



# ONION - GARLIC NEWS



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## FROM DIRECTORS DESK

June to December 1999 period was marked by steady supply of onion from storage and the same was supplemented with better *kharif* crop. *Kharif* crop however, was not severely affected by monsoon as experienced during the last two years. There were regular arrivals from September onwards. In the case of garlic there was little shortage in the market. Under OGL, Chinese garlic made an official entry in Indian Market. Big cloved compact garlic bulbs weighing more than 50 g became quite popular in Mumbai and Chennai market. About 40,000 tons of garlic was imported from China and Korea. This long day type garlic has high yield potential under low temperature and long day conditions. The traditional garlic growing areas of MP, Gujarat, Orissa and Maharashtra cannot grow these long day varieties due to climatic barrier. Farmers from these areas will have to compete with long day types being imported in future by way of maintaining quality of their local material. Researchers will have to take a note of this and plan for development of big cloved garlic which can be grown under short day and short winter conditions of peninsular India.

Disease survey conducted during *kharif* 99 indicated an average of 12-60% incidence of *collectotrichum* and 34% of purple blotch. *Kharif* onion crop was affected by a tropical problem of neck elongation alongwith 2-3 dangling pale green leaves with no bulb formation. The symptoms were more severe in plots with water logged conditions. Severely affected plants could be pulled out easily due to rotting of base. Microscopic examination of affected base revealed presence of nematode like worms. This needs further investigation.

*Kharif* onion is mostly grown in drought prone areas of Maharashtra, Karnataka, Andhra and Gujarat, which accounts for 20% of total production. There is demand for dark red bulbs with moderate keeping quality and tolerance to *collectotrichum* and purple blotch. The harvest should match with September - November arrivals in market. There is dearth of varieties which can match with above requirements. Earlier recommended varieties suffer from one or the other problems. The situation therefore demands for development of varieties suitable for *kharif*.

Seed availability of *kharif* varieties is always a problem. To ameliorate these problems, bulbs must be planted in November for better yield. For *kharif* varieties, seeds must be available for sowing in May-June and for getting seed during this period, bulbs must be planted in November. To plant in November, bulbs must be harvested in September-October so that by giving some rest the bulbs can be planted in November. But generally the cycle delays and seed availability is disturbed. To augment season, farmers go for any spurious seed, which pose problems of non formation of bulbs, delay in maturity and variation in size, shape and colour.

## On Going Research Activities :

### Collection, Characterisation and evaluation of germplasm

- 219 accessions in *kharif* were evaluated for desirable horticultural traits. Acc. No. 780-5-2 performed best in terms of yield (1.77 kg/m<sup>2</sup>) and acc No. 64-1 in average wt./bulb (75 g) whereas Acc. no. 11-1, 12-01-1, 8-01-1, 117, 121 recorded 100% marketable bulbs.
- In *rabi* seasons, 179 accessions of onion and 205 accessions of garlic were planted for evaluation.
- For seed production of *rabi* germplasm, bulbs of 170 accessions and six released varieties were sown.

### Varietal performance studies

- In *kharif*, among 5 varieties tested, B-780 performed best in terms of yield.
- Recommended onion varieties were sown at different dates in late *kharif* /*rangda* and *rabi* to test their performance.

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Chinese Garlic

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- Effect of different system of planting (flat bed v/s. ridges and furrows) is being assessed.
- Sulphur plays an important role in improving storage life of onion and decreasing incidence of insect pest and diseases. In this regard trials on the use of micronutrients, potassium, sulphur and granulated ammonium sulphate is being conducted.
- In crop protection, seasonal incidence of thrips and diseases (*Collectotrichum*, purple blotch and stemphyllium) are being studied.

#### Material exchange :

- Received seeds of exotic lines (10) from De Palmer Seeds, USA
- Seeds of *Allium fistulosum* (6) lines, were obtained from AVRDC, Tainan, Taiwan
- Chinese garlic obtained from AVRDC, Taiwan was sent to CITH, Mukteshwar and Srinagar for evaluation purpose.

#### Collaboration :

The centre is having a collaboration with Botany Dept., University of Pune. One research student from the University is working on 'Mutation studies in onion (*Allium cepa* L.)

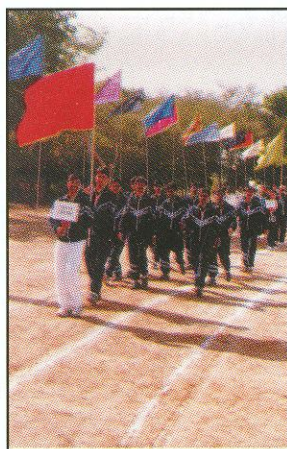
## EVENTS

52<sup>nd</sup> Independence Day was celebrated at the centre. The Director addressed the staff and encouraged them to work with vigour, dedication and sincerity.



Institute Management Committee meet took place on 04.10.99 Dr. M.K. Banerjee, Pr. Scientist, IVRI, and Dr. B.S. Dhankar, ADG(Veg.), (Chairman) attended the meeting.

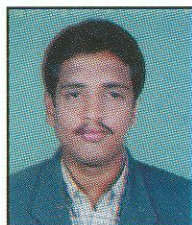
One day seminar was conducted at the centre by State Agriculture Dept. on the theme " International Conference for adoption of Green House Technology".



A team of 12 members participated in the ICAR Interzonal sports meet held at CAZRI, Jodhpur from 11 Oct. 99 to 14 Oct. 99.



Tree planting ceremony inaugurated by the Director alongwith NRC staff, organised by farm section.



