F.No. 6-5/2020-NBM (91545)
Government of India
Ministry of Agriculture & Farmers Welfare
Department of Agriculture & Farmers Welfare
(National Bamboo Mission-MIDH)

Krishi Bhawan, New Delhi
Dated 4th January 2024

To

The Director,
State Bamboo Mission (As per list)

Sir,

Subject: Report of the expert committee regarding juvenile flowering of Bamboosa Balcooa in Marathwada, Vidarbha and some part of Gujarat- reg.

The undersigned is directed to refer the even number notification dated 3rd January, 2023 regarding formation of the expert committee to look into the issues cited in the subject. The expert committee examined the matter in detail and submitted the report to the National Bamboo Mission, DA&FW which is attached alongwith.

2. In view of the findings & recommendations of the committee, the State Bamboo Missions (SBMs) are requested to raise awareness in the farming community on strictly following the recommended spacing as determined for each type of Bamboo species (Annexure 2 of the report). During the procurement/ Distribution/sales of Tissue Cultured Bamboo Planting Materials under NBM programme, the SBMs may ensure that the private tissue culture firms to provide a certificate of quality to farmers, guaranteeing compensation in case of losses due to juvenile flowering for a duration logically fixed for each species in the form of monetary benefits or as fresh planting material which has been certified.

This is issued with the approval of Competent Authority.

Encl: As above.

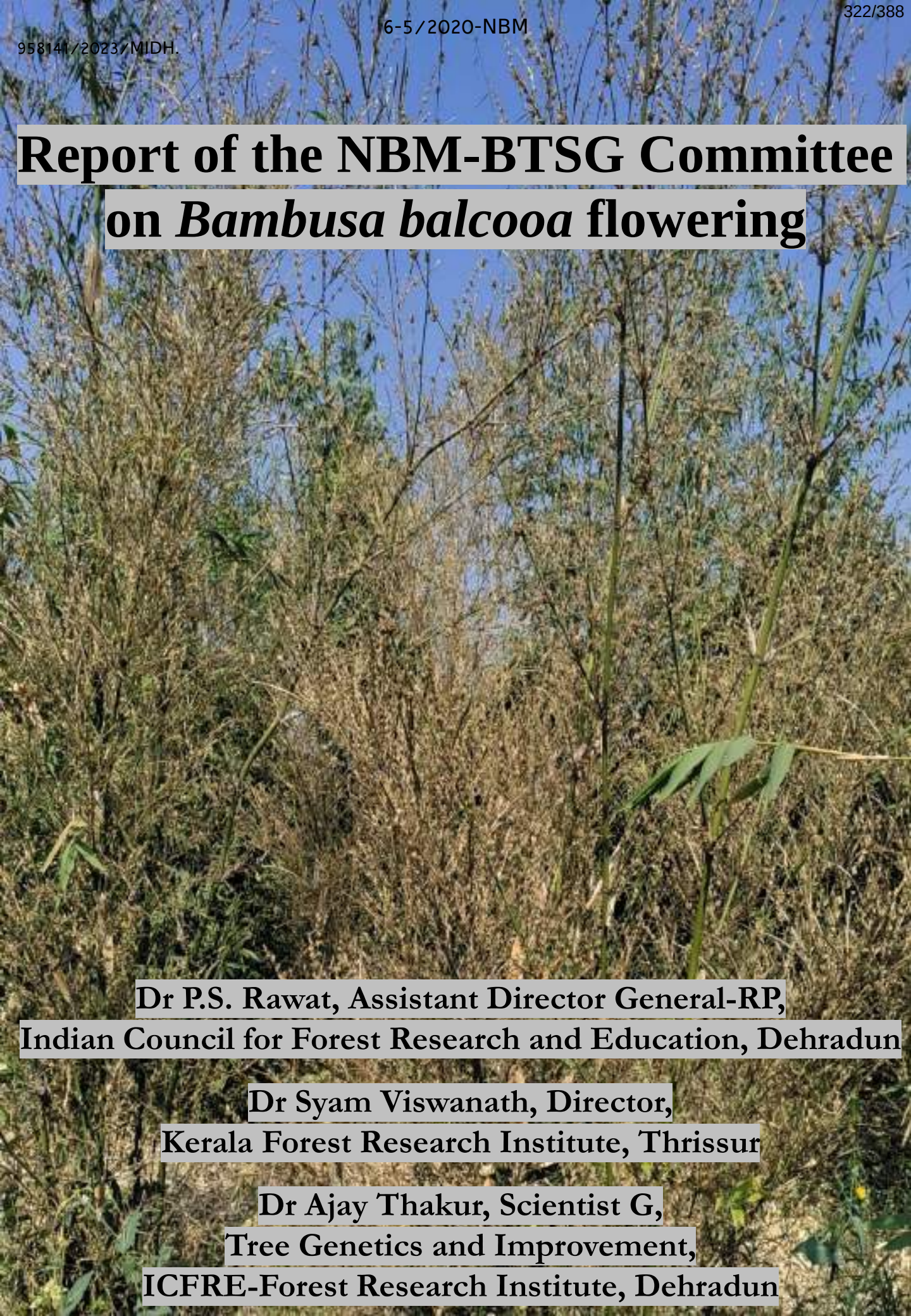
4/1/2024

(Sreekanth K S)
Assistant Commissioner (NBM)
Email: sreekanth.ks@gov.in

6-5/2020-NBM

958141/2023/MIDH.

Report of the NBM-BTSG Committee on *Bambusa balcooa* flowering



Dr P.S. Rawat, Assistant Director General-RP,
Indian Council for Forest Research and Education, Dehradun

Dr Syam Viswanath, Director,
Kerala Forest Research Institute, Thrissur

Dr Ajay Thakur, Scientist G,
Tree Genetics and Improvement,
ICFRE-Forest Research Institute, Dehradun

Report of the NBM-BTSG Committee on *Bambusa balcooa* flowering incidence

In pursuance with the letter communicated by Sh. Sreekanth KS, Assistant Commissioner, National Bamboo Mission, Ministry of Agriculture and Farmers Welfare, Govt. of India dtd. 3rd January 2023 regarding pre-mature flowering of *Bambusa balcooa* a committee was constituted to examine the pre-mature flowering of tissue culture raised *Bambusa balcooa* and furnish the findings with remedial advisory for circulating to the public.

The constitution of the committee is as follows:

1. Dr P.S. Rawat, Assistant Director General-RP, Indian Council of Forest Research and Education, Dehradun
2. Dr Syam Viswanath, Director, Kerala Forest Research Institute, Peechi
3. Dr Ajay Thakur, Scientist G, Genetics and Tree Improvement, Forest Research Institute, Dehradun

The committee met online on the 25th of January 2023 and proposed a plan of action to collect and verify the details in the matter. A comprehensive format as proposed for collecting the data and a dedicated email (bambooflowering2023@gmail.com) was created for the purpose and circulated amongst various Bamboo farmers groups. The committee members and respective BTSG coordinators collected the grievances from bamboo farmers from various states (Annexure 3). On the basis of the details received the data was compiled and collated (Annexure 1). The committee members BTSG team contacted several of the farmers and visited them to determine veracity of the claims. Based on the collated data the committee met again online on 20th June 2023 to finalize its report.

The major findings and recommendations of the committee are as follows:

1. *Bambusa balcooa* flowering although rare, has been previously recorded (Banik, 1987, Rawat, 1987, Das et al., 2017; Kumar et al., 2021). In general, in such flowering either flowering culm or clump dies after producing infertile flowers.
2. In this case the flowering incidences appears to be genetic and not induced by environmental, edaphic or physiological related factors (As the incidence is spread over a large area and reported from different geolocations).
3. All the reported flowering incidences were from tissue culture (TC) raised plantations of *Bambusa balcooa* supplied by various private tissue culture companies.
4. More than 90% of cases of *B. balcooa* flowering reported was from Maharashtra, with several cases also from Chhattisgarh, Karnataka and Andhra Pradesh (Figure 1).
5. Several cases of *B. balcooa* flowering from Gujarat region were reported since 2018 onwards (Arjumand and Rani; 2023), however the committee did not receive any written grievances from the farmers from Gujarat.
6. The total estimated area of flowering is more than 300 acres in Maharashtra alone (Vijay Pinjarkar, Times of India, May 2022), however BTSG has received only details for roughly around 100 acres in total.
7. In around 60% of total cases of reported *B. balcooa* flowering, <20% of the total plants in the plantation had flowered and in ~2% cases more than 75 % flowering was

observed. A case from Karnataka reported ~95% flowering of 5-acre *B. balcooa* plantation. However, several farmers (~33%) have not reported the extent of flowering (Figure 2).

8. Around 40% of the surveyed farmers bought tissue culture plantlets from Growmore Biotech Ltd, Hosur and ~20% each from Kala Biotech Pvt. Ltd., Pune and IshVed Biotech Ltd, Pune (Figure 3).

9. Gregarious flowering is a common phenomenon in seed producing bamboo. *Bambusa balcooa* is a sterile bamboo and not being grown in forest, hence gregarious flowering is not common in this species. In general, plantation of more than 80 years is not been reported to flower, though sometimes one culm or a clump may flower and cause mortality of clump.

10. Our observations based on data supplied by farmers shows that the report of this scale of flowering is mostly in tissue culture origin plantlets of *Bambusa balcooa* supplied between 2020–2022 only. Thus, this flowering is only in cloned tissue culture plants from a few mother plants (one or two) of *Bambusa balcooa* in central and south India, not in vast plantations growing in Bihar, west Bengal and north east India. Even, tissue culture plants supplied from the same private companies before this period (2019 and early) are growing in different geographical locations without any report of flowering.

