

Biological Mining of Soil Reserve Phosphorus in Lowland Rice (*Oryza sativa* L.)

G Bhavani, M Martin Luther, K Chandra Sekhar and P Ravindra Babu
Department of Agronomy, Agricultural College, Bapatla 522101

ABSTRACT

A field experiment entitled "Biological mining of soil reserve phosphorus in lowland rice (*Oryza sativa* L.)" during *kharif* 2009-10 was conducted on sandy clay loam soils of the Agricultural College Farm, Bapatla. Inoculation of PSB recorded the highest grain and straw yields at each level of P application, however, it was on a par with other biological treatments. The maximum P uptake was recorded with application of 60 kg P₂O₅ ha⁻¹ (P₃) and it was significantly superior to rest of the P levels. Soil inoculation of PSB recorded significantly the maximum P uptake over other biological treatments, but remained comparable with greenmanuring *in-situ* (T₃). The maximum Apparent Phosphorus Recovery (APR) and Phosphorus Use Efficiency (PUE) was recorded with inoculation of PSB along with 20 kg P₂O₅ ha⁻¹.

Key words : APR, Available P, Biological mining, Greenmanure, PSB, PUE, Rice, VAM.

Growth And Yield Of Transplanted Redgram As Influenced By Varieties And Age Of Seedlings

A Thirumala Rao, B Venkateswarlu, K Chandrasekhar, P R K Prasad and G Subbaiah
Department of Agronomy, Agricultural College, Bapatla 522101

ABSTRACT

A field experiment was conducted at the Agricultural College Farm, Bapatla on a sandy clay loam soil during *kharif*, 2010-11 to study the effect of varieties and age of seedlings on the growth and yield of transplanted redgram. The findings of the experiment revealed that transplanting 15 day aged seedlings of LRG-41 variety registered significantly the highest drymatter production at harvest, number of pods plant⁻¹, seed yield and stalk yield over other treatment combinations. Among the varieties tested, LRG-41 recorded significantly the highest test weight (9.8 g) and harvest index (16.8) than other varieties. Among the age of seedlings tested, transplanting 15 day aged seedlings recorded numerically and significantly higher number of primary and secondary branches, highest test weight, seed yield and harvest index.

Key words : Age of seedlings and Transplanting, Varieties .

Production Potential and Economics of Different Crops in Rice Fallows under No Til Condition in Telangana Region of Andhra Pradesh

M Malla Reddy, B Padmaja and D Vishnu Vardhan Reddy

Regional Agricultural Research Station, Acharya N.G.Ranga Agricultural University, Warangal – 506 007, Andhra Pradesh

ABSTRACT

A field experiment was conducted in clay loam soils of Regional Agricultural Research Station, Warangal during winter season of 2007-08, 2008-09 and 2009-10 to evaluate different crops in rice fallows under no til condition for their production potential and profitability on the same site. Higher maize equivalent yields (kg/ha) and net returns (Rs./ha) were recorded in maize crop followed by okra and mustard. However, more returns per rupee invested were realized with sunhemp crop followed by mustard, sorghum and castor compared to maize despite of their lower yields and net returns due to low cost of cultivation and/or more remunerative price for the economic produce.

Key words : Maize Equivalent Yield (MEY), No til condition, Post-rainy season crops, Returns per rupee invested, Rice fallows.

Response of Popcorn to Different Planting Patterns, Nutrient levels and Nitrogen Application

D Lakshmi Kalyani and D Srinivasulu Reddy

Department of Agronomy, S V Agricultural college, ANGRAU , Tirupati 517 502

ABSTRACT

A field experiment was conducted during two consecutive *rabi* seasons of 2008 and 2009 at S. V. Agricultural College, Tirupati, to evaluate the effect of different planting patterns, graded nutrient levels and split application of nitrogen on growth, yield and economics of popcorn. The experiment was laid out in a split - spit plot design replicated thrice. The treatments comprised of three planting patterns *viz.*, P₁(60x20 cm), P₂ (75x20 cm) and P₃ (90x20 cm) assigned to main plots and three nutrient levels *viz.*, N₁ (80-40-40 kg ha⁻¹ N, P₂O₅ and K₂O), N₂(100-50-50 kg ha⁻¹ N, P₂O₅ and K₂O) and N₃ (120-60-60 kg ha⁻¹ N, P₂O₅ and K₂O) assigned to sub plots and three times of nitrogen application *viz.*, T₁ (1/3rd basal +1/3rd knee high stage +1/3rd tasselling), T₂ (¼th basal + ½ knee high stage + ¼th tasselling) and T₃ (1/4th basal + ¼th knee high stage +1/2 tasselling) assigned to sub - sub plots. The study has revealed that best performance of popcorn with highest yield and economics could be realized with planting pattern of 90x20 cm along with application of 120-60-60 kg ha⁻¹ N, P₂O₅ and K₂O in three splits at ¼th basal + ½ knee high stage + ¼th tasselling.

Key words : Popcorn , Planting pattern and Nitrogen

Multivariate Analysis in Pigeonpea {*Cajanus cajan* (L.) Millsp.} Advanced Lines

S Venkata Naresh, B Govinda Rao, M Lal Ahmad and K L Narasimha Rao
Department of Genetics & Plant Breeding, Agricultural College, Bapatla- 522 101,
A. P.

ABSTRACT

Forty nine genotypes of Pigeonpea were assessed for genetic divergence for 13 characters. The multivariate analysis revealed considerable genetic divergence and grouped into four clusters as per D^2 analysis and eight clusters in case of cluster analysis. Grouping of genotypes was at random suggesting no role of geographical isolation. Mahalanobis' D^2 statistic inferred that number of primary branches/plant contributed maximum towards divergence followed by days to 50% flowering. Based on the intra and inter-cluster distances among the clusters, crosses between the genotypes of cluster III and II followed by cluster II and IV will give new desirable recombinants. First five Principal Components (PCs) contributed 75.04 per cent of cumulative variance. The first principal component explained 31.71% of total variability and was characterized by plant height, number of primary branches/plant, number of secondary branches/plant and shelling percentage. Agglomerative cluster analysis showed wide genetic distance between clusters II and III followed by clusters I and II. Selection of parents from these clusters will produce superior segregants. Dendrogram obtained by cluster analysis sub-grouped the genotypes. The genotypes LRG-97, LRG-61, BRG-2 and BDN 2010 with maximum inter-cluster distance and wide genetic distance in all the three divergence methods, can be exploited in hybridization.

Key words : Cluster analysis, D^2 analysis, Pigeonpea, Principal Component Analysis.

Correlation Of Quantitative And Qualitative Characters With Yield In Medium And Long Duration Genotypes Of Rice

Tushara M, Satyanarayana Rao V, Lal Ahamed M, Krishna Veni B and Narasimha Rao K L

Department of Genetics & Plant Breeding, Agricultural College, Bapatla- 522 101,
A. P.

