List of Projects - 2015

FM&PHT Division


Regional Research Station, Srinagar

RSJ&K -1.1: Collection, Evaluation, Characterization and Documentation of temperate forage germplasm. (PI: D K Verma & Suheel Ahmad)

RSJ&K -4.1: Augmenting forage resource availability through development of hortipasture system. (PI: Suheel Ahmad)


RRCP-9: Evaluation and Maintenance of Perennial forage grasses and legumes in mid Himalayan region. (PI: S. Radotra and Tejveer Singh)

Externally Funded Projects

• DST Ploidy: *Ploidy regulated expression of genes involved in mega gametophyte development, apomixis and its component traits.* (PI: P Kaushal, KK Dwivedi, DR Malaviya and AK Roy)

• DBT promoter: *Identification of ovule and embryosac specific promoters and their validation in transgenic Cenchrus ciliaris.* (PI: KK Dwivedi, A Radhakrishna and P Kaushal)

• NICRA Project (*Tech. Demonstrations in a Participatory Action Research Mode* (PI, R K Agrawal):

• Network Project on Bhadawari buffalos (PI: B.P. Kushwaha, S B Maity and Sultan Singh)

• NICRA- Strategic Research- *Impact assessment of climate change on fodder production. Grazing and rangeland ecosystem and mitigation strategies in XII plan:* (PI Sunil Kumar)

IGFRI-NIANP Collaborative program: Improvement in nutritional quality & yield of grasses and utilization of non-commercial fodder resources for higher livestock production (PI Sultan Singh.)
• **AMAAS Project**- Development of PGP inoculants bioformulations for rhizosphere management in enhancing biomass in fodder crops. PI - R. Srinivasan.

• **ICARDA-ICAR** collaborative project: Enhancing fodder and nutritional security of livestock in semi arid regions of India through Opuntia, Lathyrus and Vicia sps. (PI- Sunil Kumar).

**Crop Improvement Division**

CI 1.6: Enrichment, evaluation, conservation and documentation of genetic resources of fodder crops. (PI: Tejveer Singh, S. Ahmed, D. C. Joshi, G. Sahay, P. Saxena, SevaNayak D. and A. K. Mall)

CI 2.6: Genetic improvement of sorghum under different use patterns. (PI: D.C. Joshi, R.V. Kumar, N. Manjunath and Sultan Singh)

CI 2.7: Development of dual purpose maize. (PI: S. Ahmed, R. P. Sah, P. Saxena and M.I. Azmi)

CI 2.8: Development of high yielding dual and multicut fodder oats. (PI: S. Ahmed, R. P. Sah, K. K. Singh and H. V. Singh)

CI 3.10: Genetic improvement of berseem for root rot resistance, late maturity and biomass. (PI: Tejveer Singh, D. R. Malaviya, Ritu Mawar and Anita Kumari)

CI 2.10 Genetic improvement of barley for forage and grain yield. (PI: A.K. Singh & P. Saxena)

CI 2.11 Genetic improvement of dual purpose pearl millet. (PI: A. K. Singh, Archana Singh and S.S. Meena)

CI 2.9 Development of pearl millet and bajra-napierhybrid for high biomass production. (PI: V. K. Yadav, A. K. Mall and A.K. Mishra)

CI 4.5 Genetic improvement of guinea grass for higher biomass production and tolerance to abiotic stresses. (PI: V. K. Yadav and Seva Nayak D)

CI 5.4: Basic studies on apomixis and generation of cytogenetic stocks in *Pennisetum* and *Panicum* agamic complex. (PI: P. Kaushal, K.K. Dwivedi and A. Radhakrishna)

CI 6.8: Development of molecular markers database in forage grasses with special reference to stress responsive EST-SSRs. (PI: A. Radhakrishna and K. K. Dwivedi)

CI 7.11: Biochemical and molecular approach for characterization of drought tolerant forage Sorghum. (PI: M K Srivastava and C. K. Gupta)
CI 8.28: Integrated pest management in different forage fodder production systems in various regions of India. (PI: P Saxena, NK Shah, RK Agarwal, NK Kulkarni, RP Nagar, DK Verma, SK. Radotra)

