-storming sessions may be organized by the potential states in consultation with related R & D institutes & DAC&FW. **(Action : MM III States).**
- A proper mechanism should be put in place to facilitate the release of varieties in TBOs and germplasm evaluation should be taken up in a systematic manner. **(Action: ADG, Agro-forestry).**
- Active involvement of other line Depts. such as Horticulture, Forestry, and Rural Development etc. for integrated development of TBOs. **(Action: MM III States).**
- Relaxation in Forest Laws to encourage introduction of fruit species in the forests upto 60-70% from the existing 20% and extension of collection period. **(Action: State Forest Dept).**
- Assured procurement with incentives for seed collection like proper MSP and processing. **(Action: TRIFED/Forest Dept).**

The participants requested for support in the following under MM III of NMOOP guidelines **(Action: OS Div).**

- Separate support for nursery raising to encourage R&D centres who do not have area for possible expansion.
- Consider support for bringing field bunds under TBOs plantation on the basis of plant density per unit area
- Assistance for multi-species plantations under MM-III in view of advantages of mixed plantation of TBOs.
- Support to Community Groups/SHGs/Corporate Sector/FPOs starting from plantation to post harvest management and value addition.

Annexure-I

**List of participants of National Workshop on “TBOs-Way Ahead”
held on 15th -16th October, 2015 at ICAR- CAFRI, Jhansi**

S. No	Name	Designation	Organization
Guests of Honour			
1	Dr Arvind Kumar	Vice -Chancellor	RLBCAU, Jhansi
2	Dr. Anil Kumar	Director	ICAR- CAFRI, Jhansi
3.	Dr S.K. Dhyani	Ex-Director, CAFRI & Pr. Scientist	NRM Division, ICAR
Speakers			
4	Dr A. Barik	ADC ,Oilseeds	DAC&FW, New Delhi
5	Dr.G.R.Rao	Principal Scientist, Forestry	CRIDA, Hyderabad
6	Dr. A. H. Mughal	Assoc.Prof., Forestry	SKUAST, Srinagar
7	Dr K. Kumaran	Prof. & Head, Plant Breeding	TNAU, Mettupallayam
8	Shri Yogesh Verma	Chief Operation Officer	ROCL, Jaipur
9	Dr H.M.Behl	Ex-Scientist	NBRI, Lucknow
10	Dr V. K. Gour	Professor, Plant Breeding	JNKVV, Jabalpur
11	Dr Ashish Tewari	Asstt. Prof., Forestry	KU, Nainital
12	Dr Shital Sharma	Addl. Director, Agriculture	Deptt. of Agri., Rajasthan
13	Dr S Vimala Devi	Sr. Scientist	ICAR-CAFRI
14	Shri N Ravindra	CFO	Deptt of Forests, UP
State Departments			
15	Shri P D Sarathe	Dy. Director, Agriculture	M.P.
16	Shri G K Saranath Babu	Jt. Director, Agriculture	T.N.
17	Thiru R. Gurumurthy	Jt. Dir.(Ag.)	TN
18	Sri R P S Rawat	Agri & BSA	Uttarakhand
19	Shri J P Tiwari	Chief Agriculture Officer	Uttarakhand
20	Shri Anil Kumar	Tech. Expert	U.P.
21	Shri S K Agnihotri	Jt. Director, Agriculture	Jhansi Div. U.P.
22	Shri Ashok Kumar	Jt. Director, Agriculture (Pulses)	U.P.
23	Shri Piyush Solanki	Asstt. Director, Agriculture	Khargaon, MP
24	Dr Rajesh Kumar	Dy. Director, Plant Protection	Banda, UP
25	Dr U P Singh	Dy. Director, Agriculture	Jhansi, UP
26	Shri R S Singh	Dy. Director, Plant Protection	Jhansi, UP
27	Shri M L Verma	Agriculture Officer	ROCL
28	Sri R.K.Yadavendra,	Jt. Director, Agriculture	Rajasthan

