

The Deputy Minister of Irrigation and Power (Shri Hathi): (a) No.

(b) Does not arise.

(c) No railway line in Assam has so far been programmed for electrification.

I.A.R.I. Research on Citrus

112. Shri Inder J. Malhotra: Will the Minister of Food and Agriculture be pleased to state the nature of research investigations now undertaken by the Horticultural Division of the Indian Agricultural Research Institute, New Delhi, with regard to various citrus fruits?

The Deputy Minister of Agriculture (Shri M. V. Krishnappa): The Division of Horticulture was established at the Indian Agricultural Research Institute, New Delhi, only in April, 1956. During the last four years a survey has been undertaken to collect different varieties of citrus available within the country to study their economic characters. At present 43 varieties of sweet oranges, 20 of mandarin and 31 varieties of other citrus species are under study and further collections are in progress from foreign countries. Taxonomical studies of these varieties and those available in other parts of the country are under progress to remove the confusion now prevalent in the varietal nomenclature and to help in correct identification of the varieties. Thirty-one different varieties of citrus are being studied, particularly for their performance, with a view to select those which could be used as standard root-stocks.

Studies of growth cycles, flowering behaviour and cropping propensity in mandarin, sweet lime and sweet oranges are in progress to adjust cultural practices for higher yield and better quality. Use of various ionizing radiations for evolving new varieties through mutations has been programmed. Plant regulator chemicals have been found to be promising in increasing fruit-set in sweet lime and

similar studies are in progress in mandarin orange.

The above mentioned investigations are in various stages of progress and conclusive results of positive value to the grower will become available during the next five years.

Agronomy Division of the I.A.R.I.

113. Shri Inder J. Malhotra:

Will the Minister of Food and Agriculture be pleased to state:

(a) the maximum and the minimum yield of wheat at the Agronomy Division of the Indian Agricultural Research Institute, New Delhi, during the last ten years; and

(b) what was the average yield of wheat on non-experimental plots at the said farm during the last ten years?

The Deputy Minister of Agriculture (Shri M. V. Krishnappa): (a) Following are figures of maximum and minimum yield of wheat at the Indian Agricultural Research Institute, New Delhi, during the last ten years.

Figures in maunds per acre

Year	Maximum	Minimum	Average yield (wheat is grown mostly in experimental plots)
1949-50	42.50	9.60	20.40
1950-51	37.00	6.10	19.00
1951-52	30.05	5.80	9.74
1952-53	31.20	7.00	18.90
1953-54	27.35	10.75	16.66
1954-55	32.45	14.80	21.67
1955-56	38.35	7.00	21.67
1956-57	29.45	4.70	11.30
1957-58	30.00	9.50	15.90
1958-59	35.50	8.00	18.70

(b) No area is put under general crop of wheat as such. A total of about 10 acres is sown each year in 2

to 3 acre plots for multiplication of nucleus seed of some of the new promising N. P. varieties for distribution to States and farmers. The yields from this area are included in yield figures in the above statement.

**Central Potato Research Institute,
Simla**

114. Shri Inder J. Malhotra: Will the Minister of Food and Agriculture be pleased to state:

(a) the recommendations made to the farmers by the Central Potato Research Institute, Simla, with regard to the control of various important diseases of potato; and

(b) the nature of investigations pursued by the Institute in the last five years and their results?

The Deputy Minister of Agriculture (Shri M. V. Krishnappa): (a) and (b). A statement is laid on the Table of the Sabha. [See Appendix I, annexure No. 41].

Entomology Division of I.A.R.I.

115. Shri Inder J. Malhotra: Will the Minister of Food and Agriculture be pleased to state:

(a) the nature of research investigations undertaken by the Entomology Division of the Indian Agricultural Research Institute, New Delhi, during the year 1959-60 with regard to pests attacking wheat, rice and barley in different parts of the country;

(b) what were the results of these investigations; and

(c) the recommendations made to the farmers of the different regions in the country?

The Deputy Minister of Agriculture (Shri M. V. Krishnappa): (a) Intensive research work on pests of rice is carried out by the Entomology Section of the Central Rice Research Institute, Cuttack, and the various Entomology Sections of the rice growing States. Only some fundamental

research work on the preservation of paddy seeds against insect infestation by the use of insecticides is in progress in the division of Entomology of I.A.R.I.

Wheat and barley are free from infestation from major pests in the field, wheat being attacked only by termites in unirrigated areas. Barley also is occasionally attacked by termites. Research work on the control of termites in the field with modern organic insecticides is being carried out in the Entomology Division of the Indian Agricultural Research Institute, New Delhi.

Wheat and barley in storage are attacked by a number of serious pests such as *Trogoderma granarium*, *Rhizopertha dominica* and *Calandra oryzae*. Research work is in progress on (a) proper storage of wheat to keep it free from infestation by the use of insecticides as well as by improved methods of storage, (b) control of these pests by insecticides, (c) extent of contamination of wheat in storage by modern organic insecticides that are used for the control of these pests and (d) the translocation or absorption of insecticides from treated soils in the consumable portions of wheat plant.

(b) One improved storage structure for storage of wheat under rural conditions has been developed in the Division.

(c) The results obtained will be released to the cultivators after extensive trials.

Purchase of Rice in Punjab

116. Shri D. C. Sharma: Will the Minister of Food and Agriculture be pleased to state:

(a) the amount of money which has been spent by the Centre for the purchase of rice and paddy from Punjab in the procurement period upto 1st February, 1960; and

(b) the quantities of rice and paddy purchased State-wise by or on behalf