panchagavya at branching + flowering stages over the application of panchagavya at branching alone and flowering stage alone.

MARKER ASSISTED BACKCROSS BREEDING FOR DROUGHT RESISTANCE IN RICE

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Abstract

Drought stress is the major constraint to rice (*Oryzasativa*L.) production and yield stability in rainfed ecosystems. Identifying genomic regions (QTLs) contributing to drought resistance will help to develop rice cultivars suitable for rainfed regions through marker-assisted breeding.Marker assisted backcross breeding (MABB) has provided new opportunities to introgress regions governing stress tolerance through careful QTL identification and fine mapping studies. Selection for well-developed root system with deep and thick roots would improve drought tolerance in rice and these traits can be successfully transferred to popular varieties by MABB. Hence a marker assisted backcross breeding was conducted to introgress root trait QTLs from a *japonica* cultivar, CT9993 which is deep rooted and drought tolerant, in to popular varieties of Tamil Nadu. These QTLs for basal root thickness, grain yield and root pulling force on chromosome 4 and penetrated root thickness on chromosome 9 of CT9993 were introgressed in to the popular varieties by crossing and the progenies were selected for foreground analysis using the flanking markers of the QTLs.

ANALYTIC STUDY OF M.SC. (HORTICULTURE) THESIS UNDER THE DEPARTMENT OF PLANTATION, SPICES, MEDICINAL AND AROMATIC CROPS AT KNK COLLEGE OF HORTICULTURE, MANDSAUR (M.P.)

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Abstract

The study was carried out under the department of Plantation, Spices, Medicinal and Aromatic Crops at KNK College of Horticulture, Mandsaur (M.P.) for the period of 10 Years (From 2008 to 2017) and data was analyzed year- wise, Varieties - wise, supervisor- wise, and gender- wise. The data for all the parameters was collected from accession register. For the analysis of each parameters excel program was used. The study revealed that out of 205 M.Sc. theses from total four departments, awarded from the college, contribution of PSMA was 42 thesis with 20.48 per cent. The highest number of thesis submitted and awarded in the year 2013(7) followed by 2015(6), 2016(5) and 2017(5). The thesis awarded to male students (28) was just double comparing to the female students (14). Maximum 05 male students were awarded thesis during 2013 and minimum 01in 2009. Maximum total 07 (5+2) male and female students were awarded thesis during the year, 2013. Dr.I.S. Naruka guided 31 research scholars for thesis followed by Dr.P.P. Singh (06 thesis) and Dr. Om Singh (05 thesis). Garlic (*Allium sativum* L.) was undertaken for maximum experimentation and higher percentage (43.7) for the award of thesis followed by Coriander and Fenugreek (12.5%) and Ajwain and Dill (7.14%).

IMPACT OF NEEM-COATED UREA IN CULTIVATION OF MAJOR KHARIF AND RABI CROP IN MADHYA PRADESH

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Abstract

The study comprises 200 paddy and 200 soybean growers of Balaghat & Seoni and Khargone & Dhar districts respectively. The positive impact of NCU (Neem coated Urea) was observed on yield and probability of crops. The yield of paddy and soybean obtained by NCU respondents was found to be higher than NU (Normal Urea) respondents. The use of NCU reduced the expenditure of applying nitrogen in both the crops and found economically feasible as consumption NCU is found more