11. In case of gregarious flowering event, it is likely that all plants generated from the same mother-plant will flower simultaneously and die along with the mother-plant. However, in these cases only clonal plants of TC origin (from the private companies) between 2020-22 have flowered, while same clones supplied earlier from the same companies have not flowered in the reporting year. Thus, it may be inferred that practices adopted in tissue culture laboratories may play a role in this particular flowering incidence.

12. There are reports of *in vitro* flowering during tissue culture, which may be due to disruption of the balance between auxins and cytokinin. Recently, tissue culture raised *Bambusa balcooa* plantlets flowered *in vitro.* Usually, such materials of TC grown bamboo are discarded from production.

13. There are not many reports of survival studies on *in vitro* produced bamboo species. Prutpongse and Gavinlertvatana, (1992) observed sporadic *in vitro* flowering in cultures of *B. nana*, *B. arundinacea*, *Bambo*o. sp. Dam Khan, *B. glaucescens*, *B. brandisii*, *B. multiplex, Cephalostachyum pergracil* and *Dendrocalamus membranaceus*. They reported that all shoots died post flowering and that *in vitro* flowered plants did not survive. **Hence, it may be inferred that if there is flowering during tissue culture, the batch should be discarded to avoid future losses in field.**

14. The role of abiotic stress factors (temperature and rainfall), in inducing flowering has to be further studied.

15. The role of irrigation and fertilizer application (fertigation) in reviving senescing/flowering bamboo is yet to be scientifically proven and as such cannot be recommended. **Hence, farmers are advised not to heed to recommendations by private tissue culture companies to try and revive plantations post-flowering using fertilizer and irrigation application, as this is likely to be futile and will increase the losses to the farmers.**

16. As of now, no scientifically proven solutions are available for predicting or preventing gregarious flowering in bamboo.

17. **It is necessary to ensure private tissue culture agencies follow NBM and DBT-NCS TCP recommendations for Bamboo tissue culture.**

18. It would be crucial to ensure the collection of explants only from mother plants of young biological age (preferably seed germinated) to prevent future flowering incidences.
19. Development of DNA markers for determining the biological age of bamboo, can help considerably in reducing such incidences.
20. High density planting of *Bambusa balcooa* and other bamboo species is being advertised and promoted by several private firms and agencies which is detrimental to bamboo growth and yield.
21. It is the recommendation of the committee to raise awareness in the farming community on strictly following the recommended spacing as determined for each type of Bamboo species (Annexure 2).
22. The committee recommends the private tissue culture firms provide compensation to aggrieved farmers either in the form of monetary benefits or as fresh planting material which has been certified.
23. The committee also recommends the private tissue culture firms to provide a certificate of quality during sale of TC plants to farmers, guaranteeing compensation in case of losses due to flowering.

Signatures and Seal of Members of the Committee

24/05/2023

Dr P.S. Rawat, ADG-RP, ICFRE, Chairman

सहायक महानिदेशक (अनुसंधान योजना)
भारतीय वानिकी अनुसंधान एवं शिक्षा परिषद्
डाकघर-न्यू फॉरेस्ट, देहरादून - 248006 (उत्तराखंड)

Dr. Syam Viswanath
Director
KSCSTE - Kerala Forest Research Institute
Peechi - 680 653, Thrissur, Kerala

Dr Syam Viswanath, Director, KFRI, Member

Scientist G

Dr Ajay Thakur, Scientist G, FRI, Member

References:

1. Arjumand, T., and Rani, R. (2023). Case study on Bamboo farming, Centre for Climate Change and Adaptation (CCA), National Institute of Agricultural Extension Management (MANAGE), Hyderabad, India.
2. Banik, R.L. (1987). Seed germination of some bamboo species. Indian Forester, 113 (8): 578-588
3. Das M.C., Singnar P., Nath A.J. and Das A.K. (2017). Flowering in Bambusa balcooa Roxb. In Barak Valley of North East India. Indian Forester, 143 (2): 180-181.
4. Kumar, S.P., Shukla, G., Vineeta, Panwar, P. and Chakravarty, S. (2021). Sporadic Flowering in *Bambusa balcooa* in Sub-Himalayan region of West Bengal. Indian Forester, 147 (4): 413-414.
5. Pinjarkar, V. (2022). Balcooa Bamboo Bubble Bursts, Nagur Edition, Times of India, (May 29 2022).
6. Prutpongse, P., & Gavinlertvatana, P. (1992). In Vitro Micropropagation of 54 Species from 15 Genera of Bamboo, Hort Science, 27(5), 453-454. Retrieved Jun 22, 2023, from https://doi.org/10.21273/HORTSCI.27.5.453
7. Rawat, B.S. (1987). Flowering of bamboos. Indian Forester, 113 (11): 760-761.

ANNEXURE 1

Figure 1: State-wise cases of TC-raised *Bambusa balcooa* flowering reported to BTSG

- Total of 90 farmers reported to BTSG
- 93% of farmers from Maharashtra
- Most of the *B. balcooa* plantations planted in 2020-21
- Most of them flowered in 2022-23
- Several cases in Gujarat were reported from 2018 onwards but no farmers have approached BTSG

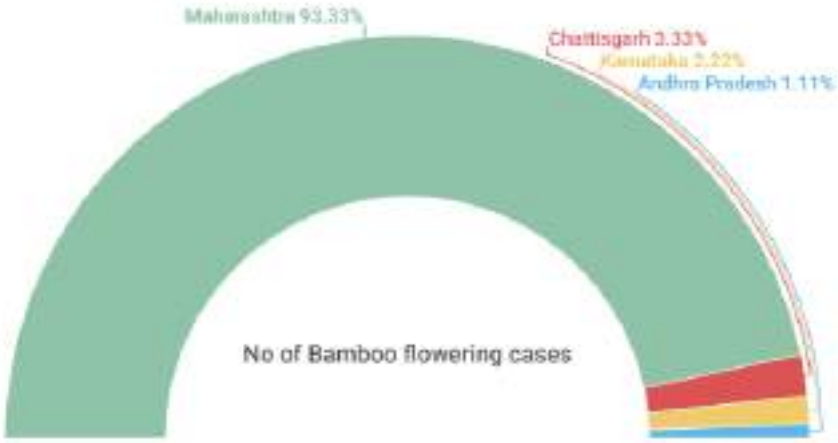
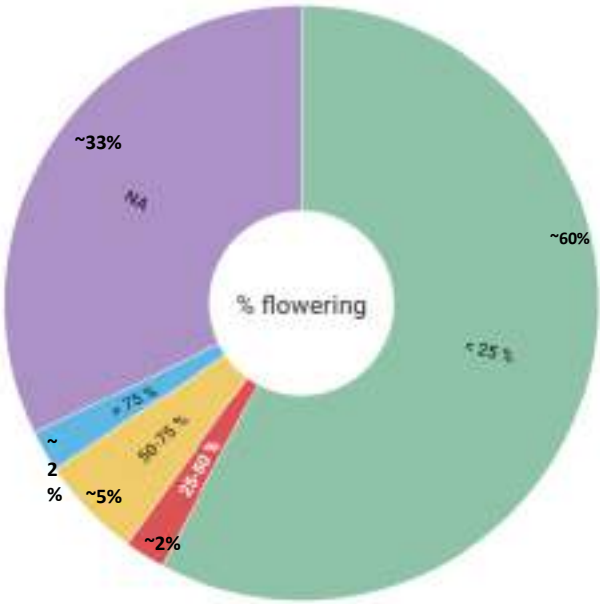
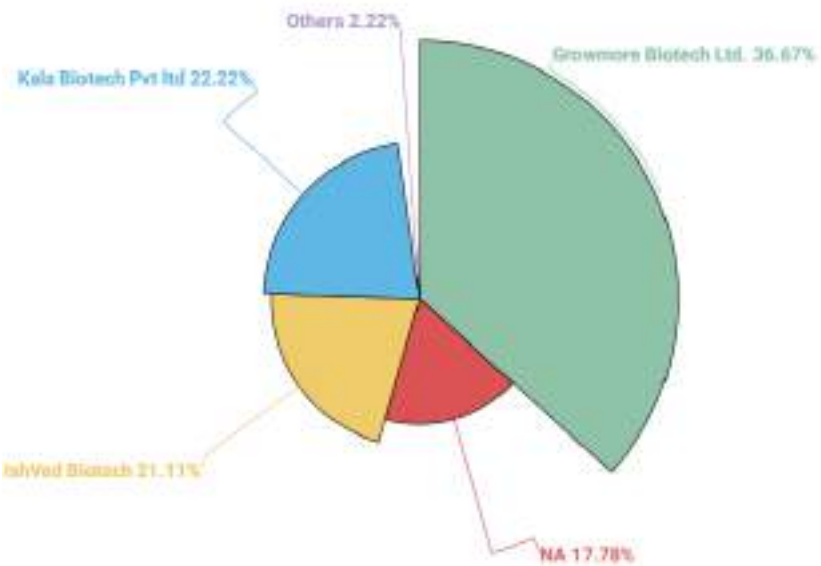


Figure 2: Percentage flowering of TC-raised *Bambusa balcooa* plantations



- Around 60% cases reported < 25% of clumps flowering
- ~2% had 25-50% flowering incidence
- >5% had 50-75% flowering incidence
- ~2% had >75 % of the plantation in flowering
- ~ 33% did not report the extent of flowering (NA)

Figure 3: Company-wise share of TC *Bambusa balcooa* plants sold to farmers*



* Having flowered as declared by farmers through emails to BTSG.

