Honourable Shri Sharad Pawar, Union Minister of Agriculture and Food Processing Industries, visited the Directorate on December 22, 2013. Shri Pawar was felicitated in a function organized at the Directorate. Shri Jayantbhai Ramanbhai Patel, MLA, Umreth, Anand, Dr S. Ayyappan, Secretary, DARE and Director General, ICAR, New Delhi ; Dr. A. M. Shekh, Vice Chancellor, Anand Agriculture University (AAU), Anand; scientists of DMAPR and a galaxy of Director Research, Dean and Directors of AAU were also present in the function. Dr. Satyabrata Maiti, Director, DMAPR, Anand, welcomed the dignitaries and the guests. Dr. Maiti, also made a brief presentation on “Country Status Report on Medicinal and Aromatic Plants (MAP)”. At the end of the function, Dr. Ayyappan expressed his gratitude to the honourable minister for guiding the Indian agriculture as whole and ICAR in particular. Shri Pawar also visited the Herbal Garden maintained at Boriavi and Botanical Garden and Field Gene Bank at Lambhvel...Continued at page 2
Ayurveda is about 6000 years old health care system of India which is time tested. However, when we talk about Ayurveda in Europe and America, it is not yet recognized as main stream of medical treatment. They are at the beast recognizing it as CAM (Complimentary and Alternative Medicines) wherein main stream of medicines remain the same as western medicine. Many western countries are keenly interested in alternative systems of medicine which are holistic and do not have the irritating side effects of modern medicines. Traditional systems of medicines are gaining acceptance in these countries against the backdrop of rising lifestyle diseases. Recent trend of increasing curiosity in Ayurveda’s effectiveness in managing lifestyle diseases and chronic illnesses are gradually and steadily gaining acceptance even by modern medicine practitioners. Traditional Chinese Medicine has already made a comfortable place in many advanced countries and regularly being practised. Other systems of traditional medicines, such as Kempo, Traditional Korean medicines, Tibetan medicines and South African Traditional medicines are raising their voice for recognitions. As part of Indian strategy to expose Ayurveda to international medical practitioners, investors and entrepreneurs, India has rightly pushed through its demand for recognition by International Organization for Standardization (ISO) meeting held in Durban, South Africa in 2013. Consequently, ISO is circulating a base paper on Ayurveda to member countries for its either inclusion in ISO 249-TCM (Traditional Chinese Medicine) by changing the scope of TCM or by modifying its name to TM (Traditional Medicines) as demanded by India. Once it is accepted, the whole horizon of medicinal plants sector will have scintillating future in terms of availability of treatments for many incurable diseases to the world, business and above all Indian dream of “May all be healthy” will be realized. It is fillip side of the story.

Let’s examine the other side of the story: there is no doubt that modern medicines are finding difficulties to provide treatments to a host of immune related diseases, AIDS, HIV, psychosomatic diseases, etc and looking forward for solution in traditional medicine systems. Many traditional systems do have very effective treatments for host of such diseases. But the principal bottle neck in traditional medicines is achieving stability in quality. Traditional medicine preparations are largely dependent on the plant based medicinal herbs, shrubs, trees, creepers, etc. of which 85-90% are sourced from forest or un-arable lands and therefore, have very limited control over their quality. Active chemical contents in the plants greatly vary depending upon genotypes, growing practices, soil and climate, various inputs applied, harvesting methods and techniques, maturity of the plant, storage handling, transportation, etc. Controlling all these check points in such a way that there is minimum variation in terms of quality which will provide stable Ayurvedic drugs would be a great challenge. Standardization of raw drug in terms of quality needs to be addressed as per the stringent ISO norms. India has made a great leap in the area of standardization of raw drug by implementing voluntary certification of Good Agricultural and Field Collection Practices. It has also implemented Good Manufacturing Practices for Ayurvedic drugs. However, a lot needs to be done in this sector for which a substantial investment is needed in research and infrastructure.

At the end I once again reiterate that though the potential of Ayurveda as holistic system of healthcare and wellness is immense, but its business penetration in international arena is yet to be fired up. As I have always been an optimist, I continue to look forward the growth of this sector since no other wealth can substitute the need for “good health” of the present world.

Jai Hind!