ABSTRACT

Fifty three medium and long duration genotypes were evaluated for correlation of quantitative and qualitative characters with yield. Genotypic correlations in general were higher than phenotypic correlations. In medium duration genotypes filled grains per panicle, flag leaf length, protein percentage and hulling percentage had significant positive association with yield and in case of long duration genotypes tillers per plant, ear bearing tillers per plant, days to 50% flowering, filled grains per panicle, alkali digestion value and hulling percentage had positive significant association with yield. Selection for these characters during selection programme will result in crop improvement.

Key words : Correlation, Rice, Variation.

Estimates of Genetic Parameters for Morphological, Yield and Yield Traits in Groundnut (*Arachis hypogaea* L)

K John, P Raghava Reddy, P Hariprasad Reddy, P Sudhakar and N P Eswar Reddy
Regional Agricultural Research Station, Tirupati 517 502, Anadhra Pradesh

ABSTRACT

Twenty eight F_1 crosses were evaluated for genetic parameters of 15 characters of morphological, yield and yield attributes during *kharif* 2009. JL-220 recorded the highest *per se* performance for number of well-filled and mature pods per plant, 100-kernel weight, harvest index and protein per cent. TPT-4 showed the highest *per se* performance for shelling per cent. ICGV-99029 recorded the maximum *per se* performance for number of secondary branches per plant, kernel yield per plant and pod yield per plant. Among the F_1 s, TPT-4 x ICGV-99029 was distinct for its highest mean values for number of primary branches per plant, number of mature pods per plant, shelling per cent, dry haulms yield per plant, kernel yield per plant and pod yield per plant. It is evident that number of secondary branches per plant had high heritability coupled with high genetic advance as per cent of mean and is least influenced by environment, therefore selection for this character would be effective. Moderate heritability and high genetic advance as per cent of mean was observed for number of well-filled and mature pods per plant and dry haulms yield per plant indicating importance of both additive and non-additive gene action in the inheritance of these traits. Low heritability and moderate GAM was noticed for kernel yield per plant and pod yield per plant indicating the importance of both additive and non additive gene effects for this traits.

Key words : Groundnut, morphological, variability, heritability, genetic advance and genetic advance as percent of mean

ariability and Genetic Parameters for Grain Quality Attributes in Elite Rice Genotypes

N Sampath Kumar, M Reddi Sekhar, D Mohan Reddy, N P Eswara Reddy and
P Venkata Subbaiah

Department of Genetics and Plant Breeding, S V Agricultural College, Tirupati 517
502

ABSTRACT

The present investigation was under taken to study the extent of variability and genetic parameters in 31 elite rice (*Oryza sativa* L.) genotypes for sixteen kernel quality characters. The magnitude of difference between PCV and GCV was relatively low for all the traits, indicating less environmental influence. High (> 20 %) GCV and PCV were recorded for the characters gelatinization temperature and gel consistency. Heritability estimates were found to be high (> 61 %) for all the characters. High heritability coupled with high genetic advance was observed for gelatinization temperature, gel consistency, amylose content, kernel L/B ratio, kernel breadth and kernel length indicating that most likely the heritability is due to additive gene effects and selection may be effective for these characters.

Key words : Genetic advance, Heritability, Rice, Variability.

Gene Action Studies for Yield and Yield Components in Maize (*Zea mays* L.)

T Sandeep Kumar, D Mohan Reddy and K Hariprasad Reddy

Department of Genetics and Plant Breeding, S V Agricultural College, Tirupati 517 502

ABSTRACT

The nature and magnitude of gene action was determined for various quantitative traits in a diallel set involving eight inbred lines of maize. Variance/covariance graphs revealed that number of kernels per row, cob length, cob girth, 100-seed weight and grain yield per plant were controlled by over dominance (non-additive gene effects), while number of kernel rows per ear showed partial dominance with additive gene effect. The parental lines possessed equal number of dominant and recessive genes for all the traits except number of kernels per row and cob length, for which the genes were distributed asymmetrically among the parents. From the distribution of the array points it appeared that inbred line BML 7 possessed maximum dominant genes for number of kernel rows per ear, cob length, 100-seed weight and grain yield per plant while the inbred line CM 133 possessed maximum dominant genes for number of kernels per row and cob girth. The graphic analysis revealed that most of the characters were under the genetic control of over dominance and therefore, the material can be effectively exploited for heterotic effects.

Key words : Gene action, Inbred lines, Maize, Over dominance.

Genetic Association of Characters and their Effects in Mungbean (*Vigna radiata* L. Wilczek)

N Vinay Kumar, G Roopa Lavanya and Sanjeev Kumar Singh

Department of Genetics and Plant Breeding, Allahabad School of Agriculture Sam Higginbottom Institute of Agriculture, Allahabad-211007, Uttar Pradesh, India

ABSTRACT

Genetic variability among mungbean genotypes and character association between different quantitative characters was studied. The highest GCV and PCV were recorded for harvest index and pods per plant, respectively. High estimates of genetic advance as percent of mean was observed for 100 seed weight and harvest index. High heritability with high genetic advance was observed for harvest index, 100 seed weight and pods per plant. High significant positive correlation was recorded for pods per plant and harvest index at both genotypic and phenotypic levels with seed yield per plant. Plant height, primary branches per plant, clusters per branch and days to maturity had positive direct effect on seed yield, suggesting their potential use in improvement of mungbean.

Key words : Direct effect, GCV, Genetic advance and correlation, Heritability, Mungbean, PCV.

Effect of Dairy Factory Effluent on Available Macronutrients in Soils of Pearlmillet and Greengram crops

G Sashi Kala, K Sreenivasulu Reddy and M V S Naidu

Department of Soil Science and Agricultural Chemistry, S V Agricultural College,
Tirupati 517 502

ABSTRACT

A pot culture experiment was conducted during *Rabi*, 2009 at S.V.Agricultural college, Tirupati (Andhra Pradesh) to characterize Dairy factory effluent (DFE) with respect (DFE) to macronutrients and also to study the effect of Dairy factory effluent on available macronutrients in greengram and pearlmillet crops. The available N, P, K and S increased with increase in levels of Dairy factory effluent application from DFE₀ to DFE_{3.0} irrespective of the crops studied. The soils of pearlmillet crop recorded higher available P and S whereas the soils of greengram crop registered higher available N and K. The interaction effect between crops and levels of Dairy factory effluent on available N and P was significant at 50 days and 25 days, respectively. Further, the interaction on available S was found to be significant at 50 days only while the interaction effect on available K was significant at all stages of crop growth.

Key words : Available N,P,K and S of soil,Dairy factory effluent.

Effect of balanced nutrition on yield, nutrient uptake and soil fertility of maize (*Zea mays*) in an Inceptisol of Tamil Nadu

M Paramasivan, P Malarvizhi and S Thiyageswari

Department of Soil Science and Agrl. Chemistry,Tamil Nadu Agricultural University,
Coimbatore 3, Tamil Nadu, India.