Pictures of *Bambusa balcooa* flowering from several states submitted by farmers to BTSG

6-5/2020-NBM

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Shri Amrith Rao; Ishwaramangala village, Dakshina Kannada; Karnataka; 5 acres; 95% flowering

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958141/2023/MIDH.

Shri Deepak Mishra – Kathiya Village, Raipur, Chhattisgarh – 10 acres; ~60% flowering

6-5/2020-NBM

958141/2023/MIDH.

Shri Deepak Mishra – Kathiya Village, Raipur, Chhattisgarh – 10 acres; ~60% flowering

6-5/2020-NBM

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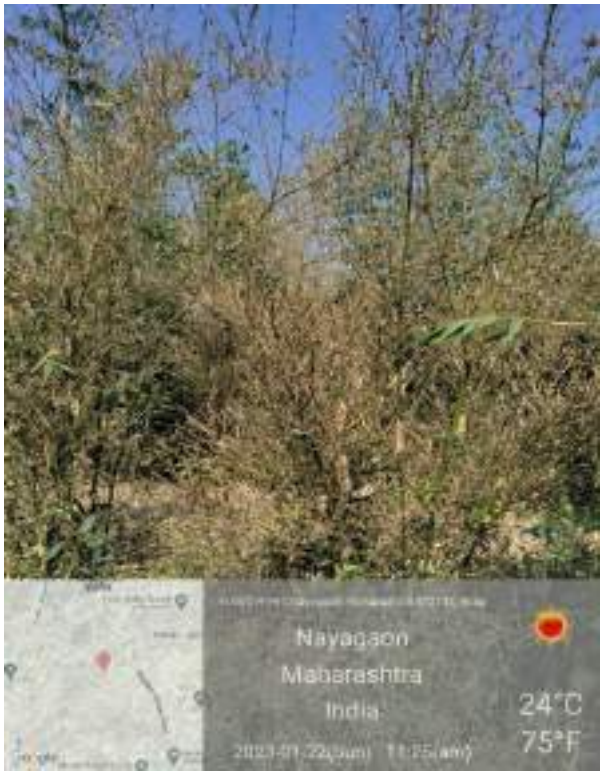
Shri Nitin Gaikwad – Nayagaon Village, Nashik, Maharashtra; ~30% flowering

6-5/2020-NBM

958141/2023/MIDH.



Shri Nitin Gaikwad – Nayagaon Village, Nashik, Maharashtra; ~30% flowering

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Rishikesh Vidhate, Karhe Village, Ahmednagar, Maharashtra

6-5/2020-NBM

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Trimbak Patil, Pimparkhed Village, Hadgoan dist. Nanded, Maharashtra

6-5/2020-NBM

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Wena Farmer producer Ltd, Kopra Village, Wardha Dst., Maharashtra- Total ~ 30 Acres; ~20% flowering

ANNEXURE 2

Recommended planting spacing of different types of Bamboo species

	Spacing	Number/ ha	Number / acre	Area suitable to grow
Largest Size				
Dendrocalamus giganteus	N- 8×8 m I- 6×6 m	160-280	65-110	All regions of India where rice is being cultivated except arid/semi arid and temperate zone. Water requirement is high. Cultivation restricted to 800 m altitude.
D. asper	N- 6×6 m I- 5×5 m	280-400	110-160	Same as above
D. brandisii	N- 6×6 m I- 5×5 m	280-400	110-160	Same as above except in cold regions of north.
D. sikimensis	N- 6×6 m I- 5×5 m	280-400	110-160	Subtropical zone of north east India.
Large size				
Bambusa balcooa	N- 5×5 m I- 5×4.5 m	400 - 440	160-180	Versatile, easily grow in rice cultivation regions except arid, saline and temperate zone. Cultivation possible in semi arid area where pH is less than 7, with irrigation and soil maneuvering. Cultivation restricted to 800 m altitude.
B. vulgaris	N- 5×5 m I- 5×4.5 m	400 - 440	160-180	Same as above
Gigantochloa attrovoilaceae (Black bamboo)	N- 5×5 m I- 5× 4.5 m	400 - 440	160-180	Same as above
D. somedevai	N- 5×5 m I- 5× 4.5 m	400 - 440	160-180	Restricted to subtropical and temperate zone of north India.
D. hamiltonii	N- 5×5 m I- 5× 4.5 m	400 - 440	160-180	
Medium Size				
Bambusa tulda	N- 5×5 m	400-500	160-200	Versatile, easily grow in rice cultivation regions except arid, saline and temperate

	I- 5×4 m			zone. Cultivation restricted to 800 m altitude.
Bambusa nutans	N- 5×5 m I- 5×4 m	400 - 500	160-200	Same as above. Cultivation possible up to 1400 m altitude. Chilling tolerance.
Bambusa polymorpha	N- 5×5 m I- 5×4 m	400 - 500	160-200	All regions of India where rice is being cultivated except arid/semi arid and temperate zone. Cultivation restricted to 800 m altitude.
Small Size				
D. strictus	N- 3×4 m I- 3×3 m	833-1100	333-425	Most versatile bamboo growing in India and grow almost all climatic conditions except dessert and temperate. It grows even in slightly basic and saline semi arid climatic conditions. Productivity with irrigation and soil maneuvering. Cultivation restricted to 1000 m altitude on eastern and southern slopes.
D. stocksii	N- 4×4 m I- 3×4 m	625-833	260 -333	Though being grown in Konkan belt now being cultivated in Maharashtra and Karnataka. Suitable to other parts of India where rice is being cultivated except arid, subtropical and temperate zone. Cold sensitivity has been noticed in north so not recommended in hilly regions.
Thyrsostachys oliveri	N- 3×4 m I- 2×4 m	833-1250	333-500	Most cultivated bamboo of Tripura. Suitable to grow in all tropical humid and high moisture regions.

I: Intensive cultivation (with drip fertigation), N: normal cultivation

Spacing is recommended for plains; in hilly terrain spacing can be reduced slightly.

ANNEXURE 3

Gmail

Search mail

Compose

Inbox

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Snoozed

Sent

Drafts 1

More

Labels

PO: New Forest, Forest Research Institute,
Dehradun, Uttarakhand, India - 248006

-----Forwarded by Ajay Thakur/FRI/icfre on 01/29/2023 10:50PM -----

To: thakura@icfre.org
From: "Rishikesh Vidhate" <rishikeshvidhate3@gmail.com>
Date: 01/28/2023 09:41PM
Subject: बालकुवा या जातीला फुलोरा आल्याकारणाने

(See attached file: IMG-20221215-WA0038.jpg)
(See attached file: IMG-20221215-WA0039.jpg)
(See attached file: IMG-20221215-WA0040.jpg)

नमस्कार साहेब मी ऋषिकेश किशोर विधाटे आणि माझी आई शारदा किशोर विधाते राहणार बाबुळखेडा तालुका नेवासा जिल्हा अहमदनगर येथील र
16 6 2021 रोजी बालकुवा या प्रजातीचे 1500 रोपे लागवड केली होती अटल बांबू समृद्धी योजना या योजनेअंतर्गत आम्ही ग्रोमोर या शासनमान्य न
दिली बांबूला फुलोरा येण्यासाठी 35 ते 40 वर्ष लागतात व आम्ही लावलेल्या रोपांना लहानपणीच फुलोरा आला काही रोपांना लावल्यानंतर सहा ते सात
फुलोरा येत आहे दीड हजार रोपांमधून 570 , बांबूचे बेट फुलोरा आला आहे आणि बाकीचे बेट फुलरा येण्याच्या कंडिशन मध्ये आहे

साहेब सांगायचे असे की बांबू हे क्षेत्र नवीन आहे त्याच्यात जर असे अडथळे आले तर लोकांचा भरोसा राहणार नाही त्यामुळे आपल्याला योग्य असा निर्
शेतकऱ्यांना व भविष्यात बांबू लागवड करू इच्छिणाऱ्या शेतकऱ्यांसाठी फायद्याचा राहील ही नम्र विनंती

आपला विश्वास

Fwd: Bamboo Flowering Issue at our farm

From Viswanath, Dr Syam on 2023-01-28 10:36

Details Plain text

Donald
Pl copy details in mail created specifically for this

---------- Forwarded message ---------
From: **PRASANNA SUTAONE** <prasanna.sutaone@gmail.com>
Date: Fri, 27 Jan 2023, 14:56
Subject: Bamboo Flowering Issue at our farm
To: <thakura@icfre.org>, <adg_rp@icfre.org>, <director@kfri.res.in>, ajay.thakur@gmail.com <ajay.thakur@gmail.com>
Cc: Gaurav Charde <gaurav11charde@gmail.com>, <sreekanth.ks@gov.in>

Dear Sir,

We are members of Wena Farmer producer co Limited bamboo farmers and have completed 30 acres of bamboo plantation in village Kopra ,dist Wardha Maharashtra under the guidance of FPC.
Maharashtra Bamboo Development Board proposed tissue culture bamboo sampling and we have purchased bamboo samplings from Growmore Biotech Limited an approved laboratory of NBM.
We have purchased 10,000 Bheema bamboo sampling out of which we have observed flowering in approx. 20 % plants. This flowering was observed after 2 years of plantation. Because of flowering we have faced huge losses. Moreover the question is why National Bamboo Mission is supporting these companies for bamboo?
We approached the laboratory (M/S Growmore Biotech Ltd) which supplied the Tissue culture seedlings, they assured us that it's common and could have happened due to water stress or nitrogen deficiency, we increased the irrigation and gave fertilisers as suggested. In the meanwhile more farmland was cultivated and more plantation was done, then again in the year 2021 the plantations started flowering and once again we approached the laboratory (M/S Growmore Biotech Ltd) and the Managing Director of Bamboo board, the laboratory once again told the same story of water stress and nitrogen deficiency, since we already had flowering (2020) before we had taken all precautions as regards to water stress and nitrogen deficient, but this time the flowering was almost 20% of the planted areas

Please find herewith photos of the bamboo plantation.