Satyabrata Maiti
The 21st Group Meeting of the AII India Coordinated Research Project on Medicinal & Aromatic Plants and Betelvine (AICRP-MAPB) was organized at Tamilnadu Agricultural University (TNAU), Coimbatore during September 23-26, 2013. The inaugural function was presided by Dr. K. Ramasamy, Vice Chancellor, TNAU and Dr. S.K. Malhotra, Assistant Director General (Hort.II) was the Chief Guest in the function. Other dignitaries present in the function included Dr. Satyabrata Maiti, Director, DMAPR and Project Coordinator, (AICRP-MAPB), Dr. S. Mariappan, Dean (Horticulture), TNAU, Dr. N. Kumar, Professor (Horticulture), HC&RI and R.M. Vijay Kumar, Professor and Head, Department of Medicinal and Aromatic Crops, TNAU. Dr. Mariappan welcomed the guests and the delegates of the group meeting. He thanked ICAR and Dr. Satyabrata Maiti for selecting TNAU to host the group meeting. Dr. Maiti, presented the salient achievements of the (AICRP-MAPB) centres. About 40 medicinal and aromatic plants (MAP) were investigated in 22 centres. Further, he highlighted that development of Good Agricultural Practices (GAP) and genetic resource management of MAP were the important components of research activities carried out in the project. Dr. S.K. Malhotra highlighted the importance of MAP as crops and their importance in primary health care in Asia and Africa. Describing AICRP as a unique vehicle for multi location testing of newly developed varieties and supply of planting materials of high quality to end users, he suggested need of the fixing of quality standards in MAP. Dr. K. Ramasamy, Vice Chancellor, TNAU in his presidential address remarked that India has not made significant mark in the area of plant based drugs and there is a need to analyze the situation “Where are we”? At the end of inaugural function, Dr. Vijaya Kumar proposed vote of thanks.

The group meeting had four technical sessions namely Crop Improvement, Crop Production, Crop Protection and Phytochemistry. After thorough discussions of the results, the technical programme for year 2013-2014 were formulated.

The plenary session was chaired by Dr. N. Krishna Kumar, Deputy Director General (Horticulture), ICAR. Dr. Satyabrata Maiti, Project Co-ordinator, presented research highlights of (AICRP-MAPB) centres during last one year. Thereafter, proceedings of the four technical sessions were approved by the house after discussion. Dr. Krishna Kumar in his concluding remarks expressed his satisfaction and suggested area of improvement in future. The programme ended with the vote of thanks proposed by Dr. Satyabrata Maiti to ICAR, the host university, participating centres and delegates.

Padmashree Dr. K.L. Chadha visited DMAPR

Padmashree Dr. K.L. Chadha, formerly DDG (Horticulture), ICAR visited the Directorate on September 11, 2013. After an interactive meeting with the scientists of the Directorate, Dr. Chadha delivered a lecture on “The Changing Face of Horticulture in India”. In his lecture, he mentioned that horticulture has emerged as an engine for economic growth and prosperity of Indian farmers and strengthening of this sector will have a positive impact on poverty alleviation and improvement of income. He also mentioned that future development in horticulture would be knowledge driven.

You only live once, but if you do right, once is enough.
- Mae West
Morphologically distinct genotypes in Solanum

Germplasm collection, characterization and evaluation were done in Solanum nigrum and its closely related species at Department of Medicinal and Aromatic Crops, Horticultural College & Research Institute, Tamil Nadu Agricultural University, Coimbatore. A total of fifty three collections were made from different states of India. Among the accessions, three morphologically distinct genotypes viz., TN Sn 10, TN Sn 44 and TN Sn 47 were identified.

**TNSn 10** – It is a Solanum nigrum species collected from Ooty, Tamil Nadu. The distinct features from other nigrum accessions are purplish stem colour with angularity and thorn; leaves are broadly ovate with trichomes; large size flower and fruits with purple black having high alkaloid content.

**TNSn 44** – collected from Nalhendra, Shimla, Himachal Pradesh. It belongs to Solanum villosum. The distinct features from other villosum are the spreading growth habit with large size, orange coloured berries.

**TNSn 47** – collected from Ottampatty of Trichy district. It belongs to Solanum villosum. The distinct feature from other villosum is flower petal has purplish streak on the lower side.

From the Directorate

**Training on promotion of medicinal plants cultivation in tribal areas of Gujarat for livelihood and health security organised**

A training programme on “Promotion of medicinal plants cultivation in tribal areas of Gujarat for livelihood and health security” was organized during July 30-31, 2013 by the Directorate at the KVK, Vejalpur, Godhra. Fifty tribal farmers from five villages namely Richhiya, Dudhwa, Gajapura, Kharsaliya and Bhadroli of Panchmanal district of Gujarat attended the training. Dr. R. S. Jat, Senior Scientist, DMAPR, welcomed the participants and presented an overview of the training. Dr. Satyabrata Maiti, Director, DMAPR presided over the inaugural function and highlighted the importance of medicinal plants in daily life emphasizing the age old saying “Health is Wealth”. Dr. Sanjay Singh, Head, CHES, Godhra, was also present in the function and he emphasized in his speech the need of medicinal plants and under-utilized fruit crops for good health. Earlier, Dr. Kanak Lata, Programme Coordinator, KVK, Vejalpur presented vote of thanks at the end of the inaugural function.