29	Sri Udai Bhan	Dy. Director, Agriculture	Rajasthan
30	Shri D J Deore	Sub-Div Agriculture Officer	Maharashtra
31	Shri R M Shinde	Sub-Div Agri Officer	Nandurbar, Maharashtra
32	Shri M D Sawant	Sub-Div Agri Officer	Palghar, Maharashtra
33	Shri C Lalnithanga	Dy. Director, Agriculture	Mizoram
34	Shri F Lalmalsawma	Agri Extn Officer	Mizoram
Special Invitees			
35	Shri S.K.Pal	Asstt. Director (OI&T)	NOVOD Board
36	Dr Ramakant	Scientist-C	FRI, Dehradun
37	Dr M K Nautiyal	Sr. Scientist	GBPUA&T, Pantnagar
38	Sri RS Dahatonde	Head cum Sr Scientist	KVK Nandurbur, Maharashtra
39	Dr D. Ram	Professor, Horticulture	NDUAT, Faizabad
40	Dr Nishi Roy	Programme Coordinator	KVK Bharari
41	Dr Tomar	Programme Coordinator	KVK, Datia
42	Shri Prabhat Kumar	Scientist	CSWTRI, Datia
43	Shri Manish Kumar	Scientist	CSWTRI, Datia
44	Dr A K Singh	Scientist	KVK, Datia
45	Shri Javed	Manager	Surya Gas, Jhansi
46	Shri V Singh	Sale Personnel	BPCL
47	Shri G.L.Sharma	Consultant	Biofuel Authority, Rajasthan
48	Shri R P Dubey	RA	RATDS, Jhansi, UP
49	Dr K.K.Tamta	RA	KU, Nainital
Other Invitees			
50	Dr A.K.Handa	Principal Scientist	ICAR-CAFRI, Jhansi
51	Dr R.K Tewari	Principal Scientist	ICAR-CAFRI, Jhansi
52	Dr Rajendra Prasad	Principal Scientist	ICAR-CAFRI, Jhansi
53	Dr Ram Newaj	Principal Scientist	ICAR-CAFRI, Jhansi
54	Dr Badre Alam	Principal Scientist	ICAR-CAFRI, Jhansi
55	Dr Ramesh Singh	Principal Scientist	ICAR-CAFRI, Jhansi
56	Dr R.P.Dwivedi	Principal Scientist	ICAR-CAFRI, Jhansi
57	Dr Sudhir Kumar	Principal Scientist	ICAR-CAFRI, Jhansi
58	Dr R.H.Rizvi	Sr. Scientist	ICAR-CAFRI, Jhansi
59	Dr Asharam	Scientist	ICAR-CAFRI, Jhansi
60	Dr Dheeraj Kumar	Scientist	ICAR-CAFRI, Jhansi
61	Dr K. B. Sridhar	Scientist	ICAR-CAFRI, Jhansi
62	Shri S.B.Chavan	Scientist	ICAR-CAFRI, Jhansi
63	Shri A.R.Uthappa	Scientist	ICAR-CAFRI, Jhansi
64	Dr. Veeresh Kumar	Scientist	ICAR-CAFRI, Jhansi
65	Dr Rama Kant	Sr Scientist	ICAR-CAFRI, Jhansi

66	Shri M . Kumar	Scientist	ICAR-CAFRI, Jhansi
67	Dr (Mrs) Madhulika	Scientist	ICAR-CAFRI, Jhansi
68	Shri Binami Singh	Chief Technical Officer	ICAR-CAFRI, Jhansi
69	Dr Rajeev Tiwari	Chief Technical Officer	ICAR-CAFRI, Jhansi
70	Dr C.K.Bajpai	Chief Technical Officer	ICAR-CAFRI, Jhansi
71	Shri Rajendra Singh	ACTO	ICAR-CAFRI, Jhansi
72	Dr Arunab Dutta	ACTO	ICAR-CAFRI, Jhansi
73	Shri Sunil Kumar	ACTO	ICAR-CAFRI, Jhansi
74	Shri R.K.Singh	Tech Officer	ICAR-CAFRI, Jhansi
75	Shri Shishupal Singh	Tech Officer	ICAR-CAFRI, Jhansi
76	Shri Prabhudayal	Technical Officer	ICAR-CAFRI, Jhansi
77	Shri Ram Bahudar	Technical Officer	ICAR-CAFRI, Jhansi
78	Ms S. Tamarkar	Technical Officer	ICAR-CAFRI, Jhansi
79	Shri P Dayal	Technical Officer	ICAR-CAFRI, Jhansi
80	Dr. R.T.Bhargav	RA	ICAR-CAFRI, Jhansi
81	Shri Tripathi	RA	ICAR-CAFRI, Jhansi
82	Shri Vesh Saxena	RA	ICAR-CAFRI, Jhansi
83	Sri Kumar Srivastava	RA	ICAR-CAFRI, Jhansi
84	Shri Vishal Singh	RA	ICAR-CAFRI, Jhansi
85	Shri A.K.Singh	SRF	ICAR-CAFRI, Jhansi
86	Shri Prashant Singh	SRF	ICAR-CAFRI, Jhansi
87	Shri M. Chaturvedi	SRF	ICAR-CAFRI, Jhansi
88	Ms Tanu Nagori	SRF	ICAR-CAFRI, Jhansi
89	Shri Mayank	SRF	ICAR-CAFRI, Jhansi
90	Shri G. Gupta	SRF	ICAR-CAFRI, Jhansi
91	Dr Amit Jain	SRF	ICAR-CAFRI, Jhansi
92	Shri P. Singh	Assistant	ICAR-CAFRI, Jhansi
93	Dr RV Kumar	Head, GSM	ICAR-IGFRI, Jhansi
94	Shri AK Singh	Sr Scientist	ICAR-IGFRI, Jhansi
95	Dr Devi Singh	Consultant	RLBCAU, Jhansi
96	Shri S N Pandey	Director	Development Alternative , UP
97	Shri K Muri	Sr. Programmer	Development Alternative , UP
DAC&FW			
98	Dr M Dutta	Consultant	DAC&FW
99	Shri A.Pandey	TA	DAC&FW
100	Shri Amar Singh	TA	DAC&FW
101	Shri Ravinder Singh	MTS	DAC&FW