Gmail Bamboo Advisory Committee <bambooflowering2023@gmail.com>

Fw: Bamboo Flowering Issue at our farm

1 message

thakura@icfre.org <thakura@icfre.org> Sun, Jan 29, 2023 at 10:51 PM
To: bambooflowering2023@gmail.com

With Best Regards,
Ajay Thakur
Ph.D. (Univ of Wales, Bangor, UK)
Scientist and Incharge Biotechnology Discipline
Division of Genetics and Tree Improvement
Senior Coordinator (Academics), FRI Deemed Univ.
PO: New Forest, Forest Research Institute,
Dehradun, Uttarakhand, India - 248006

-----Forwarded by Ajay Thakur/FRI/icfre on 01/29/2023 10:51PM -----

To: thakura@icfre.org, adg_rp@icfre.org, director@kfri.res.in, "ajay.thakur@gmail.com" <ajay.thakur@gmail.com>
From: "PRASANNA SUTAONE" <prasanna.sutaone@gmail.com>
Date: 01/27/2023 02:56PM
Cc: "Gaurav Charde" <gaurav11charde@gmail.com>, sreekanth.ks@gov.in
Subject: Bamboo Flowering Issue at our farm

Dear Sir,

We are members of Wena Farmer producer co Limited bamboo farmers and have completed 30 acres of bamboo plantation in village Kopra ,dist Wardha Maharashtra under the guidance of FPC.

Maharashtra Bamboo Development Board proposed tissue culture bamboo sampling and we have purchased bamboo samplings from Growmore Biotech Limited an approved laboratory of NBM.
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Please find herewith photos of the bamboo plantation.

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958141/2023/MIDH.

As evident from above communication the remedy was watering & compost but our question was why 20% are affected was never addressed. We request to please look into the matter and resolve the issue , we except committee to resolve the issue and give some relief to us and to the bamboo farmers.

958141/2023/MIDH.

Regards

Prasanna Sutaone
9552598815

Sr No	Name of farmer	Village	Survey No	Plantation Area (Acres)
1	Smt Vanita Bapurao Hirudkar	Kopra	90 & 93	2.71 & 2.64
2	Shri Pravin Chikankar	Kopra	71/1 A	1.45
3	Shri Pradip V. Potdukhe	Kopra	71/1 B	1.46
4	Shri Chandrashekhar Agde	Kopra	71/2 B	1.74
5	Shri Murlidhar Gadge	Kopra	71/2 A	1.21
6	Shri Manish G. Kevte	Kopra	74/1	3.46
7	Shri Gaurav C. Charde	Kopra	74/2	1.60
8	Shri Jitendra O. Charde	Kopra	74/3	2.00
9	Shri Prasanna Sutone	Kopra	74/4	1.60
10	Shri Ajikya C. Jawanjal	Kopra	74/5	2.0

Gmail

Bamboo Advisory Committee <bambooflowering2023@gmail.com>

Fw: Bamboo flowering problem

1 message

thakura@icfre.org <thakura@icfre.org> Sun, Jan 29, 2023 at 11:16 PM
To: bambooflowering2023@gmail.com

With Best Regards,
Ajay Thakur
Ph.D. (Univ of Wales, Bangor, UK)
Scientist and Incharge Biotechnology Discipline
Division of Genetics and Tree Improvement
Senior Coordinator (Academics), FRI Deemed Univ.
PO: New Forest, Forest Research Institute,
Dehradun, Uttarakhand, India - 248006

-----Forwarded by Ajay Thakur/FRI/icfre on 01/29/2023 11:16PM -----

> To: thakura@icfre.org
> From: "Rajndra Salunke" <rajendrasalunke1668@gmail.com>
> Date: 01/03/2023 10:31PM
> Subject: Bamboo flowering problem
>
> *(See attached file: Screenshot_2023-01-03-22-28-50-460_com.whatsapp.png)*
>
> Tahsil satana dist.nashik at post karhe.

Screenshot_2023-01-03-22-28-50-460_com.whatsapp.png
371K

Gmail

Bamboo Advisory Committee <bambooflowering2023@gmail.com>

Fw: Flowering of Bambusa Balcooa

1 message

thakura@icfre.org <thakura@icfre.org> Sun, Jan 29, 2023 at 10:57 PM
To: bambooflowering2023@gmail.com

With Best Regards,
Ajay Thakur
Ph.D. (Univ of Wales, Bangor, UK)
Scientist and Incharge Biotechnology Discipline
Division of Genetics and Tree Improvement
Senior Coordinator (Academics), FRI Deemed Univ.
PO: New Forest, Forest Research Institute,
Dehradun, Uttarakhand, India - 248006

-----Forwarded by Ajay Thakur/FRI/icfre on 01/29/2023 10:57PM -----

To: thakura@icfre.org
From: "Vinayak Kulkarni" <vkkulkarni63@gmail.com>
Date: 01/12/2023 02:47PM
Subject: Flowering of Bambusa Balcooa

(See attached file: 20230110_160910.jpg)
(See attached file: 20230110_160826.jpg)

R/sir
I have planted Bambusa Balcooa in Nov 21 at Survey no 42 of Village Chausala TQ and Dist Beed , Maharashtra under Atal bamboo mission .But iam facing the problem of flowering of bamboo plants .Pl suggest me the solution for above ploblem. The details are as below
Name : Vinayak Kamalakar Kulkarni
Location : Village Chausala TQ and Dist.Beed Maharashtra Survey no 42
Date of planting : November 2021
No of plants 600
Photos are attachd

2 attachments

20230110_160910.jpg
4101K

958141/2023/MIDH.

20230110_160826.jpg
4874K

Gmail

Bamboo Advisory Committee <bambooflowering2023@gmail.com>

Fw: Re: Flowering in my 2 acre Bulcoa plantation

1 message

thakura@icfre.org <thakura@icfre.org> Sun, Jan 29, 2023 at 10:59 PM
To: bambooflowering2023@gmail.com

With Best Regards,
Ajay Thakur
Ph.D. (Univ of Wales, Bangor, UK)
Scientist and Incharge Biotechnology Discipline
Division of Genetics and Tree Improvement
Senior Coordinator (Academics), FRI Deemed Univ.
PO: New Forest, Forest Research Institute,
Dehradun, Uttarakhand, India - 248006

-----Forwarded by Ajay Thakur/FRI/icfre on 01/29/2023 10:58PM -----

To: thakura@icfre.org
From: "veeragandapu saraswathy" <saraswathy051972@gmail.com>
Date: 01/10/2023 09:06PM
Cc: "Venkateswarlu Veeragandapu" <veeragandapu@yahoo.co.in>
Subject: Re: Flowering in my 2 acre Bulcoa plantation

Sent from my iPhone

On 03-Jan-2023, at 6:29 PM, veeragandapu saraswathy <saraswathy051972@gmail.com> wrote:

Sent from my iPhone

Begin forwarded message:

From: veeragandapu saraswathy <saraswathy051972@gmail.com>
Date: 3 January 2023 at 4:46:11 PM IST
To: bamboosocietyofindia@gmail.com
Subject: Flowering in my 2 acre Bulcoa plantation

In reponse to the BSI initiative to collect the data on Flowering of Bulcoa planted by the farmers, I submit the details relating to my farm as under
1.Name : V VENKATESWARLU
2.Location of Farm : Garapadau,Pedakurapadu Mandal,Palnadu Dt ,Andhra Pradesh-522403
3. Extent : 2 acres
4. Spacing : 12' x 6'
5. Date of Planting: 28.09.2020
6. Date of Flowering: December 2021
7. Tissue culture plants supplied: Growmore Biotech- Hosur, Tamilnadu
8. No of plants planted: 1050
9. No of plants shown flowering: 360
10. Percentage of flowering: 34%
11. Reported to Growmore on :16.03.2022
12. Response from the company:Not at all encouraging
13. The plants flowered got completely dried up
14. Because of their lack of concern in producing the quality plant material,many farmers like me suffered through out India.

Regards
V VENKATESWARLU
DGM(RTD)
Indian Bank
SATTENAPALLI-Po
Palnadu-Dt
A.P:522403
Mob:9840607975

Sent from my iPhone

Gmail

Bamboo Advisory Committee <bambooflowering2023@gmail.com>

Fw: Re: Regarding flowering in B. balcooa...

1 message

thakura@icfre.org <thakura@icfre.org> Sun, Jan 29, 2023 at 11:06 PM
To: bambooflowering2023@gmail.com

With Best Regards,
Ajay Thakur
Ph.D. (Univ of Wales, Bangor, UK)
Scientist and Incharge Biotechnology Discipline
Division of Genetics and Tree Improvement
Senior Coordinator (Academics), FRI Deemed Univ.
PO: New Forest, Forest Research Institute,
Dehradun, Uttarakhand, India - 248006

-----Forwarded by Ajay Thakur/FRI/icfre on 01/29/2023 11:06PM -----

To: "Viswanath, Dr Syam" <directorkfri@kfri.org>
From: "Amrith Rao" <rao.amrith@gmail.com>
Date: 01/05/2023 12:34PM
Cc: thakura@icfre.org, "Bamboo Society" <bamboosocietyofindia@gmail.com>, director@kfri.res.in, adg_rp@icfre.org
Subject: Re: Regarding flowering in B. balcooa...

(See attached file: 20211221_100106.jpg)
(See attached file: 20211221_095846.jpg)
(See attached file: 20211221_095819.jpg)

Thank you for your mail. Please see attached photos taken in 2021. This is what i could find as of now. Hope this helps.