ABSTRACT

A field experiment was conducted during July – October of 2007-2008 and 2008-2009 to study the effect of balanced inorganic fertilizers on yield and nutrient uptake of maize (COHM 5) in Mayamankuruchi soil series of Tamil Nadu. The nutrient sorption study was conducted to evaluate optimum nutrient treatment (ONT). The optimum nutrient requirements were fixed as 200-64- 48 -4.8 kg N-P-K-Zn / ha for this soil series belongs to the order of Inceptisol. The experiment was laid out in RBD replicated thrice with 13 treatments of different levels of inorganic fertilizers. The grain and stover yield of maize as influenced by various levels of fertilizers in this soil series was found to be significant and the highest grain and stover yield (8.00 and 14.39 t / ha) was recorded in treatment that received 250-64- 48 -4.8 kg N-P-K-Zn / ha, respectively. The highest total N and Zn uptake (260.8 and 1.60 kg / ha) was noted from the application of 250-64- 48 -4.8 kg N-P-K-Zn / ha. Similarly, the maximum total P and K uptake (74.8 and 216.2 kg / ha, respectively) was observed from the enhanced levels of P and K application (200-80-48-4.8 and 200-64-60-4.8 kg N-P-K-Zn / ha. The available N- P-K-Zn content of soil was found to be higher due to the enhanced levels of applied nutrients to the soil. The highest net returns (Rs 38,102 / ha) and net B:C ratios (1.72) were obtained in treatment applied with 250-64-48-4.8 kg N-P-K-Zn / ha.

Key words : Available nutrients, Grain yield, Inceptisol, Maize, Nutrient uptake, Optimum nutrient treatment.

Effect of Different levels of Gypsum and Pressmud cake on Drymatter Production, Yield and Uptake of Nitrogen, Phosphorus and Potassium in groundnut

A Revathi, C Mastan Reddy and M V S Naidu

Department of Soil Science and Agricultural Chemistry, S V Agricultural College,
Tirupati 517 502

ABSTRACT

A field experiment was conducted to evaluate effect of different levels of gypsum and pressmud cake on drymatter production, yield and uptake of nitrogen, phosphorus and potassium in groundnut on a sandy clay loam soil (Typic Haplustalfs) during *rabi*, 2009-2010 at wet land farm, S.V. Agricultural College, (ANGRAU) Tirupati. Application of pressmud cake @ 5 t ha⁻¹ along with application of gypsum @ 500 kg ha⁻¹ each at basal and flowering recorded the highest haulm and pod yield in groundnut. Further, application of pressmud cake @ 5 t ha⁻¹ along with application of gypsum @ 500 kg ha⁻¹ each at basal and flowering registered the highest uptake of N, P and K by plants at flowering and haulms and seeds at harvest.

Key words : Groundnut, Gypsum, Pressmud cake, Drymatter Production, Yield, N, P and K uptake.

Effect of spent wash on soil properties and plant nutrient composition at various distances from the effluent stream

M Sreekanth Reddy, A Madhavi and K Sreenivasulu Reddy

Department of Soil Science and Agricultural Chemistry, S V Agricultural College,
Tirupathi 517 502

ABSTRACT

Effect of spent wash on soil properties and nutrient status of index leaves at different distances from effluent stream were studied at there locations *viz*; Naidupeta, Chittoor and Renigunta distillery units around Tirupathi, A.P. The soil properties like EC, Organic carbon, available N, P, K and S, exchangeable Ca and Mg and DTPA extractable Zn, Fe, Mn and Cu were significantly more in the immediate vicinity of the effluent stream and decreased significantly with an increase in distance from the effluent stream. The adverse effects of spent wash was continued mainly upto 10 m, 50 m, and 10 m at Naidupeta, Chittoor and Renigunta, respectively. The index leaves of plants grown under polluted environment, were having slightly higher N, P, K, Ca, Mg, S, Zn, Fe, Mn and Cu contents as compared to the plants grown under normal environmental condition.

Key words : Spent wash, Soil properties, Plant nutrient composition

Effect of Spent Wash Application on Nutrient Concentration and Uptake by Bajra and Blackgram

P Sreevani and A Madhavi

Department of Soil Science and Agricultural Chemistry, S V Agricultural College, Tirupathi 517 502

ABSTRACT

A pot culture experiment was conducted with six treatments and three replications in factorial CRD concept by taking two crops *i.e* legume (blackgram) and a cereal (bajra) to know the effect of different dilutions of spent wash application on nutrient concentration, uptake, drymatter production and yield of bajra and blackgram. Maximum drymatter production and yield was recorded (78.40gpot⁻¹ and 14.95 gpot⁻¹) with the application of 10 times diluted spent wash in bajra while it was noticed with 20 times diluted spent wash with irrigation water in blackgram (41.80gpot⁻¹ and 12.4gpot⁻¹), respectively. Uptake of various nutrients was highest with 10 and 20 times diluted spent wash application in bajra and blackgram, respectively when compared to control.

Key words : Blackgram, Bajra, Nutrient content, Spent wash, Uptake.

Biocontrol Potentiality of Native microbial Isolates against Collar rot Disease of Crossandra

P Arunasri, P Madhusudhan and M Johnson

Department of Plant Pathology, S V Agricultural College, Tirupati 517 502

ABSTRACT

In the present study, we have isolated nine fungi and three bacteria were isolated from the rhizosphere of Crossandra by serial dilution method. Of various mycoflora, *Trichoderma viride* (T₁), *Trichoderma* spp (T₂, T₃ and T₄), *Penicillium* spp, *Rhizopus* spp, *Aspergillus flavus* and *A. niger* and three rhizobacterial isolates including *Pseudomonas* spp were obtained. In dual culture studies, *Trichoderma viride* (T₁) was highly effective in inhibiting mycelial growth of *Sclerotium rolfsii*. up to 70% and sclerotial production by 91% followed by *Trichoderma* species (T₂). *Pseudomonas* spp was also effective among rhizobacterial isolates with mycelial and sclerotial inhibition up to 43.1% and 71% respectively.

Key words : Biocontrol, Crossandra, Invitro, *S.rolfsii* Sacc, Rhizosphere.

Evaluation of Chemicals for Control of Mungbean Leaf Curl and its Vector *Thrips palmi* Karny in Allahabad District of Uttar Pradesh

V Manoj Kumar and P Williams

Acharya N G Ranga Agricultural University, Agricultural Research Station,
Amadalavalasa-532185

ABSTRACT

Experiments were conducted at Allahabad Agricultural Institute –Deemed University, Allahabad to evaluate the efficacy of insecticides in control of leaf curl of mungbean and its vector *Thrips palmi* Karny during kharif-2006, summer-2007 and kharif-2007 in randomized Complete Block Design with four replications on local variety. Dimethoate foliar spray @ 0.06%, Imidacloprid foliar spray @ 0.02%, Neem oil @ 5ml/lt. of water, Imidacloprid seed treatment @ 5gms/kg seed, Carbosulfan foliar spray @ 0.05%, Carbosulfan seed treatment @ 30gms/kg seed, Thiamethoxam seed treatment @ 3gms/kg seed, Thiamethoxam foliar spray @ 0.005%, Acephate foliar spray @ 0.75% in comparison with untreated control. Observations on leaf curl were recorded at 30, 45 and 60 days after sowing, thrips population counts (No. of *Thrips palmi* Karny / 5 terminal/each plot) were made at 1, 3, 7 and 15 days after spraying along with a pre-treatment count at 1 day before spraying. Imidacloprid and thiamethoxam were significantly superior than rest and were equally effective in reducing the mungbean leaf curl at 30, 45 and 60 days after sowing in all three seasons. However, as far as per cent reduction is concerned imidacloprid was superior over thiamethoxam in all studied seasons with 34.4, 36.6 and 37.3 per cent respectively followed by thiamethoxam (31.03, 34.70 and 33.64 per cent in respective seasons). Imidacloprid and thiamethoxam significantly reduced the thrips population and were at par except during summer-2007, wherein, mean reduction of thrips with thiamethoxam significantly more compared to imidacloprid. However, thiamethoxam treatment reduced thrip population more over control during kharif-2006(64.80%), summer-2007(68.00%) whereas imidacloprid reduction of thrip population over control was more during kharif-2007(73.50%).