During the training, the medicinal properties of various plants were described to the participants. Topics covered the topics of cultivation practices, preparation of homemade recipes of medicinal plants, ITKs in agriculture, nutritional value of leafy vegetables, medicinal value of underutilized fruits crops and protection of plant varieties and farmers’ rights act. A social survey of the participants health problems, medicinal plants use for common diseases and economic status were also conducted. At the end of the training programme, two days activities were reviewed and the seedlings of ten medicinal plant species and improved farm implements were distributed to the participants.
A Field Day under the project Tribal Sub Plan

Field Day on “promotion of medicinal plants cultivation in tribal areas of Gujarat for livelihood and health security” was organized by the Directorate on November 11, 2013 at the farmer’s field in Dudhwa village, Vejalpur, Godhra. About fifty beneficiary tribal farmers, under the TSP, participated in the field day.

The farmers were taken to the plots of medicinal plants such as Kalmegh, Tulsi, Arduisi, Aloe, Satavari, Turmeric, Gandhaprasarni, Giloe, Saragya. Participants learned the cultivation practices and also clarified their doubts in the context of the cultivation of these plants.

A Workshop on Promoting Good Governance-Positive Contribution of Vigilance

Workshop on “Promoting Good Governance-Positive Contribution of Vigilance” was organized at the Directorate on November 01, 2013. Dr. Satyabrata Maiti, Director, DMAPR chaired the function and Major General (Retd.) Dr. T.S. Handa, Head, Zydus Hospital, Anand, was the Chief Guest in the function and. Dr. P. Manivel, Principal Scientist (Plant Breeding) and Vigilance Officer, DMAPR welcomed the guests. Dr. Handa in his speech highlighted the eight point of governance and categorically mentioned the problem of overlooking prevailing in society. He highlighted the slogan “Love your institution, love your motherland”. At the end of the function, Dr. Satyanshu Kumar, Principal Scientist (Organic Chemistry) proposed the vote of thanks.

22nd Foundation Day of the Directorate Celebrated

The 22nd Foundation day of the Directorate was celebrated on November 24, 2013. Dr. A.M. Shekh, Vice Chancellor, AAU, Anand presided the inaugural function and Dr. C. Devakumar, formerly ADG (EPD), ICAR, New Delhi was the Chief Guest. Dr. K.C. Dalal, formerly Director, NRCMAP was the Guest of Honor. At the outset of the function, Dr. Satyabrata Maiti, Director, DMAPR, Anand welcomed the guests and also presented a report on the growth and achievements of the Directorate. Dr. K.C. Dalal, in his address, appreciated the progress made by the Directorate. Dr. C. Devakumar in his speech emphasized the need of popularization of cultivation practices of medicinal and aromatic plants among the farmers and need for targeted research on entire value chain of some of the medicinal plants. Dr. A.M. Shekh in his presidential address suggested the sharing of information available for medicinal and aromatic crops with the end users. He also highlighted problems of marketing, post harvest management and value addition being faced the growers of medicinal and aromatic crops.

Prof. R. R. Hanchinal, Chairperson, PPV&FRA visited DMAPR

Prof. Hanchinal, Chairperson, and Dr. R.C. Agrawal, Registrar General, PPV&FRA, visited DMAPR on October 22, 2013. They visited DUS experimental field and Medicinal Plants Botanical Garden and Field Gene Bank at Lambhvel and various Laboratories at Boriavi. To commemorate his visit, a sapling of Karambola (Averrhoa carambola L.) was planted in the Botanical garden. He expressed his satisfaction in the progress of work at the Centre and congratulated the Director and his team for their effort. Later, the Chairperson addressed the scientists.