Regards
Amrith Rao

On Thu, 5 Jan 2023, 11:47 Viswanath, Dr Syam, <directorkfri@kfri.org> wrote:

> Dear Amrith rao,
> Thanks for providing the detailed information regarding the current status of B. balcooa TC plants in your farm. I would appreciate if a few photographs of the same are shared with the committee members. this will help us in framing a recommendation/report.
> S.Viswanath
> Director KSCSTE- KFRI
>
> On Thu, Jan 5, 2023 at 10:56 AM Amrith Rao <rao.amrith@gmail.com> wrote:
>
> > Dear All,
> >
> > This is with regards to the message circulated in the Bamboo Society of India WhatsApp group regarding incidence of flowering in young B.balcooa experienced by growers. Presented below is a brief of my experience/case.
> >
> > My farm is located in Ishwaramangala village, Puttur Taluk, Dakshina Kannada District, Karnataka State. I have allocated 5 acres (about 2 Ha) for bamboo cultivation. During CY2020, I procured and planted 1,000 nos. (minimum order quantity) of B.balcooa (Beema variety) from Grow More Biotech in Hosur in the month of June/July 2020. Subsequently I procured and planted 175 nos. each of D.brandisii and D.asper from College of forestry at Ponnampet in Madikeri Taluk. Beema bamboo was planted at a spacing of 10 x 10 feet, D.asper was planted at 10 x 10 feet and brandisii was planted at 10 x 15 feet.
> >
> > The Beema bamboo showed good growth till about 8 to 10 months, but after that the growth did not show much progress in terms of shoots/leaves. Subsequently we noticed what appeared to be 'flowering' in these young plants. I was not sure if this was the case and thought that tissue culture plants are supposed to be sterile and not display flowering. So out of the 1,000 plants, I would say that over 95% of the plants exhibited this behaviour with perhaps a handful showing normal growth.

After this incident, I removed all the Beema bamboo and planted Tulda and Giganteus varieties at 15 x 15 feet. I retained a few Beema at the fence line.

Brandisii, asper, tulda are showing good progress.

Trust this information is useful for your records. Thank you

Amrith Rao (BSI life member)
Mangalore
(NBM Beneficiary Code: NBMSUM0196940)

--
Dr. Syam Viswanath
Director
KSCSTE-Kerala Forest Reseach Institute
Peechi, Thrissur- 680 651, KERALA, INDIA
Phone ; +91-487-2690100
Mobile # 9188066880
Fax # +91-487-2690111
Email : directorkfri@kfri.org
Website : www.kfri.res.in
KFRI - Dr. Syam Viswanath

3 attachments

20211221_100106.jpg
2145K

20211221_095846.jpg
2333K

6-5/2020-NBM
958141/2023/MIDH.

20211221_095819.jpg
2867K

Gmail

Bamboo Advisory Committee <bambooflowering2023@gmail.com>

Fw: Regarding Bamboosa Balcoa Flowering- Nasik Maharashtra

1 message

thakura@icfre.org <thakura@icfre.org> Sun, Jan 29, 2023 at 10:54 PM
To: bambooflowering2023@gmail.com

With Best Regards,
Ajay Thakur
Ph.D. (Univ of Wales, Bangor, UK)
Scientist and Incharge Biotechnology Discipline
Division of Genetics and Tree Improvement
Senior Coordinator (Academics), FRI Deemed Univ.
PO: New Forest, Forest Research Institute,
Dehradun, Uttarakhand, India - 248006

-----Forwarded by Ajay Thakur/FRI/icfre on 01/29/2023 10:53PM -----

To: "thakura@icfre.org" <thakura@icfre.org>, "adg_rp@icfre.org" <adg_rp@icfre.org>, "director@kfri.res.in" <director@kfri.res.in>, "ajay.thakur@gmail.com" <ajay.thakur@gmail.com>
From: "NITIN GAIKWAD" <nitingaikwad48@yahoo.com>
Date: 01/23/2023 03:03PM
Cc: "mahabambamboo@nic.in" <mahabambamboo@nic.in>, "Bhaskar P." <pawarmbdbnsk@gmail.com>, "Maharashtra Bamboo Development Board Nagpur" <mahabamboo@mahaforest.gov.in>
Subject: Regarding Bamboosa Balcoa Flowering- Nasik Maharashtra

(See attached file: WhatsApp Image 2023-01-23 at 2.10.39 PM (1).jpeg)
(See attached file: WhatsApp Image 2023-01-23 at 2.10.39 PM (2).jpeg)
(See attached file: WhatsApp Image 2023-01-23 at 2.10.39 PM.jpeg)
(See attached file: WhatsApp Image 2023-01-23 at 2.10.40 PM (1).jpeg)
(See attached file: WhatsApp Image 2023-01-23 at 2.10.40 PM (2).jpeg)
(See attached file: WhatsApp Image 2023-01-23 at 2.10.40 PM.jpeg)
(See attached file: WhatsApp Image 2023-01-23 at 2.10.41 PM.jpeg)
(See attached file: WhatsApp Image 2023-01-23 at 2.15.26 PM.jpeg)
(See attached file: WhatsApp Image 2023-01-23 at 2.15.27 PM (1).jpeg)
(See attached file: WhatsApp Image 2023-01-23 at 2.15.27 PM.jpeg)
(See attached file: WhatsApp Image 2023-01-23 at 2.15.28 PM.jpeg)
(See attached file: Bamboo order -Nashik.xlsx)

Dear sir,

This is NItin Gaikwad from Nasik Maharashtra requested to inform you that with the reference letter no- Konbac/Gen/027/2022-23 dated of 17/12/22 of Sanjeev Karpe sir .
Here I wants to inform you that I had purchased 405 sapling of Bamboosa Balcoa in june 21 from Dr.D.N Barathi's Grow more nursary Hosur & planted all the sapling during rainy season of year 2021. We had observed very good growth till year but after that many of plants get matured which was not expected and it was increased day by day in las 4-5 months. Currently there are almost 105 plants of Balcoa get early matured and we also worried about plants future maturity. There is almost 105 plants get matured which is almost 26 % plants got early maturity situation.

Requested to look into matter & guide on same. Plz find attached pictures for your information .

Rgds,
Nitin Gaikwad
Nashik
mo-9704017070

12 attachments

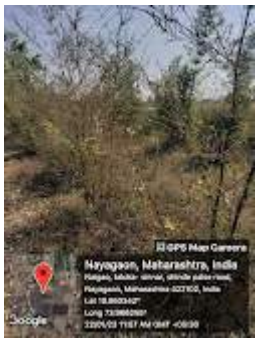
WhatsApp Image 2023-01-23 at 2.10.39 PM (1).jpeg
550K

WhatsApp Image 2023-01-23 at 2.10.39 PM (2).jpeg
421K

WhatsApp Image 2023-01-23 at 2.10.39 PM.jpeg
550K

WhatsApp Image 2023-01-23 at 2.10.40 PM (1).jpeg
357K

WhatsApp Image 2023-01-23 at 2.10.40 PM (2).jpeg
470K



WhatsApp Image 2023-01-23 at 2.10.40 PM.jpeg
491K

WhatsApp Image 2023-01-23 at 2.10.41 PM.jpeg
449K

WhatsApp Image 2023-01-23 at 2.15.26 PM.jpeg
459K

WhatsApp Image 2023-01-23 at 2.15.27 PM (1).jpeg
574K

WhatsApp Image 2023-01-23 at 2.15.27 PM.jpeg
438K

WhatsApp Image 2023-01-23 at 2.15.28 PM.jpeg
385K

Bamboo order -Nashik.xlsx
15K

Gmail

Bamboo Advisory Committee <bambooflowering2023@gmail.com>

Fw:

1 message

thakura@icfre.org <thakura@icfre.org> Sun, Jan 29, 2023 at 11:05 PM
To: bambooflowering2023@gmail.com

With Best Regards,
Ajay Thakur
Ph.D. (Univ of Wales, Bangor, UK)
Scientist and Incharge Biotechnology Discipline
Division of Genetics and Tree Improvement
Senior Coordinator (Academics), FRI Deemed Univ.
PO: New Forest, Forest Research Institute,
Dehradun, Uttarakhand, India - 248006

-----Forwarded by Ajay Thakur/FRI/icfre on 01/29/2023 11:05PM -----

To: thakura@icfre.org
From: "sanjay pattekari" <sanathionemedico@gmail.com>
Date: 01/06/2023 06:37PM
Subject: (Untitled)

Sir I am SANJAY PATTEKARI, a farmer from kolhapur Dist.
I Planted bambusa bulcova in September 2019,around 250 plants . Among them 50 to 60 plants hav pre mature flowering in jan 2020.

Gmail

Bamboo Advisory Committee <bambooflowering2023@gmail.com>

Fw:

1 message

thakura@icfre.org <thakura@icfre.org> Sun, Jan 29, 2023 at 11:15 PM
To: bambooflowering2023@gmail.com

With Best Regards,
Ajay Thakur
Ph.D. (Univ of Wales, Bangor, UK)
Scientist and Incharge Biotechnology Discipline
Division of Genetics and Tree Improvement
Senior Coordinator (Academics), FRI Deemed Univ.
PO: New Forest, Forest Research Institute,
Dehradun, Uttarakhand, India - 248006

-----Forwarded by Ajay Thakur/FRI/icfre on 01/29/2023 11:15PM -----

To: thakura@icfre.org
From: "sanjay pattekari" <sanathionemedico@gmail.com>
Date: 01/06/2023 06:37PM
Subject: (Untitled)

Sir I am SANJAY PATTEKARI, a farmer from kolhapur Dist.
I Planted bambusa bulcova in September 2019,around 250 plants . Among them 50 to 60 plants hav pre mature flowering in jan 2020.