Key words : Insecticides, Mungbean leaf curl, *Thrips palmi* Karny

Management Of Cucumber Mosaic Virus In Chilli

V Govardhan Rao, Ch Kiran Kumar and B Bhaskar Rao

Department of Plant pathology, Dr. YSR Horticultural university, Krishi Vigyan Kendra,
Pandirimamidi.

ABSTRACT

Salicylic acid (SA) showed better performance in glasshouse studies as an SAR inducer against the CMV in chilli. Integrated disease management (IDM) experiment conducted in field, indicated that Seed treatment with Trisodium orthophosphate (TSOP) @ 150g/kg followed by seed treatment with imidacloprid @ 8 g/kg + seedling dip in imidacloprid @ 1 ml/l at transplantation + spray application of imidacloprid 0.5 ml/l at 60, 75, 90 and 105 DAT was the best with low aphid population (3.20 aphids 10 p⁻¹), less disease incidence (28.51 %), increased yield attributes (16.10 branches/ plant and plant height of 111.20 cm) and maximum green chilli yield (9,403.9 kg/ha).

Key words : Chilli, Cucumber, Mosaic virus.

Effect of certain new insecticide molecules on *Spodoptera litura* (Fab.) larvae

G Sravanthi, J Satyanarayana, G Ramachandrarao and V Srinivasarao

Department of Entomology, Agricultural College, Bapatla 522 101, Andhra Pradesh, India.

ABSTRACT

Laboratory investigations were carried out during 2010-11 in the Department of Entomology, Agricultural College, Bapatla, Guntur district, Andhra Pradesh to study the efficacy of certain new insecticide molecules on *Spodoptera litura* (Fab.) larvae. The results revealed that chlorfenapyr 10SC @ 0.015% was most effective against *S. litura* larvae followed by the flubendiamide 480SC @ 0.0118%, chlorantraniliprole 18.5SL @ 0.0083% and thiodicarb 75WP @ 0.15%. Pupation per cent was high in thiodicarb treated larvae (57.5) followed by chlorantraniliprole (27.5) treated larvae. Lowest pupation per cent was recorded in chlorfenapyr (22.5) treatment followed by flubendiamide (25.0) treated larvae. Adult emergence per cent was also more in thiodicarb (55.0) treatment followed by chlorantraniliprole (27.5) treatment.

Key words : Adult emergence, Efficacy, Pupation, *Spodoptera litura*.

Field Screening of Chickpea Genotypes against Gram Pod borer, *Helicoverpa armigera*

Ch Sreelakshmi, D Shivani and C V Sameer Kumar

Agricultural Research Station, Tandur – 501 141, Andhra Pradesh

ABSTRACT

Twenty five chickpea genotypes were screened at Agricultural Research Station, Tandur for incidence against pod borer under field conditions. Oviposition ranged from 1.33 to 5.00 eggs plant⁻¹ in vegetative stage and 0.67 to 5.33 eggs plant⁻¹ in podding stage while larval abundance ranged from 3.33 to 7.67 larvae plant⁻¹ and from 3.00 to 7.33 larvae plant⁻¹ during vegetative and podding stages, respectively. ICCV 09314 recorded least larval load during vegetative stage while ICCV 5383 harboured least larvae plant⁻¹ during podding stage. The pod damage ranged between 5.84 and 22.43% where in ICC 09317 recorded lowest pod damage followed by ICC 5383 (6.43%). The genotype ICC 5360 recorded significantly high yield of 1498 kg ha⁻¹ followed by ICC 3137 (1378 kg ha⁻¹).

Key words : Chickpea, Pod borer, Screening.

Status of Insecticide Resistance in Rice Brown Planthopper, *Nilaparvata lugens* (Stal) in Certain Districts of Andhra Pradesh

N Mallikharjuna Rao, P Satyanarayana Reddy, G Ramachandra Rao, K V M Krishna Murthy and V Srinivasa Rao

Department of Entomology, Agricultural College, Bapatla 522 101, Andhra Pradesh

ABSTRACT

Experiments were conducted during 2008-09 and 2009-10 to determine the degree of resistance acquired by Rice brown planthopper, *Nilaparvata lugens* (Stal) to monocrotophos, acephate, phosphamidon and fenobucarb. The BPH populations of the three districts differed in the degree of resistance acquired by them to each of the test insecticides. The West Godavari strain of *N. lugens* was found to be 3.01 and 3.07; 2.80 and 2.79; 2.22 and 2.30; 1.39 and 1.69 folds resistant at LC₅₀ and 1.31 and 1.49; 1.10 and 1.28; 1.40 and 1.40; 1.06 and 1.50 folds resistance at LC₉₀ to monocrotophos, acephate, phosphamidon and fenobucarb, during 2008-09 and 2009-10, respectively compared to susceptible strain. The East Godavari strain of *N. lugens* acquired 2.37 and 2.50; 2.42 and 2.36; 1.98 and 2.04; 1.41 and 1.44 fold resistance at LC₅₀ and 1.07 and 1.31; 0.00 and 1.19; 1.35 and 1.38; 1.12 and 1.26 fold resistant at LC₉₀ to monocrotophos, acephate, phosphamidon, and fenobucarb during 2008-09 and 2009-10, respectively compared to susceptible strain. The Karimnagar strain of *N. lugens* showed 2.34 and 2.52; 0.00 and 1.31; 1.93 and 2.12; 1.28 and 1.33 fold resistance at LC₅₀ and 1.08 and 1.31; 0.00 and 0.00; 1.51 and 1.53; 1.06 and 1.30 fold resistance at LC₉₀ to monocrotophos, acephate, phosphamidon and fenobucarb during 2008-09 and 2009-10, respectively compared to susceptible strain.

Key words : BPH, Carbamates, Insecticide Resistance, *Nilaparvata lugens*, Organophosphates, Rice.

Evaluation of some plant extracts against major insect pests of cauliflower (*Brassica oleracea* var. *botrytis* L.).