Director, DMAPR visited Bangkok

Dr. Satyabrata Maiti, Director, DMAPR presented the country report in “the Expert Consultation on Promotion of Medicinal and Aromatic Plants in Asia and the Pacific Region” during 2-3 December, 2013 held at Bangkok, Thailand.
हिंदी चेतना सपाट

समापन समारोह
हिंदी सताह 13-19 सितम्बर, 2013
औपचारिक व सांगीतिक पारम्परिक अनुसंधान निदेशक
बोरीआलौ 387, 11 आण

निदेशार्थी की राजभाषा कार्यान्वयन समिति के तत्वाधारण में दिनांक 13-19, सितम्बर 2013 तक हिंदी सपाट हलपास से मनाया गया। इस दौरान हिंदी के प्रयोग को प्रोत्साहन देने के लिए निर्धारित लेखन, हिंदी व्याकरण, सांगीतिक शास्त्र, व्याख्यान एवं काव्यांतर प्रतियोगिताओं का आयोजन किया गया। हिंदी सपाट का समापन समारोह 19 सितम्बर को मनाया गया। समारोह का प्रारंभ राजभाषा कार्यान्वयन समिति की सदस्य सचिव डॉ. वदना त्रिपाठी के स्वागत भाषण से हुआ। इस कार्यक्रम को अध्यक्षता निदेशक एवं राजभाषा कार्यान्वयन समिति के अध्यक्ष डॉ. सत्यब्रत माईत ने को। कार्यक्रम के मुख्य अधिच्छि, डॉ. नवनीत चौहान, प्रोफेसर एवं अध्यक्ष, हिंदी विभाग, सरदार पटेल विश्वविद्यालय, आर्यन के विभिन्न प्रतियोगिताओं में विभिन्न रूप से विषयगत पत्र एवं पारंपरिक विषय किये। मुख्य अधिच्छि महोदय ने हिंदी भाषा पर अपने विचार प्रकट करते हुए संपर्क भाषा को रूप में सरल हिंदी का प्रयोग करने पर जोर दिया। सत्र के सभापति डॉ. सत्यब्रत माईत ने कहा कि हिंदी का उपयोग केवल हिंदी दिवस / सपाट / पखवाड़ा तक सीमित न होकर दैनिक कार्यों में भी होना चाहिए। समारोह के अंत में प्रशासनिक अधिकारी एवं राजभाषा कार्यान्वयन समिति के सदस्य, श्री बिजय कुमार ने ध्यानबाद प्रस्ताव प्रस्तुत किया।

हिंदी कार्यालय

औषधीय एवं सांगीतिक पारंपरिक अनुसंधान निदेशालय, नोरीआलौ, आर्यन, गुजरात में “राजभाषा हिंदी के प्रचार-प्रसार में राजभाषा नियम/अधिनियम की भूमिका” विषय पर 27 नवम्बर, 2013 को हिंदी कार्यालय का आयोजन किया गया था। जिसमें निदेशालय सहित भारतीय कृषि अनुसंधान परिषद के गुजरात स्थित 5 अनुसंधान केंद्र, केंद्रीय मूला एवं जल संरक्षण अनुसंधान एवं प्रशिक्षण संस्थान, वास्त (CSWRTI), केंद्रीय अनुसंधान केंद्र, केंद्रीय मूला लवणात्मक अनुसंधान संस्थान, बाज़ार (CSSRI), केंद्रीय वाग्नरी प्रशिक्षण केंद्र, गोपाल (CHES), केंद्रीय अनुसंधान केंद्र, केंद्रीय मीटाजुल जीव पालन संस्थान, आर्यन (CIFA), केंद्रीय अनुसंधान केंद्र, केंद्रीय आंध्र-लोकीय मार्गदर्शक अनुसंधान संस्थान, बीडी (CIFRI), के लघुभाषा 75 प्रतियोगियों के भाग भेज लिया। इस कार्यालय में डॉ. महेंद्र कुमार साहू, वरिष्ठ तकनीकी अधिकारी; राजभाषा राज्यीय मूला संरक्षण एवं भूमि उपयोग नियोजन व्यायाम, नागपुर (NBSS&LUP), प्रमुख बन थे। कार्यालय के सूचू-बात में संस्थान की हिंदी अधिकारी एवं वरिष्ठ वैज्ञानिक, डॉ. बंदना त्रिपाठी ने सभी उपस्थित प्रतियोगियों को परीक्षण देते हुए स्वागत किया। निदेशालय के प्रधान वैज्ञानिक, डॉ. गी. मुख्यलेखन, ने डॉ. साहू का स्वागत किया।

कार्यालय के प्रथम सत्र में डॉ. महेंद्र कुमार साहू ने राजभाषा हिंदी के प्रचार-प्रसार में राजभाषा नियम/अधिनियम की भूमिका पर सभी को सम्बोधित किया। हिंदी की महत्वपूर्ण भूमिका बताते हुए उन्होंने कहा कि राजभाषा हिंदी हमारे संस्कृति एवं देश से जुड़ी है और भारत जैसे बहुसंस्कृतिक देश में विविधता में एकता लाने के लिए हिंदी संपर्क भाषा का काम करती है। कार्यालय के दूसरे सत्र के आरंभ में भाव.अनु.प. के अंगारे गुजरात ग्राम से आए अनुसंधान के प्रतियोगियों ने अपने संस्थान में चले रहे हिंदी उत्तरकार कार्यों के बारे में जानकारी दी। कार्यालय के अंत में निदेशालय की वैज्ञानिक डॉ. जौ.आर. रिमाला ने ध्यानबाद प्रस्ताव प्रस्तुत किया।
Human Resource Development