Gmail

Bamboo Advisory Committee <bambooflowering2023@gmail.com>

Fw:

1 message

thakura@icfre.org <thakura@icfre.org> Sun, Jan 29, 2023 at 11:16 PM
To: bambooflowering2023@gmail.com

With Best Regards,
Ajay Thakur
Ph.D. (Univ of Wales, Bangor, UK)
Scientist and Incharge Biotechnology Discipline
Division of Genetics and Tree Improvement
Senior Coordinator (Academics), FRI Deemed Univ.
PO: New Forest, Forest Research Institute,
Dehradun, Uttarakhand, India - 248006

-----Forwarded by Ajay Thakur/FRI/icfre on 01/29/2023 11:16PM -----

> To: thakura@icfre.org
> From: "Sharnu Navadgi" <snavadgi11@gmail.com>
> Date: 01/03/2023 03:56PM
> Subject: (Untitled)
>
> *(See attached file: 20221208_142005.jpg)*
>
> Hi i am sharnu s navadgi from karnataka Gulbarga my 9343222202

20221208_142005.jpg
17211K

Gmail

Bamboo Advisory Committee <bambooflowering2023@gmail.com>

Fw:

1 message

thakura@icfre.org <thakura@icfre.org> Sun, Jan 29, 2023 at 11:09 PM
To: bambooflowering2023@gmail.com

With Best Regards,
Ajay Thakur
Ph.D. (Univ of Wales, Bangor, UK)
Scientist and Incharge Biotechnology Discipline
Division of Genetics and Tree Improvement
Senior Coordinator (Academics), FRI Deemed Univ.
PO: New Forest, Forest Research Institute,
Dehradun, Uttarakhand, India - 248006

-----Forwarded by Ajay Thakur/FRI/icfre on 01/29/2023 11:09PM -----

To: thakura@icfre.org
From: "Trimbak Patil" <trimbak.patil71@gmail.com>
Date: 01/04/2023 07:59PM
Subject: (Untitled)

(See attached file: 20221228_31520pmByGPSMapCamera.jpg)
(See attached file: 20221228_31558pmByGPSMapCamera.jpg)
(See attached file: 20221228_31516pmByGPSMapCamera.jpg)
(See attached file: IMG_20221228_150951.jpg)

I'm Trimbak Kishanrao Patil
Resident at pimperkhed tq Hadgoan dist. Nanded. Maharashtra I brought 1000 tissu culture plants but the plants got flowers on 2nd year of planting rather it should not .

4 attachments

20221228_31520pmByGPSMapCamera.jpg
2766K

20221228_31558pmByGPSMapCamera.jpg
2762K

20221228_31516pmByGPSMapCamera.jpg
2830K

IMG_20221228_150951.jpg
5623K

Re: Fwd: Bamboo Flowering Advisory Committee-email working group

From Viswanath, Dr Syam on 2023-02-08 12:10

Details Plain text

Dear All,

The format developed by Dr. Ajay Thakur looks comprehensive and may be adopted by the committee for evaluation.

with regards,

Dr. Syam Viswanath
Director, KSCSTE-KFRI

On Sun, Jan 29, 2023 at 11:29 PM <thakura@icfre.org> wrote:

> Please find format.
> I have forwarded the farmers's plights.
> With Best Regards,
> Ajay Thakur
> Ph.D. (Univ of Wales, Bangor, UK)
> Scientist and Incharge Biotechnology Discipline
> Division of Genetics and Tree Improvement
> Senior Coordinator (Academics), FRI Deemed Univ.
> PO: New Forest, Forest Research Institute,
> Dehradun, Uttarakhand, India - 248006
>
> -----"Viswanath, Dr Syam" <directorkfri@kfri.org> wrote: -----
>
> To: adg_rp@icfre.org, ajay.thakur@gmail.com, thakura@icfre.org
> From: "Viswanath, Dr Syam" <directorkfri@kfri.org>
> Date: 01/27/2023 12:11PM
> Cc: "sreekumar" <sreekumar@kfri.res.in>, "Sumadev" <sumadev@kfri.res.in>, donald@kfri.res.in
> Subject: Fwd: Bamboo Flowering Advisory Committee-email working group
>
> Dear All
> As discussed during the last video conference the following email id has been created for sharing information
>
> Director
> KFRI
>
> ---------- Forwarded message ---------
> From: **Bamboo Advisory Committee** <bambooflowering2023@gmail.com>
> Date: Fri, Jan 27, 2023 at 11:54 AM
> Subject: Bamboo Flowering Advisory Committee-email working group
> To: director@kfri.org <director@kfri.org>
>
> Dear Sir
>
> With reference to the online meeting held on 25th January 2023, to discuss the incidences of flowering of tissue culture-raised *Bambusa balcooa*, this email id has been created to collate the queries and complaints received from bamboo farmers.
>
> Kindly find a draft email prepared to be sent to the advisory committee members.
>
> Email id: bambooflowering2023@gmail.com
> Password: Bamboo@123
>
> Best regards
>
> Donald
>
> --
> **Dr. Syam Viswanath**
> Director
> KSCSTE-Kerala Forest Reseach Institute
> Peechi, Thrissur- 680 651, KERALA, INDIA
> Phone ; +91-487-2690100
> Mobile # 9188066880
> Fax # +91-487-2690111
> Email : directorkfri@kfri.org
> Website : www.kfri.res.in
> KFRI - Dr. Syam Viswanath

6-5/2020-NBM

958141/2023/MIDH.

Bamboo flowering incidence report

1	Name of Farmer	Manish Tiwari	Sudeep Shome	Deepak Mishra
2	Adress	Bamboo Plantation, Kathiya Mandlove Road village Kathiya-2 Teh Abhanpur Dist Raipur Chhattisgarh - 493097		
3	Latitude	21.069867°		
4	Longitude	81.851359°		
5	Species name	Tissue culture Bambusa Balcooa		
6	Variety name	~~Bheem~~ Beema	Bamboo	
7	Year of plantation	July 2021		
8	Supplier name	Grow More Bio Tech Ltd, A1 B Sipcot Phase II Hosur 635130 (TN) India		
9	Fertilizer applied	(i) FYM/Gobar Khad (ii) Vermi compost (iii) Neem Cake (iv) Urea (v) DAP (vi) MOP - Ref Annexure I, II		
10	Irrigation applied	Drip Irrigation with fertilisation Tank 15hr/day		
11	Flowering incidence time	1st time Jan 2022	2nd time severe Jan 2023	
12	Flowering %	57 %		
13	Total clumps 79465	Flowered clumps 45243	Flowered culms/clump without ? 34222	
13	Flowering clump status	Culms/clump drying		
	0-25 %			
	25-50 %			
	50-75 %			
	75 % and above	All flowering plants are in the process of drying		
14	New shoot emergence in flowered clumps (Yes/No)	No		
	If yes (%)	Not Applicable		

Note :- 1. Recommendation of Bio Tech have been followed in toto.

2. 20 % flowered plants/clumps have been completely dried & remaining plants are expected to dry up within one to one & half month.

3 A sticky gum like substance have been seen on dried up plant branches tips & leaves

6-5/2020-NBM

958141/2023/MIDH.

Bamboo flowering incidence report

1	Name of Farmer	KATORE NANDKISHOR TULSIDAS		
2	Adress	BHARVIR Tal IGATPURI Dist NASHIK		
3	Latitude	19.746843		
4	Longitude	73.798372		
5	Species name	BAMBOO		
6	Variety name	BALCOVA		
7	Year of plantation	2021		
8	Supplier name	GROWMORE HOSUR		
9	Fertilizer applied	VERMICOMPOSST,COWDUNG, UREA		
10	Irrigation applied	DRIP IRRIGATION		
11	Flowering incidence time	ONE YEAR AFTER PLANTATION		
12	Flowering %	65%		
13	Total clumps	Flowered clumps	Flowered culms/clump	
	400	250		
13	Flowering clump status	Culms/clump drying		
	0-25 %			
	25-50 %	CLUMP DRYING		
	50-75 %			
	75 % and above			
14	New shoot emergence in flowered clumps (Yes/No)	NO		
	If yes (%)			
		ALL FLOWERED PLANTS ARE DRYING UP		

Fwd: Bamboo Flowering Issue at our farm

Inbox

Dr Donald James <donald@kfri.res.in>

Sat, Jan 28, 1:24 PM

to me

Case No 1/27-01-2023/Prasanna/Kopra/Maharashtra

--
Donald James, PhD
Scientist B,

KSCSTE-Kerala Forest Research Institute

Email: donald@kfri.res.in
Website: https://www.researchgate.net/profile/Donald-James
Phone: 0487 269 0192
Mobile: 9873699119
Address: Forest Biotechnology Department, KSCSTE-KFRI, Peechi Rd, P.O, Peechi, Kerala 680653

-------- Original Message --------

Subject: Fwd: Bamboo Flowering Issue at our farm
Date:2023-01-28 10:36
From:"Viswanath, Dr Syam" <directorkfri@kfri.org>
To:donald@kfri.res.in
Cc:"SREEKUMAR. V.B" <vbskumar@gmail.com>, Sumadev <sumadev@kfri.res.in>

Donald
Pl copy details in mail created specifically for this

---------- Forwarded message ---------
From: **PRASANNA SUTAONE** <prasanna.sutaone@gmail.com>
Date: Fri, 27 Jan 2023, 14:56
Subject: Bamboo Flowering Issue at our farm
To: <thakura@icfre.org>, <adg_rp@icfre.org>, <director@kfri.res.in>, ajay.thakur@gmail.com <ajay.thakur@gmail.com>
Cc: Gaurav Charde <gaurav11charde@gmail.com>, <sreekanth.ks@gov.in>

6-5/2020-NBM

958141/2023/MIDH.