B Viswanadha Rao, G Ramachandra Rao, P Rajasekhar and V Srinivasa Rao

Department of Entomology, Agricultural College, Bapatla 522 101, Andhra Pradesh

ABSTRACT

The studies were carried out to evaluate insecticidal properties of 5% aqueous extracts of nine plant species against major insect pests infesting cauliflower viz., diamondback moth, *Plutella xylostella* (Linn.), tobacco caterpillar, *Spodoptera litura* (Fab.) and mustard aphid, *Lipaphis erysimi* (Kalt.). The results revealed that all the plant extracts gave significantly superior control of the pests over the untreated check. Among different plant extracts tested neem seed kernel extract (NSKE) 5% was found to be the most effective treatment in bringing down the pest population of *S. litura* and *P. xylostella* followed by the leaf extracts of *Melia azedarach* and *Pongamia glabra*. Whereas NSKE was found to be the most effective treatment in bringing down the pest population of *L. erysimi* followed by the leaf extracts of *P. glabra* and *M. azedarach*.

Key words : Cauliflower insect pests, Plant extracts.

Effect of Bioregulators on Growth Analysis and Yield in Rice Fallow Maize

V Gowtham, K L Narasimharao, G Ramarao and Y Ashokarani

Department of Crop Physiology, Agricultural College, Bapatla-522101 Andhra Pradesh

ABSTRACT

A field experiment was conducted during *rabi* 2010-11 at Agricultural College Farm, Bapatla to study the effect of bioregulators on growth analysis and yield in rice fallow maize. Results revealed that significant differences were observed among the treatments for AGR, CGR, RGR, NAR, LAI, SLW, yield and yield components in rice fallow maize. Among the treatments foliar application of brassinosteroids 1ppm + thiourea 1000 ppm + kinetin 10 ppm at silking stage recorded higher values of AGR, CGR, RGR, NAR, LAI, SLW, yield and yield components compared to other treatments in rice fallow maize.

Key words : Bioregulators, Growth analysis, Growth parameters, Maize, Rice fallow maize.

Effect of water stress on seed germination and seedling growth in Ragi

G Rama Rao, G Geetanjali and K L Narasimharao

Department of Crop Physiology, Agricultural College, Bapatla-522101, Andhra Pradesh

ABSTRACT

A laboratory experiment was conducted at Department of Crop Physiology, Agricultural College Bapatla during 2011-12 to study the effect of water stress on seed germination and seedling growth in ragi genotypes. The results revealed that as the water stress increases from -0.3 M.Pa to -1.2 M.Pa, the percentage of germination, root, shoot length and seedling vigor index was decreased in all the genotypes. Among the ragi genotypes tested TNAU1214 and VR959 withstand the water stress even up to -1.2 M.Pa followed by GE3777, GE3138 and DHRS1-1.

Key words : Ragi, Seed germination, Seedling vigor index, Water stress

Varietal Identification in Groundnut (*Arachis hypogaea* L.) through Morphological Characters

P S Rao, M Bharathi and M Anjana

College of Agriculture, Rajendranagar, Hyderabad-500 030 Andhra Pradesh.

ABSTRACT

Varietal identification has recently gained more importance with the introduction of Plant Variety Protection (PVP) and Plant Breeder's Rights (PBR). The present study on thirty groundnut genotypes was undertaken to find out the extent by which the morphological characters could be used to differentiate the groundnut varieties in seed production. These genotypes showed variation for growth habit, leaflet colour, flowering pattern, pod constriction, pod surface texture, number of kernels, beak prominence, kernel colour, kernel shape and kernel size, thus can be differentiated from each other. From this it can be possible to identify the individual cultivars on the basis of morphological characters. To identify each genotype individually, a schematic diagram is presented based on the above parameters.

Key words : Identification, Groundnut, Morphology, Varieties

Effect of triacontanol on seed germination, seedling growth and antioxidant enzyme in rice under poly ethylene glycol induced drought stress

K Suman, Rajesh Kondamudi, Y Venkateswara Rao, T Vishnu Kiran, K N Swamy, P Raghuvver Rao, D Subramanyam and S R Voleti

Division of plant physiology, Directorate of Rice Research, Rajendranagar, Hyderabad

ABSTRACT

Investigations were carried out to document the effect of bioregulator n-triacontanol with two concentrations (5, 10 µg) on rice seedlings germination. Germination percent, seedling lengths, seedling fresh and dry weights were studied. The results revealed that seed germination was increased with treatment of triacontanol over all the treatments and improved the growth of polyethylene glycol -20 % (mw-6000) + Triacontanol treated seeds compared with polyethylene glycol -20%. Length, fresh and dry weights were also found to increase with triacontanol treatment. Catalase, Peroxidase and Superoxide dismutase activities were also discriminated by the treatment under polyethylene glycol induced drought conditions.

Key words : Antioxidant enzymes, Germination, Growth, Polyethylene glycol induced drought, Rice and triacontanol.

“Studies on integrated nutrient management on Growth, yield and drymatter Production in Brinjal (*Solanum melongena* L.)”

Ratna kumari N Raghavarao D V, Hari Prasad P and Madhu Vani P

Division of Horticulture, Agricultural College, Bapatla 522 101, Andhra Pradesh

ABSTRACT

A field experiment was conducted during rabi season at college farm, Agricultural College, Bapatla during 2007-08 to find out the best combination of organic manures and inorganic fertilizers for maximum growth, yield and dry matter production. The experiment was laid out in a randomized block design with factorial concept and replicated twice. The treatments consisted of different INM treatments viz., T₁: 100% NPK (RDF) - 100:60:60 Kg ha⁻¹ T₂: 50% NPK (50:30:30 Kg ha⁻¹) + FYM (25%) 2.5 t ha⁻¹+ Vermi compost (25%) 1.25 t ha⁻¹ T₃: 50% RDF (50:30:30 Kg ha⁻¹) + FYM (25%) 2.5 t ha⁻¹ + Neem cake (25%) 0.5 t ha⁻¹ T₄: 50% RDF (50:30:30 Kg ha⁻¹) +Vermi compost (25%) 1.25 t ha⁻¹ + Neem cake (25%) 0.5 t ha⁻¹ T₅: 50% RDF (50:30:30 Kg ha⁻¹) + FYM (25%) 2.5 t ha⁻¹ + Bio fertilizers 2 Kg ha⁻¹ each T₆ : 50% RDF (50:30:30 Kg ha⁻¹) +Vermi compost (25%) 1.25 t ha⁻¹ + Bio fertilizers 2 Kg ha⁻¹ each T₇ : 50% RDF (50:30:30 Kg ha⁻¹) +Neem cake (25%) 0.5 t ha⁻¹+Bio fertilizers 2 Kg ha⁻¹ each T₈ : 25% RDF (25:15:15 Kg ha⁻¹) + FYM (25%) 2.5 t ha⁻¹ + Vermi compost (25%) 1.25 t ha⁻¹ + Neem cake (25%) 0.5 t ha⁻¹ T₉ :25%RDF (25:15:15 Kg ha⁻¹) + FYM (25%) 2.5 t ha⁻¹+ Vermi compost (25%) 1.25 t ha⁻¹ + Bio fertilizers 2 Kg ha⁻¹ each T₁₀: 25% RDF (25:15:15 Kg ha⁻¹) + FYM (25%) 2.5 t ha⁻¹+ Neem cake (25%) 0.5 t ha⁻¹ + Bio fertilizers 2 Kg ha⁻¹ each T₁₁: 25% RDF (25:15:15 Kg ha⁻¹) + Neem cake (25%) 0.5 t ha⁻¹ + Vermi compost (25%) 1.25 t ha⁻¹ + Bio fertilizers 2 Kg ha⁻¹ each *Biofertilizers (Azatobacter + PSB) . Among all the treatments i.e., T₉ (25% RDF + FYM 25% + Vermi compost 25% + Bio fertilizers)treatment recorded maximum growth, yield and dry matter production.

