



Proceedings of the Workshop on Promotion of Walnut and Almond

National workshop on Promotion of Walnut and Almond in Himachal Pradesh and Uttarakhand

22-23 March, 2013
at DMR, Chambaghat, Solan



Amity Institute of Horticulture Studies and Research

Introduction:

Amity Institute of Horticulture Studies & Research (AIHSR) have organized a National workshop on Promotion of Walnut and Almond in Himachal Pradesh and Uttarakhand on 22-23 March, 2013 at DMR, Chambaghat, Solan with the following objectives:

1. Identification of areas (Districts/Blocks/Villages) in Uttarakhand and Himachal Pradesh for plantation
2. Identification of varieties imported in last 15-20 years from different countries, their performance in terms of adoptability and productivity.
3. Establishment of Mother Nurseries in Uttarakhand and Himachal Pradesh
4. Import of good quality lateral bearing disease free mother plants
5. Funding arrangement for training and motivation of farmers for expansion of walnut and almond

The workshop was sponsored by National Horticulture Board, Ministry of Agriculture, Govt. of India. Around 100 participants were attended the Workshop for discussing about the status of research and development. Experts from YSPUHF, Nauni, Solan, IARI, Regional Station Shimla, NBPGR, Shimla, APEDA, Officers of State Departments of Horticulture, H.P. & Uttarakhand, Walnut & other Nut Fruit Growers Association of India and farmers of both the States participated and deliberated on the issues in details.



Prospects identified:

The prospects identified by the experts while participating with the fruit growers, nurserymen and exporters for the promotion of walnut and almonds in the States of Himachal Pradesh and Uttarakhand are as under:

- Both the States have suitable agro climatic conditions and available land for growing/production of good quality walnuts and almonds.
- Now many varieties having desirable traits, like dwarf stature, shorter juvenile period, earliness, better nut: kernel ratio and lateral bearing, are available, and these can be used & utilized as planting material instead of seedling trees, which generally are lacking in such desirable traits.
- Walnut has both alimentary and industrial uses. The kernel is rich in fat and minerals and is a concentrated source of energy. Walnuts are a high-energy food, rich in oil (including the preferred omega-3 fatty acids), vitamins and minerals. It is extensively used for cooking oil in tribal areas of the region. Walnut is reported to enhance appetite, promote blood circulation and keep the skin delicate. Walnut hull is used to dye fabrics of rugs and dresses. In India, the root bark (locally known as *dandasa*) is extensively used for colouring (red) the lips and teeth. It is also valued as a healthy snack food and bakery ingredient. The demand of this fruit is increasing manifold.
- Earlier, the most of the walnut-growing areas were either in remote places or in tribal areas from where marketing was difficult. Now, with the availability of better communications and road networks, marketing to cities can be done easily.
- ●Walnut and Almond are less perishable commodities and have good storability. These can, therefore, be transported easily to distant places, including for export.
- The package of practices for growing walnut and almond have been standardized and made available to the farmers by various Research Institutes/ State Agri. Universities.

Recommendations of the workshop:

The following recommendations emerged from the deliberations held during workshop:-

1. An advisory panel should be constituted by NHB, Gurgaon under the Chairmanship of Dr. Jagmohan Singh Chauhan, Former Vice Chancellor who is the expert of walnut available in India with the following experts in the panel.

- a. Dr. B. S. Thakur, Professor, UHF, Nauni, Solan
- b. Dr. Joginder Singh Chandel, Professor, UHF, Nauni, Solan
- c. Dr. K. K. Pramanick, Station Head, Regional Station, IARI, Shimla – 4
- d. Dr. V.D. Rana, Scientist Incharge, NBPGR, Regional Station, Phagli, Shimla-4
- e. Dr. N. C. Nainwal, Assistant Director, AIHSR, Amity University, Uttar Pradesh
- f. Mr. Gunjan Jain, Director, M/S VKC & Nuts Jammu Tawi, J & K

2. After deliberations, presentations and interaction with the experts and farmers, it was decided that the plants of the following lateral bearing varieties are required to be imported from USA with the financial support from National Horticulture Board, Ministry of Agriculture, Govt. of India.
1) Chandler 2) Howard 3) Tulare 4) Sexton 5) Forde 6) Gillet 7) Cisco. These lateral varieties are suitable for high density planting, start bearing early and give more productivity per unit area



as compared to terminal bearing varieties available in India. Some of the walnut varieties which are lateral bearing developed and commercialized in France such as Lara, Fernor, Fernette etc are also required to be procured through NHB finance assistance for plantations.

