Effect of packaging method and seed moisture content on germination capacity of seed paddy during storage

Nearly 100,000 metric tons of rice seed are used by farmers in Sri Lanka every year for cultivation and the loss in germination capacity of the seed paddy below the recommended level within six months of storage has been major problem among farmers and major suppliers of seed material.

In order to overcome this problem, a study was conducted to determine the effect of moisture content on seed germinability by storing paddy belonging to the variety of Bg 300 at four different moisture levels, namely, 14, 13, 11 and 10%. Then seeds of each moisture level were packed in 5 Kg woven polypropylene bags (poly-sacks) and stacked separately. Each stack was then covered with a low-density polypropylene (LDPE) sheet of gauge 200 and the edges of the sheet touching the floor were sealed using sand snakes.

The results revealed that germination capacity of paddy with initial moisture content of 10%, stored in polypropylene sacks under semi hermetic conditions remained at 93% level even after 12 months of storage.