Key words : Brinjal, Organic manures, Growth, Yield.

Effect of Sucrose on Water Relations During the Vase Life of Cut Gerbera (*Gerbera jamesonii* Bolus ex. Hook.)

M R Bhanusree, N Hariprasad Rao and R Chandra Sekhar

Department of Horticulture, College of Horticulture, Venkataramannagudem, West Godavari District,

ABSTRACT

Sucrose in vase solution significantly influenced the water relations associated with water uptake, transpirational loss of water and water balance in cut gerbera (*Gerbera jamesonii* Bolus Ex. Hook.) and extended the vase life. The flowers held in sucrose 5% vase solution recorded highest value in water uptake (9.52 g/f), transpirational loss of water (9.31 g/f) and water balance (4.21 g/f) where as the flowers held in distilled water (control) were observed with lowest values in water uptake (5.33 g/f), transpirational loss of water (5.83 g/f) and water balance (3.50 g/f). The treatment sucrose 5% in vase solution recorded maximum fresh weight of cut gerbera (92.67) which was on par with sucrose 6% (91.27) and sucrose 3% (89.57). With better water relations and maximum fresh weight, the treatment sucrose 5% recorded longest vase life of cut gerbera (9.45 days) which was on par with sucrose 6 % (8.90 days). The flowers held in distilled water (control) recorded the lowest vase life (4.63 days).

Key words : Fresh weight change, Transpirational loss of water, Water balance, Water uptake, Vase life.

Bioefficacy of Metamifop in Wet Seeded Rice

C T Abraham , P Prameela and M Priyalakshmi

College of Horticulture, Kerala Agricultural University, K.A.U(P.O), Thrissur

ABSTRACT

An experiment was conducted to test the bio efficacy of Metamifop for control of graminaceous weeds in wet seeded rice. The treatments consisted of four rates of application of Metamifop 10 % EC formulation (Metamifop 50g, 75g, 100g and 125 g/ha) at two growth stages of weed *i.e*; 2-3 leaf stage (10 -12 DAS) and 5-6 leaf stage (15 -18 DAS). Cyhalofop butyl @100g/ha was included as standard check for comparison. Application of Metamifop 10 EC showed better control of *Echinochloa* when applied at 2-3 leaf stage than at 5-6 leaf stage of the grass weed. Metamifop 10 EC @ 125 g/ha applied at 2-3 leaf stage and 5-6 leaf stage and Metamifop 10 EC @ 100 g/ha at 2-3 leaf stage gave complete control of *Echinochloa* and remained on par with the weed free and cyhalofop butyl 10EC @ 100 g/ha in weed control and resulted in higher grain and straw yields.

Key words : Metamifop, Rice, Weed control

Seasonality in Market Arrivals and Prices of Tomato in Madanapalli Market of Chittoor District

P Kumuda Keerthi and G Mohan Naidu

Department of Statistics & Mathematics, S V Agricultural College, Tirupati 517 502

ABSTRACT

The present study was conducted for tomato commodity in Chittoor district for the period 2002-2010. The secondary data pertaining to monthly arrivals (Qtls) and prices (Rs Qtls⁻¹) of tomato was collected from Madanapalli Agricultural Market Committee. For evaluation of seasonality in market arrivals and prices, the multiplicative time series analysis, twelve month centered moving average, trend analysis and two-way ANOVA were used. In tomato crop with regard to arrivals and prices, there was a presence of seasonality within a year and seasonal pattern did not change over years in the market. The market arrivals had showed no specific trend in movement and market prices had showed an increasing trend over the years. The correlation coefficient between monthly arrivals and prices were positive and non significant for the period 2002-2010.

Key words : Correlation, Seasonal indices, Trend analysis, Two way ANOVA.

Characterization and Classification of bamboo (*Dendrocalamus strictus* and *Bambusa bamboos*) supporting soils in Talakona Forest area of Chittoor district in Andhra Pradesh

P V Chalapathi Rao

Conservator of Forests, Wild Life Management Circle, A.P. Forest Department,
Tirupati -517 502

ABSTRACT

Six representative pedons located in bamboo grown forest soils of Talakona forest area in Chittoor district of Andhra Pradesh are selected for their characterization and classification. The soils were distributed on uplands and plains and were developed from granite-gneiss parent material. The soils were shallow to deep in depth, reddish brown to brown in colour and texture varied from loam to clay in surface while sandy loam to clay in sub-surface. Structure varied from crumb to angular blocky in surface horizons whereas it varied from sub-angular blocky to angular blocky in sub-surface horizons. The soils are slightly acidic to neutral in reaction, non-saline, low in organic carbon, low in CEC (11.23 to 22.26 cmol (p+) kg⁻¹) and bulk density ranged from 1.19 to 1.32 Mg m⁻³. The bamboo grown forest soils are low in nitrogen, medium in phosphorous and potassium and sufficient in available sulphur. DTPA extractable micronutrients in the bamboo grown forest soils were sufficient in available Zn, Cu, Mn and deficient in DTPA extractable Fe. Bamboo grown forest soils of Talakona forest area taxonomically grouped under: Typic Ustorthent, Lithic Ustorthent, Typic Haplustalfs, Typic Haplustepts and Typic Dystrustepts.

Key words : Available Macro and Micronutrients, Bamboo grown forest soils, Characterization, Classification

Satellite Based Analysis of Seasonal Surface Water Spread Dynamics In Godavari Basin

P Yogitha, A V Suresh Babu, V Venkateshwar Rao, A Mani, G Behera
College of Agricultural Engineering, Bapatla 522 101, Andhra Pradesh

ABSTRACT

Availability of surface water resources in a river basin is a key and critical parameter in water resources planning and management. The study of surface water dynamics vis-à-vis rainfall pattern, its distribution and seasonal crop area estimates. The present study has used satellite data from IRS P6 – Resourcesat-1 AWiFS sensor data and delineate inter/intra seasonal surface water spread areas for the 2004-2011 during Kharif and Rabi seasons. Automated water spread extraction algorithm developed by NRSC has been used. The trends in surface water spread area (WSA) variations have been presented at Godavari basin level and relationships with rainfall pattern, seasonal crop area estimates were also discussed in detail in the study. It was observed that maximum water spread is 5.09 lakh ha (2004-05) and minimum water spread is 2.45 lakh ha (2010-11) respectively. It was noted that the 50-70% of surface water spread is contributed from larger water bodies. Satellite derived seasonal crop areas indicate that Kharif crop area grown in Godavari basin is ranging from 127.91 lakh ha (2005-06) to 150.48 lakh ha (2009-10). Rabi crop area grown in Godavari basin is ranging from 48.90 lakh ha (2004-05) to 69.51 lakh ha (2010-11).