3. About 5000 plants of above selected seven varieties are required to be imported with the financial assistance of National Horticulture Board, Gurgaon for plantation in Private Nurseries and in Nurseries of State Agricultural/ Horticulture Universities for evaluation and further propagation.

4. The budwood of recommended & well established varieties in H.P. viz. Pratap, Kotkhai Selection (Kainthal selection) and Govind are available with Horticulture & Forestry University, Solan. WANGAI will organize the collection of budwood from these trees under the guidance of experts of UHF, Nauni in the month of July, 2013. The scion wood will be given to the private nursery in H.P. & Uttarakhand who are interested and will be having walnut seedlings for budding/grafting. The experts of the Advisory panel will provide their expertise during initial years. It was advised by the expert that WANGAI should submit a proposal of Action Plan with financial requirement through Amity University, Noida U.P. to both the Horticulture Mission Directors of the States of H.P. and Uttarakhand and copy to Commissioner Horticulture Government of India immediately so that 'Central/ State Governments' can be contacted well in time for financial assistance.

5. Bud wood will be collected from the following sources in the month of July, 2013

- 1) UHF, Nauni, Solan,
- 2) Sher-e-Kashmir university, Srinagar, J & K,
- 3) Horticulture Farm, Kotkhai, Distt- Shimla of UHF,
- 4) CITH, Srinagar, J& K,
- 5) NBPGR, Shimla,
- 6) IARI Regional Station, Shimla

6. The Ranichauri and Bharsar Research Station of Veer Chandra Singh Garhwali Horticulture University should be explored for the availability budwood of "Chakrota" selection of walnut and establishment of State of Art Research Center for R & D on walnut and other nut crops. WANGAI should write a letter to the Vice Chancellor of the University and organize a visit of 2-3 member expert panels headed by Dr. Jagmohan Singh Chauhan for on the spot study for this purpose.

7. The nurseries established at or above 4000 feet height will be identified for the production of budded & grafted plants of walnut & almond.

8. UHF, Nauni will make available the number of grafters for private nurseries on cost basis.

9. Eleven nursery growers from Himachal Pradesh and Uttarakhand who participated in the workshop have shown their interest to be the part of this holistic programme and have been listed for the vegetative propagation of walnut plants & establishment of Mother Blocks of elite varieties of walnut & almond.

10. The short duration trainings of grafters, and nursery growers and walnut growers will be organized on regular basis for creating awareness about the latest technologies with the financial support of National Horticulture Board, HMNEH and other available Government schemes.



11. Identification of sites for nursery raising and to establish mother nurseries of walnuts in Uttarakhand, Himachal Pradesh, Arunachal Pradesh etc under HMNEH scheme will be undertaken and finalized with the help of state departments of Horticulture.
12. Survey and study would be organised by WANGAI on the availability of thin shelled walnuts of good quality in the above mentioned states- by marking the elite trees for possible bud-wood collection for grafting.
13. The almond plants of varieties viz. Non Pareir, California Paper Shell, IXL and Merced which have been identified and evaluated by ICAR, Central Institute of Temperate Horticulture, Srinagar are required to be procured & multiplied for the distribution among the farmers of H.P., Uttarakhand and Arunachal Pradesh. Recently released indigenous cultivars like Shalimar, Makhdoom and Waris by CITH, Srinagar have also shown promise and can be procured for further propagation & distribution. The cultivars like Caramel, Ne Plus ultra Pedre and Butle almond, which are highly productive can also be imported by National Horticulture Board from USA to have broad base of varieties for growing both as green almonds and dried nuts in the state of H.P., Uttarakhand & Arnachal Pradesh. These varieties can also escape frosts due to the late flowering time.
14. Survey of the possible area for expansion of walnuts and almond in H.P. & Uttarakhand will be organised. Similarly a study on identification of problems and prospects of growing improved varieties of walnuts and development of production & post harvest technologies in walnut growing states is required to be carried out.
15. Standardization of production technology of organic walnuts/and almonds in association with State Universities and ICAR institutes is required to be carried out.
16. The exposure to the modern nurseries of walnut & almond in the developed countries will be given to the nursery growers and grafters for sharing of the knowledge and information with premiere Nurseries, Institutes and Universities abroad under NHB scheme.