

## IMPACT OF MOISTURE CONTENT AND HARDNESS OF MAIZE VARIETIES ON THE INFESTATION OF RICE WEEVIL

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Study on influence of moisture content and hardness of grains was tested on 15 varieties of maize against rice weevil, *Sitophilus oryzae* Linn. Results revealed that both the parameters influenced the infestation and losses caused by rice weevil, in maize varieties viz., Cianga 5, Histarch, Vijay, Naveen, Navjot, Kanchan, Knan, Prabhat, Sartaj, C-M-500, Deccan 103, Tarun, Gangali, Pusa composit II and Harsha after four months of storage. The moisture content in grains ranged from 10.80-15.61% in different varieties being maximum in Harsha and minimum in Prabhat. The varieties having higher moisture content were observed to be more susceptible against the pest and vice-versa. The percentage of damaged grains (37.45 and 62.25), loss in weight (7.26 and 17.36%) and mean pest population (32.15 and 112.57) were recorded on Prabhat and Harsha, respectively. Besides, the varieties Sartaj, Vijay and Prabhat having more hardness i.e. 34.02, 33.17 and 31.51 kg/grain were comparatively less infested whereas the damage to grains ranged from 37.45- 42.67% with a loss in weight from 7.26-11.45% at the population level of 32.15-69.56 as against 62.25% damage, 17.36% loss in weight and 112.57 population build up in soft seeded variety Harsha having hardness of 22.92 kg/grain. The moisture content had positive and hardness had negative relationship with the percentage of damaged grains, loss in weight and multiplication of this insect.

## SCREENING OF SUMMER GROUNDNUT GENOTYPES AGAINST INSECT PESTS AND DISEASES WITH ECO-FRIENDLY AGRO-TECHNOLOGY.

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The screening of summer genotypes of groundnut for Semi Arid agro-ecological situation of U.P. was carried at Regional Research Station, Mainpuri under lead function of NARP as mandated by ICAR from the material supplied by ICRIAT in 1997 and

it was tested upto 1998. The main objective of this experiment was to select out the suitable-genotype against insects, pest and diseases as per need and demand of farmers and to avoid the complexity of the nature. A sub normal dose of N10 P20 K30 kg/ha as against the recommended dose of N20 P30 K45 kg/ha with five irrigations was given for early maturity. The gypsum was used @ 300 kg/ha, out of which 50% was given at sowing and remaining 50% between the flowering and pegging stage to create the fragile condition at pegging and conservation of more moisture upto longer time during summer. The crop was sown in the last week of March and harvested after 100 days of sowing in last week of June.

Out of 33 cultivars, genotypes D4d8-10, D4D8-14, ICGV93468, ICGV96360, ICGV95337 were found most suitable and yielded 17.54, 17.17, 16.31, 12.97 and 12.45 q/ha pods, respectively. Jassid incidence was not observed in these five genotypes while incidence of pod borers was 0 to 11.53%. The maximum incidence of pod borer (11.53%) was noted in D4D8-14 and genotypic ICGV 96360 was free from this insect. Likewise, the incidence of *Anarsia eppiphias* was only 1 to 2%. In addition to this, incidence of viral and fungal (Tikka) diseases were found only 0, and 1.2%, respectively. Therefore, least incidence of aforesaid insect pests, and diseases created non complexity of environment to summer groundnut for enhancing the productivity.

Genotypes ICGV95337 and 93468 were showed the dormancy while D4D8-1-, D4D8-14 and ICGV 96360 were non dormant. In all genotypes the flowers and pegs were initiated after 20 and 40 days of sowing, respectively. Therefore, on the basis of these results the above genotypes may be suggested for summer ecology of U.P.

## SCREENING OF SOYBEAN GENOTYPES AGAINST MAJOR INSECTS PESTS

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Forty-four genotypes of soybean were tested for their reaction against leaf miner, *Aprorema modicella* and pod borer, *Heliothis armigera* Hubner at Regional Research Substation, Belatal (Bundelkhand), C.S.Azad University of Agriculture and Technology, Kanpur, during *khurif* seasons of 1997 and 1998. The tested entries were raised in Randomized Block Design with four replications. The full agronomical practices were followed in experimental crop. The observations were recorded on days of flowering, maturity, grain yield/plant and grain yield. The percent damage of leaves