

Pure Seed and the Need for its Renewal at Frequent Intervals

By

K. B. VISWANATHAM, B. sc., (Ag.)
Seed Development Officer

With the intensive propaganda carried on all these years, there is practically no cultivator of rice who does not grow some strain or other of it, to suit his soil, climate and season. All have realised the importance and necessity of paddy strains but from a study of the crops grown by them, during his visits to several villages in the six districts, under his charge, the author still finds that in at least more than half the area, the purity of the strain under cultivation has not been kept up at the desired level.

If one examines the crops under general cultivation critically, he finds first of all, very many wild paddy plants that have awned and coarse grains, and secondly varieties other than the strain are also seen as mixtures which are either, early or late in duration; bolder or finer in size of grain, shorter or taller in growth, and having differing colour characters in similar parts of the plant and also with different shapes of earheads. All these admixtures are technically called 'rogues' and the loss in yield of the strain caused by them is not appreciated generally by most of the cultivators.

The chief character of the wild paddy plants is that a majority of the grain sheds from the earhead as it ripens so that by the harvesting time there will barely be very few grains on the ear. Not only is the produce lost from this shedding of grains, but another and more dangerous aspect of this shedding is that the fallen grains remain in the soil and germinate when the succeeding crop is planted and thereby cause rapidly increasing proportion of such wild plants in the succeeding years. Apart from this, the fallen grains that get under the soil during the cultural operations and have no chance of germination in the succeeding season, remain viable for two or more seasons and germinate when conditions are favourable for them. Most of these wild paddy plants have red rice while the strain is usually of white coloured rice and in milling of the paddy, greater polish has to be given to the rice to remove the traces of the red colour of the mixtures which result in loss of outturn of rice. The damage caused by the other kinds of mixtures that are usually found are also not known to many. In an early duration strain, late duration rogues remain green at the time of harvest and contribute nothing towards yield, on the other hand early plants in a late crop mature far earlier than the strain and shed their grain by the time of the harvest and thereby cause loss of yield. Presence of rogues having

bolder size grains is of the same disadvantage as that of the red rice because of the reduction of outturn of rice during milling. Contrarily, finer sized grain does not get milled along with the strain but pass through the sieves along with the rice and remain in the rice unmilled causing reduction in the quality of the rice. The other kinds of rogues interfere with the general cultural and threshing operations and reduce the appearance, quality and value of the final produce.

Most cultivators would remember that, in former days, when a miller purchased paddy, his only test about the goodness of the paddy, was to crush a sample of it between the palms and assess the outturn of rice that he was likely to get while milling, which naturally depends on the proportion of red rices and bolder or finer sized grains and correspondingly reduce the price for the paddy for samples in which these are prepondering. Of course, during the intensive procurement days the millers paid no attention to the quality of produce offered to them but such conditions are gone along with the decontrol and it is quite possible that hereafter greater and greater attention will be paid by all and particularly by the millers to the purity and quality of the produce they purchase. It is thus most imperative that hereafter only the best and pure seed is utilised to cultivate the paddy crop.

The deterioration in the quality of the strain in the hands of the ryots is never intentional but is mainly due to the inevitable and increasing proportion of the mixtures and paying no attention to their removal during the crop growth period. It is also not possible for most of the cultivators to pay timely attention to such removal and therefore the general quality of the produce is deteriorating. To keep up the existing level of production and to increase it in view of the deficit in good grains that is facing the country as a whole, every ryot must change his seed and secure good seed from the agricultural depots.

Most of the readers of the Padipantalu will remember that in the issue of October 1950 (Vol. 7 No. 10) details of the Seed Development Scheme in the state have been published. However, to recapitulate, the chief function of the scheme is to produce good seed in large quantities for the use of the ryots. Nucleus seed from the Research Stations is utilised by the special staff for initially multiplying it in ryots lands in primary seed farms under their close supervision and the seed produced from such primary seed farms is being utilised for further multiplication in the secondary seed farms under the supervision of the Agricultural Demonstrators. During the three years the scheme has been in operation, the level of purity of the secondary seed farm seed that is being distributed has been on the increase year after year as the following data proves it.

Range of purity of the seed	Particulars of percentage purity of the secondary seed farm seed in the area covered by the Kakinada Seed Development Division during the years		
	1949—1950	1950—1951	1951—1952
100%	4.17	10.2	16.0
99%	10.43	22.7	33.30
98%	25.43	28.2	31.00
97%	12.20	22.4	16.30
96%	15.25	9.7	2.50
95%	17.75	3.9	0.50
94.9% 90%	13.46	2.7	0.35
89.9% to 85%	0.96	0.2	0.05
84.9% and less	0.35	Nil	Nil
Total	100.00	100.00	100.00

From this table it is pleasing to note that the proportion of seeds having greater purity is increasing year by year consequent on the progressive efforts of the Seed Development Staff, and that in 1951-'52, the proportion of seeds of less than 97% purity is negligible. It is also to be mentioned here that not only the purity of the seed but its germination quality has been kept at a high standard and practically there are no complaints during the last three years, of paddy seed from agricultural depots not germinating.

Many ryots still have an apprehension that paddy seed supplied from the agricultural depots may not be good as was unfortunately the case in certain rare cases in previous years but now they can with greater confidence and without any hesitation obtain their seed requirements from the Agricultural Demonstrators and grow the purest possible crop on their lands and help to wipe out the deficit of food in the State. Good seed usually remains tolerably pure for at least three years in the ordinary methods of cultivation adopted by the ryots.

It must however be emphasised that with all the sincere efforts of the department, it will practically be impossible to supply the seed requirements of all the ryots in one and the same year. Hence ryots must co-operate with the department by obtaining pure seed from the Agricultural Depots once in three or four years and maintain its purity by themselves to the extent possible in the remaining years.

fodder
count

when
wild r
the m
of the
Edwa
them
and th
indige
grass
very l
was r
confro
proble
were
buffalo
baffled
of Ar
lands
vegeta
the U
was gr
eastwa
plains
so ind
plants
of pas
stoppe
and so
lands
hay an
in 194
and gr