#### Our New Colleague

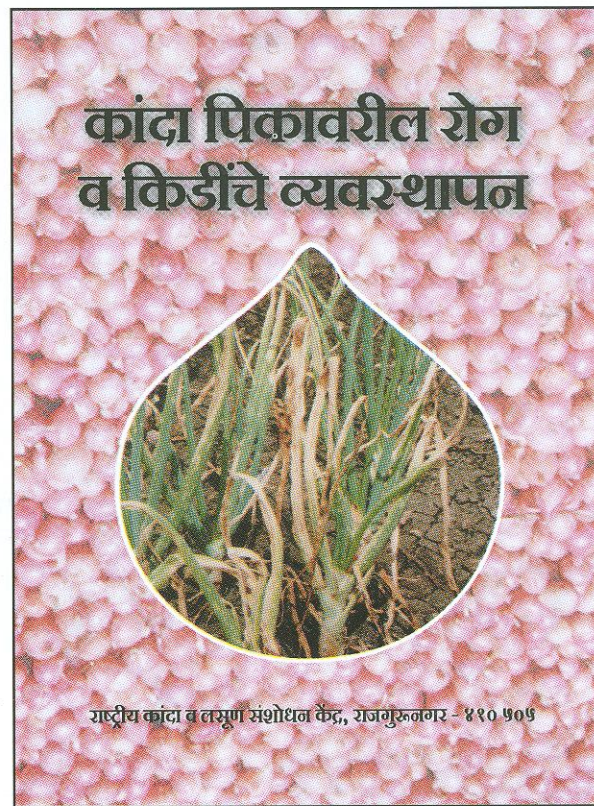
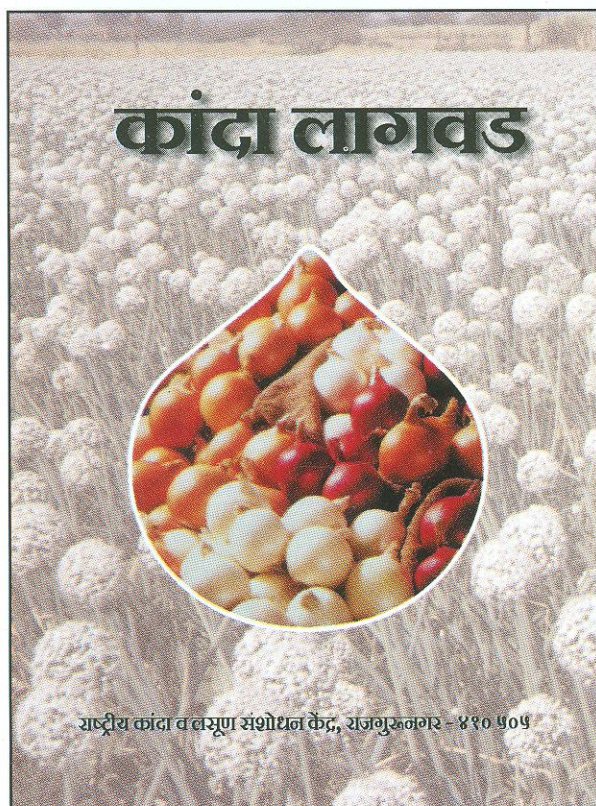
Mr. V. Sankar, Scientist (Hort.) joined this centre on 25.11.99. He completed his graduation in Horticulture and post graduation in Vegetable Science from TNAU, Coimbatore. His publication till date includes research articles (2) and popular articles (30).

Presently, he is concentrating on vegetable production; drip and sprinkler system aspects in onion and garlic



## PUBLICATIONS

- Excellent source of information on onion production practices, disease and insect pests, symptoms and prevention (in Marathi).



- Dhumal, K.N., Sushma Kirtane, S.L. Laware, Anil Khar and K.E. Lawande. Morphogenic and macromolecular analyses of combined mutagenic effect of Sodium Azide and Gamma radiation in onion (*Allium cepa*). In Tenth All India Congress of Cytology and Genetics, West Bengal, Oct. 29-31, 1999.

## VISITORS

- |   |          |
|---|----------|
| 1. Dr. Krishna Lavlekar,<br>Director of Hort., Pune | 24.07.99 |
| 2. Dr. G.L. Kaul,<br>Ex-OSD (NATP), ICAR, New Delhi | 13.08.99 |
| 3. Dr. B.S. Dhankar,<br>ADG (VC), ICAR, New Delhi   | 04.10.99 |



## HUMAN RESOURCE DEVELOPMENT

- Mr. Anil Khar, Scientist (Hort.) underwent 67<sup>th</sup> FOCARS training at NAARM, Hyderabad from 1 June, 99 to 28 Sep. 99.
- Dr. K.E. Lawande, Dynamics for labour management, NAARM Hyderabad, 14-7-99 to 19-07-99
- Dr. K.E. Lawande, Director Conference, KAB New Delhi, 7-8 Sept. 99.
- Dr. K.E. Lawande, XVIII Group Meeting of AICVIP, PAU, Ludhiana, 11-14 Oct., 99.
- Dr. K.E. Lawande, 2<sup>nd</sup> Executive Development Programme in ARM, NAARM, Hyderabad, 21-23 Dec., 99
- Dr. K.E. Lawande, National Training on Hi-Tech Horticulture, College of Agriculture, Pune, 8 Dec., 99.
- Dr. K.E. Lawande, International Conference on Adoption of Greenhouse Technology, Ministry of Agriculture, Govt. of India, 12-08-99.
- Dr. M.N. Maholay, Dr. A.A. Qureshi, Methods of Mycorrhizae research, UAS, GKVK Campus, Bangalore, 20-25 Sept. 99.

# Onion - Garlic News

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