SEED PADDY PRODUCTION : PATHOLOGY AND PROSPECTS

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The characteristics which make for good seed paddy include genetic purity, freedom from weed seeds and extraneous matter and seed health. Seed health depends on two important factors-infection with seed-borne pathogens, and the "physiological status" of the seed to produce vigorous seedlings. The latter aspect

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is influenced by environmental conditions which have a bearing on seed filling and processing. Adverse conditions may result in poor seed characterised by low germination, un-uniform stands and weak seedlings.

In recent studies, about nineteen genera of fungi have been recorded seed-borne in rice. Although *Pyricularia oryzae*, the blast fungus, is regarded as the most dangerous pathogen, it has not been detected seed-transmitted in a viable form. Of the others, *Trichoconis padwickii* and *Drechslera oryzae* exert their pathogenic potential only when seed is "physiologically" weak-poorly filled, light seed matured under relatively unfavourable conditions. Other common seed-borne fungi like *Curvularia* spp. are for the most part saprophytes. These seed-borne fungi have been recorded from different agro-ecological regions of the country and they are not restricted to any geographical area.

There is therefore a case for organising seed paddy production in climatically favourable regions with assured irrigation adopting intensive farming practices to ensure the production of quality seed paddy of good "physiological status". Such well filled, heavy seed will give excellent stands of vigorous seedlings unaffected by weak pathogens and with the potential for high yields. Perhaps, the establishment of "seed production zones" in Sri Lanka ought to be considered with this activity organised in extensive tracts as an industry engaging "professional" farmers, backed by technical expertise and supported by skilled agriculturists.