Promotion
1. Dr. A.P. Trivedi, T-5 (Technical Officer) promoted to Sr. Technical Officer w.e.f. January 15, 2013
2. Shri M.B. Vaghari, T-2 (Field Assistant) promoted to Technical Assistant (Field Assistant) w.e.f. July 28, 2013
4. Shri K.R. Patel, T-1 (Tractor Driver) promoted to Sr. Technician (Tractor Driver) w.e.f. September 11, 2013

Transfer
1. Dr. Virendra Singh Rana, Sr. Scientist (Organic Chemistry) transferred to IARI, New Delhi on July 06, 2013 consequent upon selection to the post of Sr. Scientist (Organic Chemistry) in the Pay Band - 4
2. Dr. Nukella Srinivasa Rao, Sr. Scientist (Computer Application) transferred to IASRI, New Delhi on July 27, 2013 consequent upon selection to the post of Sr. Scientist (Computer Application) in the Pay Band - 4

Training
1. Dr. P. Manivel, Principal Scientist (Plant Breeding) attended training programme “Management Development Programme on Leadership Development” during August 26 - September 6, 2013 at NAARM, Hyderabad
2. Dr. R.R. Singh, Scientist (Farm Machinery and Power) attended Workshop cum-Installation Training to Nodal Officers for NAIP Consortium ‘Strengthening Statistical Computing for NARS’ on August 30, 2013 at CIFE, Mumbai
3. Dr. R.R. Singh, Scientist (Farm Machinery and Power) and Mrs. S. H. Nair (Technical Assistant) attended training programme under the NAIP sub-project entitled “Developing, Commissioning, Operating and Managing on online System for NET/ARS-Preliminary Examination held during November 21-22, 2013 at ASRB, ICAR, New Delhi
4. Mr. Vijay Kumar, Administrative Officer attended the training programme on Administrative Vigilance (Code-AV-1) during December 2-6, 2013 at ISTM, New Delhi

Participation in seminar /symposium/meetings
1. Dr. R.R. Singh, Scientist (Farm Machinery and Power) attended Second National NKN Annual Workshop held during October 17-19, 2013 at IISc, Bangalore.
2. Dr. P. Manivel, Principal Scientist (Plant Breeding) attended “International Round Table on Biochemical and Genetic Dissection of Control of Plant Mineral Nutrition” during October 23-24, 2013, at Balaram Resort, Palanpur, Gujarat
4. Dr. P. Manivel, Principal Scientist (Plant Breeding) and Dr. Satyanshu Kumar, Principal Scientist (Organic Chemistry) attended meeting of RFD to review the mid-term achievements” on October 28, 2013 at NAAS complex, New Delhi.
5. Dr. P. Manivel, Principal Scientist (Plant Breeding) attended NABMGR meeting on November 29, 2013 at NRC Grapes, Pune.
Species of Conservation Interest

KUTKI (Picrorhiza kurrooa Royle ex. Benth.= P. kurroa Hook. f.)

It is a small perennial herb belonging to family Scrophulariaceae. The leaves are spathulate with deeply serrated margin and are arranged at the base of the plant. Flowers are bluish or purplish arranged in terminal cylindrical spikes; fruits are capsule. Rhizomes of the plant are creeping, elongated and woody. Flowering occurs during June to August. The species is distributed in the hilly parts of the North-Western Himalayan region of India and Nepal at an altitude of 2700-4500 m. Dried rhizomes and roots are mainly used as drug in Ayurvedic System of Medicines since ancient times. The species is enlisted in the Negative list of Export by the Government of India and banned for its collection from the wild as well in CITES (Convention on International Trade in Endangered Species) of Wild Fauna and Flora for controlling the international trade.

Picrosides (iridoid glycosides) are known as the active ingredients responsible for the therapeutic action especially for hepatic injuries caused by ethanol, chemicals and micro organisms. Picrosides have also reported to have anticancer property. The species is also used as either adulterant or substitute of Indian Gentian (Gentiana kurroa Royle). At present P. kurroo is not under commercial cultivation and the raw drug is collected from the wild for drug preparations. The unregulated and illogical collection practices have created lot of pressure to the natural species populations.

[This column is contribution of Dr. Geetha, K. A. since inception of the Newsletter]