

Agri Res. J. Kerala, 1976 14 0)

STORAGE LIFE OF RICE SEEDS OF SOME HIGH YIELDING VARIETIES IN A HIGH HUMID REGION

Paddy seeds are hygroscopic in nature and as such they absorb or lose moisture depending on the relative humidity and temperature of the surrounding atmosphere. The high relative humidity and temperature as prevalent in Kerala favour rapid absorption of moisture under ordinary storage conditions, and this ultimately impair the storage life of the seeds. Even under these conditions seeds of most of the indigenous tall *indica* rice varieties maintain viability for 12 to 15 months (Sahadevan 1966). Information on the storage life of high yielding dwarf *indica* rice varieties especially under such conditions is meagre and therefore the present study was undertaken at the Rice Research Station, Pattambi during 1968 — 1972.

Six high yielding dwarf *indica* rice varieties, three belonging to early (90—105 days) and three to medium (115—130 days) duration groups, were selected for the study. Seeds of these varieties collected from different harvest seasons were dried to 12% moisture and stored in jute bags (single gunny) on pallets, under ordinary storage conditions. Samples of seeds from these bags were drawn at fortnightly intervals starting from the first fortnight after harvest and germination percentages estimated by the method prescribed by the ISTA (ISTA 1966) in a Minnesota type germinator at 28°C—30°C. Four samples of 100 seeds each were tested from each variety. Storage life was computed in days based on the minimum standard of germination (80%) fixed for the certified seed. The results are presented in table 1

Table 1

Storage life of different Rice seeds

Duration	Variety	Mean storage life (in days) when harvest and storing where done during								
		August	Sept.	Oct.	Novem.	Decem.	Jan.	Feb.	March	April
Medium	IR. 8		316	286		276	240	237	249	—
	Jaya	377	362	—	—	270	277			
	Aswathi	289	—	—	—	264	258	247	—	—
Short	Annapoorna	329	293		253	—	236	214	238	230
	Triveni	252	—	—	—	245	205		—	—
	Rohiui		302		231	225	210			

The data show that viability of seed is influenced by season of harvest. Seeds of autumn crop harvested in August-September have comparatively longer storage period than those harvested in Winter and Summer seasons. Jaya, among the medium duration group when harvested and stored in August-September showed a germinability of more than 80% upto one year while it can retain the same standard of germination only upto 9 months if harvested in December-January. All other varieties also showed a longer storage life when harvested in August-September. Among the short duration varieties, Triveni has a shorter storage life period than Annapoorna and Rohini.

സംഗ്രഹം

അധികോല്പാദനശേഷിയുള്ള നെൽവിത്തിനങ്ങളുടെ അങ്കുരണശേഷി എത്രനാൾ നഷ്ടപ്പെടാതിരിക്കുമെന്ന് പരീക്ഷിച്ചറിയാൻ പട്ടാമ്പി നെല്ലുഗവേഷണ കേന്ദ്രത്തിൽ 1968 മുതൽ 72 വരെ നടത്തിയ പഠനത്തിൽനിന്നും മദ്ധ്യകാല ഇനങ്ങളിൽ ഹ്രസ്വകാല ഇനങ്ങളെ അപേക്ഷിച്ച് കൂടുതൽ നാൾ ജീവനക്ഷമത നഷ്ടപ്പെടാതിരിക്കുമെന്ന് കണ്ടു. ഹ്രസ്വകാലയിനങ്ങളിൽ തൃവേണിയുടെ ജീവനക്ഷമത താരതമ്യേന കുറവാണെന്നും മനസ്സിലായി. അനുകൂലമായ സാഹചര്യങ്ങളിൽ സൂക്ഷിച്ചിരുന്നാൽ ആഗസ്റ്റ് - സെപ്റ്റംബർ മാസങ്ങളിൽ കൊയ്ത്ത് സംഭരിക്കുന്ന വിത്തിനങ്ങളുടെ ആകെ ജീവനകാലം ഡിസംബർ-ജനുവരി മാസങ്ങളിൽ കൊയ്ത്ത് സൂക്ഷിക്കുന്നവയേക്കാൾ കൂടുതലാണെന്നും കണ്ടു.

REFERENCES

International seed testing Association 1955, International Rules for Seed Testing. *Proc. Int. Seed Test s.*, 31 PP. 152. Wageningen, Netherland.

Sahadevan P. C. 1966. Rice in Kerala. Agril. Information Service, Department of Agriculture, Kerala II 239

Rice Research Station,
Pattambi.

T. C. RADHAKRISHNAN
V. p. SUKUMARA DEV
P. A. VAR KEY
Dr. R. GOPALAKRISHNAN