Dear Sir,

We are members of Wena Farmer producer co Limited bamboo farmers and have completed 30 acres of bamboo plantation in village Kopra ,dist Wardha Maharashtra under the guidance of FPC.

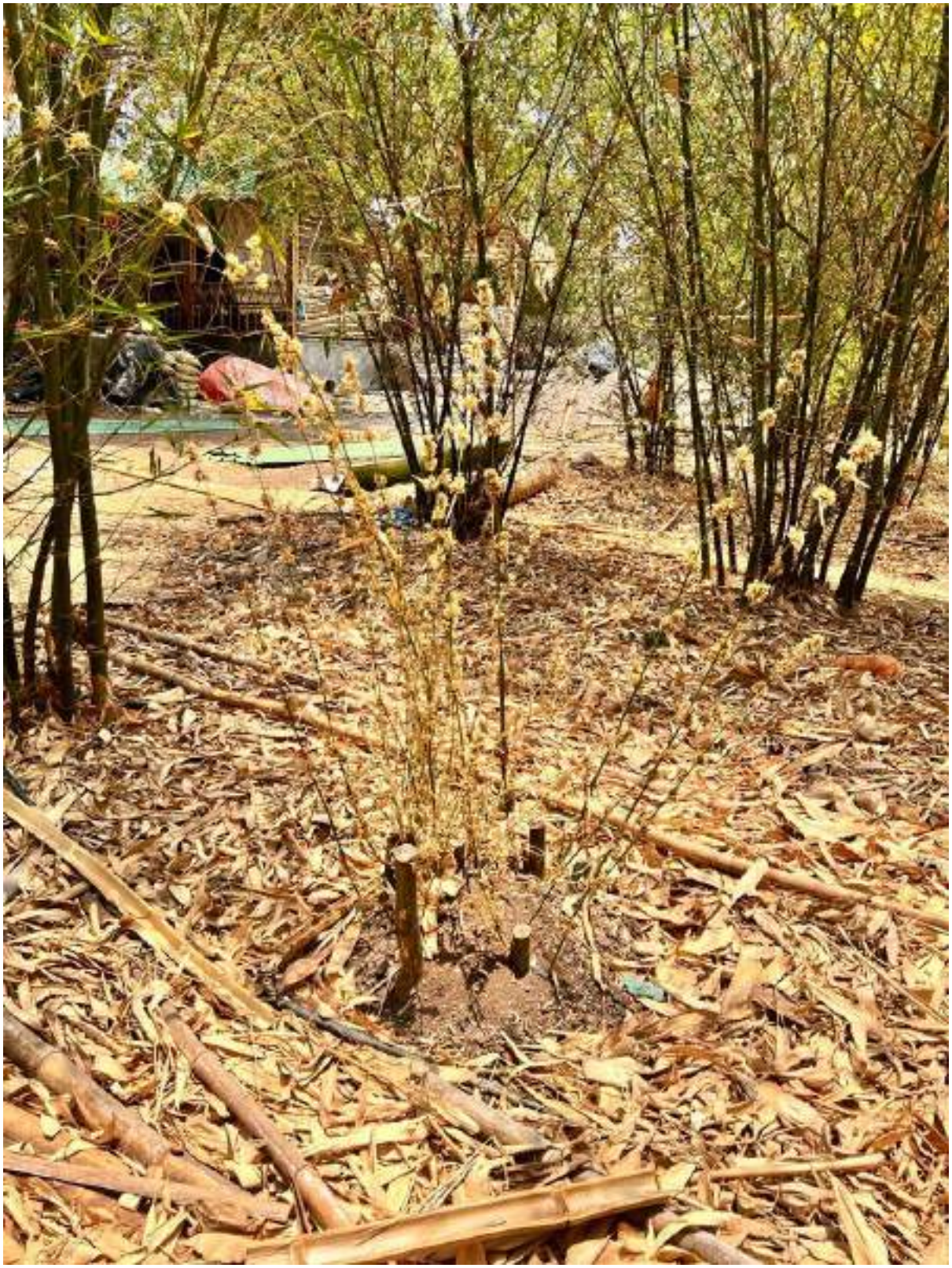
Maharashtra Bamboo Development Board proposed tissue culture bamboo sampling and we have purchased bamboo samplings from Growmore Biotech Limited an approved laboratory of NBM. We have purchased 10,000 Bheema bamboo sampling out of which we have observed flowering in approx. 20 % plants. This flowering was observed after 2 years of plantation. Because of flowering we have faced huge losses. Moreover the question is why National Bamboo Mission is supporting these companies for bamboo?

We approached the laboratory (M/S Growmore Biotech Ltd) which supplied the Tissue culture seedlings, they assured us that it's common and could have happened due to water stress or nitrogen deficiency, we increased the irrigation and gave fertilisers as suggested. In the meanwhile more farmland was cultivated and more plantation was done, then again in the year 2021 the plantations started flowering and once again we approached the laboratory (M/S Growmore Biotech Ltd) and the Managing Director of Bamboo board, the laboratory once again told the same story of water stress and nitrogen deficiency, since we already had flowering (2020) before we had taken all precautions as regards to water stress and nitrogen deficient, but this time the flowering was almost 20% of the planted areas

Please find herewith photos of the bamboo plantation.

6-5/2020-NBM

958141/2023/MIDH.

