From the above, it will be seen that the chicken that got the green sprouts grow much better than the controls.

It is generally presumed that chicken are not pasture feeders and are more often enclosed in a bare piece of land. The birds do suffer for want of suitable material for their proper growth. In the case of intensive poultry keeping, it is a good plan to give rest to the runs and to dig up the soil as often as necessary to encourage the growth of vegetation by sowing seeds.

"COMPARISONS BETWEEN THE SELFED AND NON-SELFED ONION FLOWER HEADS AND BETWEEN THE EARLY AND LATE FLOWER HEADS ARISING FROM THE SAME ONION BULB"

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For breeding pure lines in onion, the flower heads were selfed at the Agricultural Research Station Hagari, in the season 1934. In the selfed heads very poor setting was observed and the weight of the seed also was found to be much lower than that obtained from the non-selfed.

In this crop very frequently, two heads arise from a single bulb. The first head is put forth early in the season and when the capsules of this are fully formed, the second head is produced. The seeds collected from the later heads were found to be poorer in weight than those from the earlier ones.

With the object of testing whether selfing and lateness of flowering, affect also, certain other characters of the onion, the following data were gathered.

The observations were made on large sized Dhulia onion, acclimatised here for a long time. The crop was planted during the cold weather of 1934 under irrigated conditions. In Tables I and II, the statistical values of the characters studied are given.

From Table I it is clear that for all the characters observed the values of the non-selfed heads are higher. Table II shows that with the exception of "Percentage of capsules formed" all the values are higher in the case of early heads. The better setting observed in the case of lateheads may be due to sparser distribution of the flowers in the head. The few flowers that were produced had greater scope for complete development.

Selfing in onion was found to be injurious by other workers also. As early as 1888, Charles Darwin has remarked in his classical book, 'Cross and Self Fertilization of Plants in the Vegetable Kingdom' that in onion (Blood-red, Var.) the selfed heads showed a very poor setting. Jones and Emsweller recommended for onion breeding, isolation of pure lines by selfing and a free crossing of the plants of the same stock to regain their lost vigour.

Summary.

1. "Selfing" is injurious to seed setting and other characters in onion.

2. In the case of bulbs producing two flushes of flowering it is desirable to collect seeds from the earlier heads.

References.

1. Charles Darwin, 1888. Cross and Self Fertilization.

2. Jones, H. A., and Emsweller, S. L.—Methods of Breeding onions. Imperial Bulletin of Fruit Production Vol. No. 1. Page 31.

Table I.

Comparison between 'Selfed' & Non-selfed flower heads of onion.

	Percentage of Capsules formed.		Wt. of 500 seeds in grammes.		No. of seeds per head.		Percentage of Germination.		Mean Wt. of bulbs in ounces.	
	S. F.	N. F.	S. F.	N. F.	S. F.	N. F.	S. F.	N. F.	S. F.	N. F.
No. of determinations.	10	10	10	10	10	10	9	9	6	6
Mean.	51·3	71·2	1 64	2·13	158·8	1500·6	7·667	35·56	2·667	4·55
S. E. of mean difference.	1·5711		0·03155		46·327		1·3266		0·23026	

Table II.

Comparison between the "Early" & "Late" flower heads arising from the same bulb in onion.

	No. of flowers in the head.		Percentage of Capsules formed.		Wt. of 500 seeds in grammes.		Percentage of germination.	
	E	L	E	L	E	L	E	L
No. of determinations.	17	17	17	17	17	17	14	14
Mean.	453 8	175·8	74·0	78·6	2·212	1·648	55·07	26·714
S. E. of mean difference.	4·998		0 89913		0·20722		1·3244	