Key words : Crop Area Estimates, Satellite Remote Sensing, Surface Water Spread.

Effect of Blanching on Inactivation of Enzymes in Potato, Banana and Carrot

D Vijay Kumar, M Rajendra, Binay Kumar and D Bhaskara Rao
Dept. of Agril. Process and Food Engg., College of Agricultural Engineering,
Bapatla 522 101

ABSTRACT

An experiment was conducted on the effect of blanching on inactivation of enzymes in potato, banana and carrot and on their quality at College of Agricultural Engineering, Bapatla. Three methods, namely low temperature long time (LTLT), LTLT followed by high temperature short time (HTST) and steaming followed by HTST were followed. The processed samples were stored at room temperature and refrigerator storage conditions and the quality was observed by color, taste and flavor up to 20 days time period. An organoleptic score of 1-9 is followed for quality analysis. It was concluded that, with increase of blanching temperature, the blanching time is significantly reduced and the time taken for inactivation of enzymes by mixed blanching methods is less over single stage blanching method. The potato sample blanched at 80 °c for 25 minutes under HTST method and stored at room temperature has scored highest 7.86 (like moderately). Under refrigerated storage, potato sample blanched at 60°c for 30 minutes and then at 80°c for 20 minutes under LTLT followed by HTST method scored highest i.e. 8.53 (like very much). For banana, the sample blanched at 70 °C for 4 min by HTST method scored highest i.e. 7.67 (like moderately) at both room and refrigerated storage conditions. Similarly for carrot, it was observed that, the sample blanched at live steam for 5 min and then at 70 °C for 0.5 min by Steaming followed by HTST method gave highest score of 7 (like moderately) at both room and refrigerated storage conditions. Un-blanching samples were spoiled within 5 days of storage period.

Key words : Blanching, Enzymes, Quality, Temperature-time combinations, Organoleptic score

Artificial Groundwater Recharge Zones Mapping in Bist Doab Basin (Indian Punjab) using Remote Sensing and GIS

K S Kumar, Amanpreet Singh, and Sudhindra N Panda

Department of Agricultural Engineering, S V Agricultural College, Tirupati-517502, Andhra Pradesh

ABSTRACT

Artificial recharge plays a vital role for the sustainable management of scarce groundwater resources. This study proposes a methodology to delineate artificial recharge zones using remote sensing (RS) and geographical information system (GIS) for augmenting groundwater resources in Bist Doab basin of Indian Punjab, which has been facing severe groundwater shortage due to shift in cropping pattern over the past few decades. The thematic layers considered in this study are: geomorphology, geology, drainage density, slope, soil texture, aquifer transmissivity and specific yield which have been prepared using data obtained from different sources. Different themes and their corresponding features were assigned proper weights based on their relative contribution to groundwater recharge in the area, and normalized weights were computed using the Saaty's analytic hierarchy process (AHP). These thematic layers were then integrated in the GIS environment to delineate artificial recharge zones in the study area. The artificial recharge map thus obtained divided the study area into four zones, viz., 'poor,' 'moderate', 'good' and 'very good' based on the analysis that influence the groundwater discharge. The results inferred that the eastern portion of the study area was found not suitable for artificial recharge due to its poor infiltration ability and where as middle and western portion of the study area falls under good and very good zones. The results of this study could be used to formulate an efficient groundwater management plan for the study area so as to ensure sustainable utilization of scarce groundwater resources.

Key words : Analytic hierarchy process, Artificial groundwater recharge zones, Groundwater management, Indian Punjab, Remote sensing and GIS, Water scarcity.

Performance Of RBC Flume For Low Discharge Field Channels

B Raj Kiran, Ch Murali Krishna, D Sai Gangadhara Rao and H V Hemakumar

College of Agricultural Engineering, Bapatla 522 101, Andhra Pradesh

ABSTRACT

Water is the most valuable asset of irrigated agriculture. Accurate measurement of irrigation water permits more intelligent use of this valuable natural resource. A new portable flume (RBC) is designed to measure the flow in furrows and unlined canals. These flumes are relatively easy to install and operate. They are long throated flumes and broad crested weirs, which requires a very little head loss for satisfactory operation. The study enlightens the performance of a RBC flume, designed by using software model namely Win flume. The flume is fabricated and installed for low discharge range of 3-8 LS⁻¹

Key words : RBC flume, Long throated flumes, Portable flow etc.

Use and Productivity of Irrigation Water in Tail Region of Canal Irrigation System – An Economic Approach

G Sunil Kumar Babu

Regional Agricultural Research Station, Anakapalle, Andhra Pradesh

ABSTRACT

The study was undertaken to study the optimal water use at farm level in Narasapur canal irrigation system in West Godavari district of AP. The study revealed that the irrigation intensity and cropping intensity were more in the large sized farms. The percent of area under irrigated dry crops were more predominant in the case of Canal as well as tube well irrigated farms. The study revealed that as the distance of the farm increased, the area under irrigated dry crops also increased. Irrigation intensity and cropping intensity were more in farms which were adjacent to the water resources. The number of installation of tube wells increased with increase in the distance of the farms from the outlet of the supply channel.

Key words : Approach, Canal Irrigation System, Productivity.

Growth Trends of Major Crops in Coastal Districts of Andhra Pradesh

S B Ramya Lakshmi and I Bhavani Devi

Department of Agricultural Economics, S V Agricultural College, Tirupati 517 502

ABSTRACT

The present study is an attempt to estimate the patterns of growth in area, production and productivity of different crops grown in Coastal Region of Andhra Pradesh for a period of 28 years i.e. from 1981-82 to 2008-09. The results showed that in Vizianagaram district, jowar, bajra, ragi, small millets and bengalgram recorded significant negative area growth. On the other hand, crops like maize, redgram, blackgram, greengram, sugarcane and sesamum were found associated with positive significant growth of area. Area under paddy declined at an annual rate of 0.20 per cent but it was non-significant. Among the foodgrains, bengalgram recorded the highest growth rate of productivity (3.80 per cent). In Prakasam district, area growth rate was the highest for bengalgram followed by maize and sunflower. Productivity growth rate was the highest in bengalgram (3.10 per cent) followed by chillies (2.04 per cent).