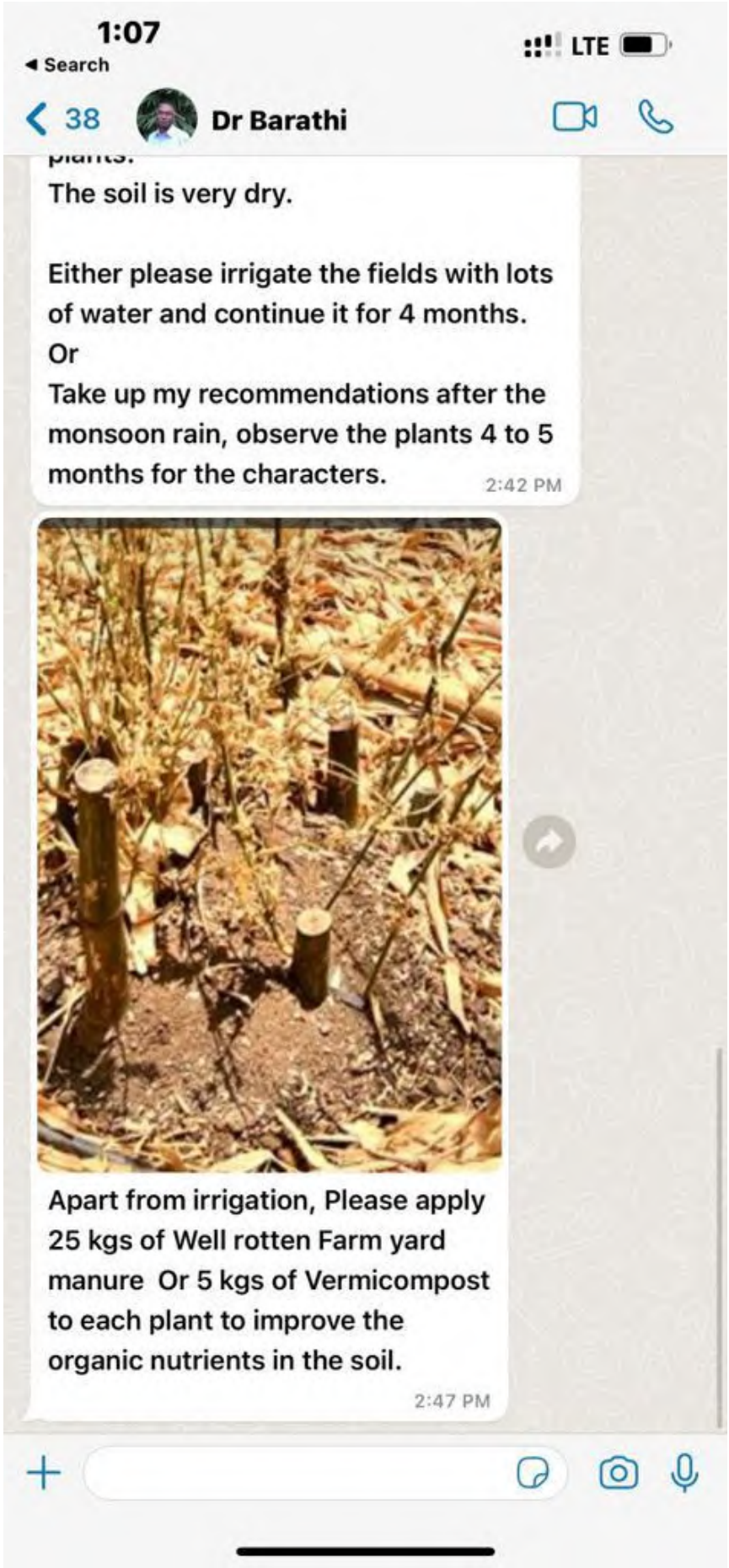


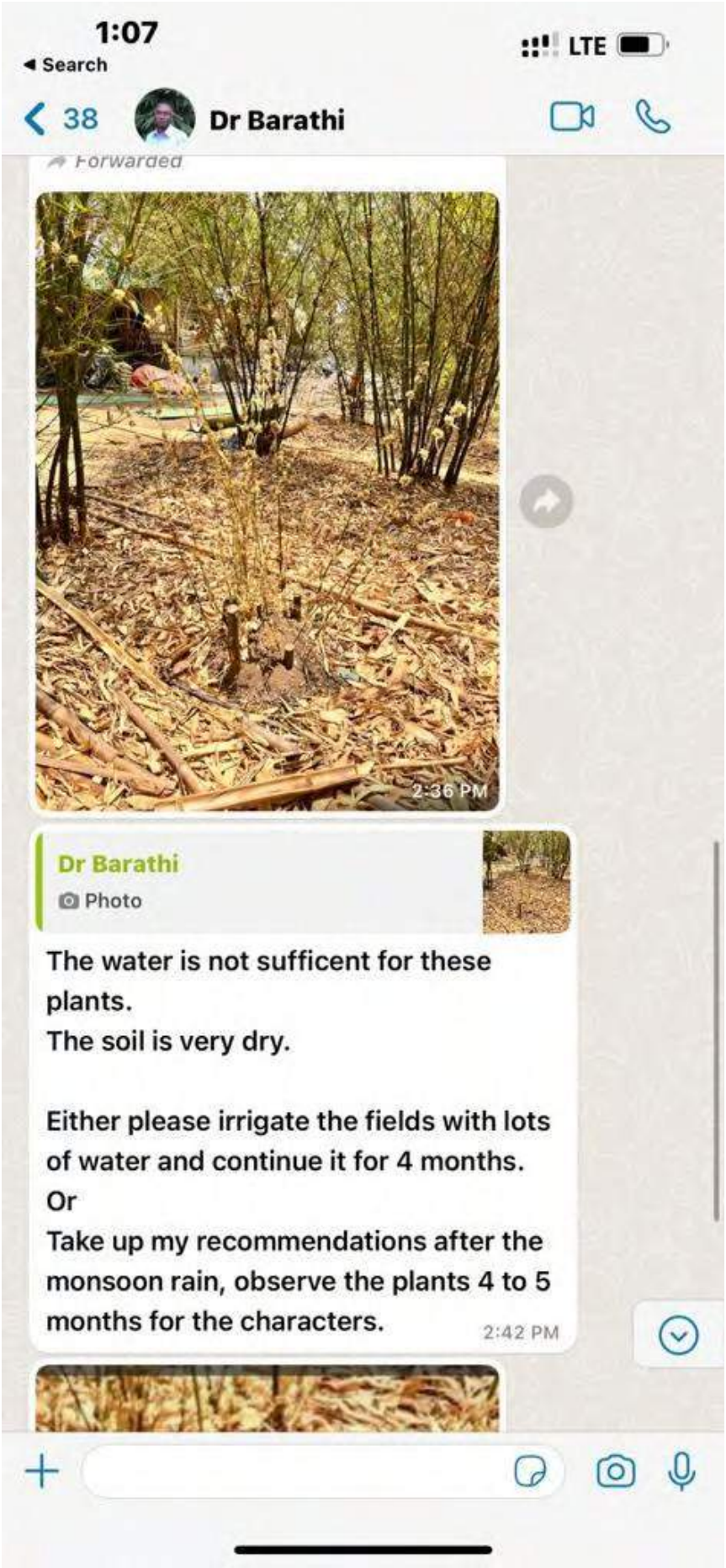
6-5/2020-NBM

958141/2023/MIDH.

6-5/2020-NBM

958141/2023/MIDH.


1:07
Search
LTE
38
Dr Barathi
The soil is very dry.
Either please irrigate the fields with lots of water and continue it for 4 months.
Or
Take up my recommendations after the monsoon rain, observe the plants 4 to 5 months for the characters.
2:42 PM
Apart from irrigation, Please apply 25 kgs of Well rotten Farm yard manure Or 5 kgs of Vermicompost to each plant to improve the organic nutrients in the soil.
2:47 PM


1:07
Search
LTE
38
Dr Barathi
Forwarded
2:36 PM
Dr Barathi
Photo
The water is not sufficent for these plants.
The soil is very dry.
Either please irrigate the fields with lots of water and continue it for 4 months.
Or
Take up my recommendations after the monsoon rain, observe the plants 4 to 5 months for the characters.
2:42 PM

6-5/2020-NBM

958141/2023/MIDH.

As evident from above communication the remedy was watering & compost but our question was why 20% are affected was never addressed. We request to please look into the matter and resolve the issue , we except committee to resolve the issue and give some relief to us and to the bamboo farmers.

Regards

Prasanna Sutaone
9552598815

Sr No	Name of farmer	Village	Survey No	Plantation Area (Acres)
1	Smt Vanita Bapurao Hirudkar	Kopra	90 & 93	2.71 & 2.64
2	Shri Pravin Chikankar	Kopra	71/1 A	1.45
3	Shri Pradip V. Potdukhe	Kopra	71/1 B	1.46
4	Shri Chandrashekhar Agde	Kopra	71/2 B	1.74
5	Shri Murlidhar Gadge	Kopra	71/2 A	1.21
6	Shri Manish G. Kevte	Kopra	74/1	3.46
7	Shri Gaurav C. Charde	Kopra	74/2	1.60
8	Shri Jitendra O. Charde	Kopra	74/3	2.00
9	Shri Prasanna Sutone	Kopra	74/4	1.60
10	Shri Ajikya C. Jawanjal	Kopra	74/5	2.0

Noted.

Thanks for the mail.

Thanks for the information.

ReplyForward

FERTILIZER APPLIED

Annexure-I

(I) Land Area- 4.01h (Khasra 676-1.13h + 672/ -0.45h + 675/ -0.33h + 677/2 -0.53h Total 2.44h of Manish Tiwari and others 677/1-0.64 h+679/2-0.93 h Total 1.57 h of Deepak Mishra)

(II) No. of plants – 10,000 Nos.

(A) **At the time of Plantation**

(i) FYM Approx 20kg /plant Biotech Recommendation – 20/25kg/plant - 200M/T
(ii) DAP 100g /plant Biotech Recommendation -100g/plant – 1000kg
(iii) Neem Cake 500g /plant Biotech Recommendation – 500g /plant – 5 M/T

(B) Regular fertilization as per Biotech Recommendation on the basis of 10,000 plants.

	Urea	DAP	MOP
July 2021 to Feb 2022	1790kg	470kg	1790kg
June 2022 to Feb 2023	2480kg	690kg	2620kg

(C) Vermi compost - 27130kg

Annexure II

PRECISION FARMING FOR BEEMA BAMBOO

POPULATION OF 1000 PLANTS PER ACRE

Growmore Biotech Ltd, Hosur, TN.

PLANTING

In the pit, mix the soil with 2 baskets (20 to 25 kgs) of FYM, 100gms of DAP and 500gms of neemcake. If the place is prone to termite increase the neem cake to 1 kg as basal application. In case of long trench apply the above mixture along the trench. Carefully cut open the Polybag having the bamboo plants using a sharp blade, to ensure the root ball is not disturbed. Place the plant vertically in the pit, ensuring that entire polybag soil is placed along with plants. Level the pit or trench with the mixed and enriched soil, be sure to eliminate all air pockets and provide 20-30 liter of water as life irrigation to all the newly planted Bamboo. Mulch the soil around the plants, it will help control weeds and keep the soil moist.

POST PLANTING CARE:

Provide life irrigation immediately after planting with 20 to 30 lit of water. Drip irrigation along with fertigation tank is one of the good irrigation systems to get maximum yield from Bamboo. Irrigate after planting, depending on the soil condition and prevailing climatic condition. Compact the loose soil around the plant. Repeat the irrigation at an interval of 2 to 3 days for the first one month. The water requirement of bamboo for the first month will be 4to 5 lit per plant / day, at the endof first year it will increase to 8 to 10 lit a plant/day for non-rainy days. When the plants are fully grown the water requirement would be 20 lit per plant during peak summer. The frequency of watering depends on how soon the bamboo is showing the symptom of wilting. The typical wilting symptom of bamboo appears as folding of leaf blade followed by totalcurling.

6-5/2020-NBM

958141/2023/MIDH.

Annexure-51

MONTH WISE FERTILIZER RECOMMENDATION FIXED TABLE FOR WORKING OUT THE MONTH WISE REQUIREMENT by GROWMORE BIOTECH LTD, Hosur, Tamil Nadu.										
FERTILIZER RECOMMENDATION SCHEDULE										
POPULATION 1000 PLANTS/ACRE										
SPACING ROW TO ROW 10 FT * PLANT TO PLANT 4 FT										
SL.NO.	MONTH	1ST YEAR			2ND YEAR			3RD YEAR		
		UREA (N)	DAP (P)	MOP (K)	UREA (N)	DAP (P)	MOP (K)	UREA (N)	DAP (P)	MOP (K)
		ACTUAL QTY IN GMS/PLANT/MONTH			ACTUAL QTY IN GMS/PLANT/MONTH			ACTUAL QTY IN GMS/PLANT/MONTH		
1	January	17	6	27	22	8	36	28	10	45
2	February	15	7	27	20	9	36	25	11	45
3	March	-	-	-	-	-	-	-	-	-
4	April	-	-	-	-	-	-	-	-	-
5	May	-	-	-	-	-	-	-	-	-
6	June	17	7	22	22	10	30	28	12	37
7	July	25	7	27	34	9	36	42	11	45
8	August	25	6	22	34	8	30	42	10	37
9	September	23	5	11	31	6	15	39	8	19
10	October	25	5	16	34	7	21	42	9	26
11	November	23	5	22	31	7	30	39	9	37
12	December	19	6	27	25	8	36	32	10	45
	TOTAL	190	54	201	252	72	268	315	90	335