on behalf of the ryot. This amount is treated as a loan to the ryot in accordance with the terms of the Thakkavi loan act. This system has considerably helped the ryots in Dharwar district where tractor ploughing has been popularised to such an extent that large areas are ploughed every year. It is urged therefore, that wherever sufficient security is forth-coming and where the land owner is not already over burdened with debts the system may be adopted in the Madras Presidency as well. In my enquiries in the villages of Bellary I could gather that there is a large number of ryots willing to get their lands ploughed with the tractor if only Government loans could be secured. Doubts may also be entertained as to the advisability of large scale mechanised ploughing which in the initial stage involves the ryot in additional expenditure in a tract where, under existing conditions of nature, and precarious seasonal factors successful raising of crops is problematical. Will not this innovation deprive a part of the agricultural labourers of their employment and thus aggravate the distress of the aggrarian population ?

Such fears are unfounded because the labourer on being thrown out of employment from ploughing operations will be compensated by the large area under cultivation. Larger yields may also be expected as a result of better farming methods which necessarily would involve the employment of more labour for harvesting, thrashing, and preparation for the market etc.

GREEN FEED FOR POULTRY

By H. NARAHARI RAO

The necessity of green food for poultry, specially for the growing chicken need not too greatly be emphasized. Under normal conditions, they are natural foragers and when released in the mornings they prefer young succulent grass and other edible weeds to artificial feeds. This kind of foraging tends to keep the birds in a healthy and active condition and as such this should be encouraged as far as possible.

Men with considerable experience in poultry insist on a liberal supply of green feed to the birds, as this tends not only to the egg-production, but also to keep the flock in a healthy condition.

One reason why the birds under free range system grow much quicker and healthier than those under confinement, is that the former get the requisite quantity of green material as their food. In a poultry yard where the birds have been kept in wire netting enclosures for some days, it will be noticed that the ground becomes bare and after some time the pasture becomes totally extinct, the reason being that the birds nip all the tender shoots ; so that there is no chance for the pasture to grow at all. Under the intensive and semi-intensive systems of poultry keeping, the birds do not get the required amount of green material, unless adequately supplemented.

By green feed is generally meant all kinds of greens from the stalk of some vegetables to the tender green grass. The best and the easily available are the several kinds of grasses. Tender green grass is said to be the best material for rapid growth and is equivalent to any concentrated food material. It supplies enough protein for flesh formation and contains vitamins and minerals besides providing the necessary bulk to the ration.

The green feeds supplied to poultry should be fresh and succulent and the most suitable among them are: green grass, leaves of cabbage, cauli-flower, lettuce, lucerne, berseem, pillipesara, amaranthus, drum-stick, radish, country spinach, and carrots.

During the winter months, there is an abundance of green food available, but it becomes scarce as summer approaches.

At the Agricultural Research Station, Anakapalle, at the suggestion of the Superintendent of the farm, we have been regularly following a particular system which has worked quite satisfactorily.

Shallow nursery pots 6″ to 9″ deep with 2½′ diameter are filled in with rich soil mixed with farm yard manure. The seeds of Ganti, Ragi, mixed with a small quantity of Pillipesara are sown thick in these pots and watered. The tender seedlings will be available for use after 8 to 10 days from the date of sowing. These pots are transferred to the chicken pens both in the morning and evening for an hour each time.

With a view to study the effect of this on the growth of chicken, 7 chicks from the Rhode Island Reds, 7 from the White Leg-Horns, 6 from the Light Sussex and 4 from the Black Minorca were selected from those that hatched on the same day (i. e.) on 21—4—1935.

Four Rhode Island Reds and 4 White Leghorns got the green sprouts and 3 were the controls in each. 3 Light Sussex and 2 Black Minorcas got the green sprouts whereas a similar number formed the controls in each. The chicken were weighed and their weights recorded from 21—4—1935 to 28—7—1935.

The statement herewith appended gives details.

Breed and Number.	Experimental.		Number.	Control.	
	21—4—'35 Grams.	28—7—'35 Grams.		21—4—'35 Grams.	28—7—35 Grams.
Rhode Island Red. ... 1	42	1,059	5	44	994
" ... 2	43	1,116	6	43	804
" ... 3	37	1,178	7	46	892
" ... 4	39	died	—	—	--
White Leg Horns. ... 1	29	976	5	27	died
" ... 2	33	998	6	38	792
" ... 3	32	1,018	7	32	746
" ... 4	29	802	—	—	—
Light Sussex. ... 1	37	1,192	4	40	died
" ... 2	38	1 240	5	39	920
" ... 3	39	1,181	6	39	916
Black Minorca. ... 1	34	916	3	35	716
" ... 2	33	839	4	33	died.

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.