Key words : Compound Growth Rates

Impact of Microfinance Through Self Help Group Bank Linkage Programme – A Study in Nalgonda District of Andhra Pradesh

S Lavanya and R Vijaya Kumari

Department of Agricultural Economics, College of Agriculture, Rajendranagar, Hyderabad, 500 030

ABSTRACT

The present study entitled “Impact of Microfinance Through Self Help Group Bank Linkage Programme - A study In Nalgonda District of Andhra Pradesh” was undertaken mainly to assess the socio-economic impact of micro finance through SHG bank linkage programme in Nalgonda district of Andhra Pradesh. The study covered two mandals, 8 SHGs and 80 member households. Both conventional and statistical tools were employed to analyze the data and arrive at valid results. The intervention of SHG has resulted in a shift in the saving amount to higher levels. The average value of assets registered an increase of about 81.25 per cent of the sample households. The lower Gini concentration ratio indicated that the net income was more evenly distributed in the member households during post-SHG period. Maximum income was generated from dairying (Rs.3041) followed by tea & tiffin centre (Rs.2083). The regression estimates of income due to SHG indicated significant impact of microfinance on SHG member households in terms of contributing a major share to the gross income of the member households. Though the performance of SHGs was outstanding, there were certain areas which need to be improved. There was lack of initiative in sharing the responsibilities of the leaders, when required. Therefore, it has to be ensured that leadership rotation or election of leaders is strictly to be practiced for future sustainability of the group. The study observed that a large number of SHGs have already been promoted. Therefore, presently all efforts should be concentrated on nurturing and strengthening of existing groups. There is a need for documentation, an effective Management Information System (MIS) and build up of database on SHGs at the district level.

Key words : Economic Activities, Microfinance, Self Help Group, SHG Bank Linkage.

Knowledge and Adoption of Rice Farmers on Integrated Nutrient Management Practices of Rice

O Sarada and G V Suneel Kumar
Krishi Vigyan Kendra, Undi – 534 199

ABSTRACT

The study was conducted in West Godavari District of Andhra Pradesh during the year 2009-10 to know the level of knowledge and adoption of Integrated Nutrient Management (INM) practices by Rice farmers. Seventy per cent of the rice farmers possessed medium overall knowledge level whereas 22.5 and 7.50 per cent of them possessed high and low knowledge levels, respectively regarding recommended INM practices of rice. Similarly, sixty five percent of the rice farmers had medium adoption level of recommended INM practices followed by low (22.50%) and high (12.50%) adoption. Further it was also observed that personal socio-economic characteristics of rice farmers like exposure in training programmes, innovativeness, scientific orientation, mass media exposure, extension participation and extension contact exhibited positive and significant relationship with knowledge and adoption level of rice farmers on INM practices of rice.

Key words : Adoption, INM, Knowledge, Rice

Career Preferences of Undergraduate Agricultural Students of S V Agricultural College, Tirupati

T Lakshmi, V Nrusimha Kalyan and S V Prasad

Department of Extension Education, S V Agricultural College, Tirupati 517 502,
Andhra Pradesh

ABSTRACT

The primary aim of Agricultural universities is to prepare Agricultural Graduates for serving farming community. The present research carried out to study the career preferences of Agricultural Graduates of S.V. Agricultural College, Tirupati. The total sample for the study constituted 60 boys and 60 girl students. It was observed that majority of the boys preferred administrative jobs followed by bank, extension, teaching, research, sales representative while girls preferred administrative jobs, banks, teaching, research, extension, business and sales representative.

Key words : Agricultural students, Career preferences, Profile characteristics

Information Input Behaviour of Input Dealers and its Relationship with Profile Characteristics

M Leelavani, G Sivanarayana and G B M Ram Naidu

Department of Extension Education, Agricultural College, Bapatla 522 101, Andhra Pradesh

ABSTRACT

The study revealed that majority of the input dealers possessed medium information input behaviour (68.33%) followed by high (16.67%) and low (15.00%) levels. The relationship between profile characteristics and information input behaviour of input dealers observed that computed 'r' value of education, business experience, occupation, farming experience, annual income, training received, economic orientation and innovativeness were positively significant at 0.01 level of probability and social participation was positively significant at 0.05 level of probability, while age and land holding were non-significant with the information input behaviour of input dealers. Multiple Linear Regression Analysis gave the R² value of 0.8833, thus inferred that selected independent variables put together contributed 88.33 per cent of the total variation in the information input behaviour of the input dealers. The independent variables like economic orientation and innovativeness of the respondents had contributed significantly at 0.01 level of probability towards the variation in the information input behaviour of the input dealers

Key words : Information input behaviour, Input dealers, Profile, Relationship.

Impact of Krishi Vigyan Kendra on Farmer's Yield and Income in Srikakulam district of Andhra Pradesh

A Manoj, G Sivanarayana, Ch Ramesh Babu and V Srinivasa Rao
Department of Extension Education, Agricultural College, Bapatla 522 101, Andhra Pradesh

ABSTRACT

An evaluation study of Krishi Vigyan Kendra (KVK) of State Agricultural University was undertaken with the objective of investigating the impact of KVK on farmers. Data were collected from 40 adopted and 40 non-adopted village farmers. The study revealed that in adopted villages, the KVK had a positive impact on increase in yield and income as compare to non-adopted villages.

Key words: Adopted, Income, Impact, KVK, Non- adopted villages, Yield.

Soybean Production Technology Evaluation through Frontline Demonstrations in Adilabad, Andhra Pradesh

M Sree Rekha K Sukumar
AICRP on Soybean, Agricultural Research Station, ANGRAU, Adilabad 504 002

Key words : Demonstrations, Frontline, Soybean Production Technology.

Genetic Variability Studies for Yield and Yield Components in Urdbean (*Vigna mungo* (L.) Hepper)

S Isha Parveen, M Reddi Sekhar , D Mohan Reddy and P Sudhakar
Department of Genetics and Plant Breeding, S V Agricultural College, Acharya N. G. Ranga Agricultural University, Tirupati 517 502, Andhra Pradesh, India.

Key words : Genetic advance, Heritability, Urdbean, Variability.

Nutrient Mapping for Fertilizer Recommendations under Micro-watershed Level in Northern Transitional Zone of Karnataka, India

M Madhan Mohan , G S Dasog , G Mrudula and M Vijay Sankar Babu
Department of Soil science and Agricultural Chemistry, College of Agriculture, Dharwad
University of Agricultural Sciences, Dharwad-580 005, Karnataka

Key words : Available Phosphorous, Available Potassium, Micro-watershed, Nutrient mapping

Effect of Organics on Incidence of Tobacco Mosaic Virus in Bidi Tobacco

B Sivaprasad, S Jahgirdar, A S Byadgi and S Kulakarni
Department of Plant Pathology, College of Agriculture,
Dharwad University of Agricultural Sciences, Dharwad- 580 005

Key words : Bidi tobacco, Panchgavya, quality parameters, Viroson.

Economics of pesticide use in cotton production in MahaboobNagar district of Andhra Pradesh

K S R Paul and N Vasudev
Department of Agricultural Economics, Agricultural College, Bapatla 522 101, Andhra Pradesh

Key words : Cotton production, Economics of Pesticide

Evaluation of Bio Intensive Integrated Pest Management Module in Brinjal

G V Suneel Kumar and O Sarada
Acharya N. G. Ranga Agricultural University, Krishi Vigyan Kendra, Undi – 534 199,
West Godavari Dist.

Key words : Bio Intensive IPM, Brinjal