Regional Research Station, Avikanagar
RSA-10: Evaluation of promising neem strains under agri-silvi-pasture system in the semi-arid conditions. (PI: SS Meena)

RSA-13: Germplasm enrichment, evaluation, maintenance and genetic improvement of forage crops for arid and semi-arid regions. (PI: S S Meena)

RSA 14: Evaluation for seed yield and quality in cenchrus species indifferent seasons under semi arid environment. (PI: R.P. Nagar and S.S. Meena)

RSA-15: Gene specific allele mining in Cenchrus with special emphasis on aboitic stress tolerance. (PI: Divya, S.S. Meena, KK. Dwivedi)

Crop Production Division
CP. 1.1.8: Market led fodder production technology for profit maximization in peri-urban agglomeration. (PI: R.K. Agrawal, Mukesh Choudhary, M.M. Das & Satyapriya)


CP 1.5.2: Resource conserving technologies (RCT's) for improved productivity and soil health in fodder sorghum based cropping systems. (PI: Kiran Kumar, T, D.R. Palsaniya and Manoj Chaudhary)

CP.1.4.6: Evaluation of New herbicides for development of IWM module in Forage crops. (PI: Prabhu,G and D.R. Palsaniya)

CP. 2.3.12: Studies of dynamic crop growth simulation model for fodder cowpea using crop grow- Grain Cowpea Model for agronomic management and impact of climate change on its productivity in few location of India. (PI: S.K. Rai and D. Deb)

C.P.2.1.14: Climate Resilient Forage Production Systems under Rainfed Situation. (PI: Sunil Kumar, Kiran Kumar T. and J.B. Singh)

CP 3.3.1: Identification and characterization of root architecture traits associated with high biomass under different cutting regimes in oat and guinea grass. (PI: Anita Kumari and C K Gupta)

CP-1.1.12-Integrated Nutrient Management in Napier bajra hybrid based cropping system for sustainable fodder production and soil health. (PI: Manoj Chaudhary, Mukesh Choudhary & M.M. Das)

CP 2.3.11: Forewarning models for major pests of cowpea and berseem. (PI: JB Singh, P. Saxena and P Bihari)

Integrated Farming System: Integrated farming system models for sustainable productivity and income of small holders in Bundelkhand region in Central India. (Inter-institutional project) (PI: Sunil Kumar, D.R. Plasaniya, Sunil Seth, MM Das, CS sahay, Kiran, T., S. K. Rai, Khem Chand, M Chaudhary, M. Akram)

Nano-technology: Synthesis and application of P, Fe and Zn nano-particles for increased fodder and seed production. (PI: R Srinivasan, A Radhakrishana, A. Maity)

GSM Division
GSM 3.11: Silvipasture system for round the year top feed and fodder availability. (PI: R.V. Kumar, Sunil Kumar, H.V. Singh)


GSM 2.9: Diversity of arbuscular mycorrhizal fungi associated with grasses and its role in forage production. (PI: H V Singh)

GSM 3.14: Productivity of Hardwickia binata based silvopasture systems under moisture conservation practices in rainfed condition. (PI: S N Ram, MM Das and A. Ahmed)

GSM 3.12: Evaluation of shrubs in Hardwickia binata based three tier silvopasture systems under semiarid rained situation. (PI: S N Ram and R V Kumar)

GSM 4.12.1 Productivity of aonLa based hortipastoral system under different soil and water conservation practices. Phase II (2012-17). (PI: Sunil Kumar, Ramesh Singh, & Sunil Tiwari)

GSM 4.14: Development of guava based hortipastoral system with natural resource conservation. (PI: Sunil Kumar)

GSM 4.18: Evaluation of substrate dynamics for integrated nutrient management in baeL based hortipastoral system. (PI: Sunil Kumar)
GSM 4.19: Studies on microflora of *Bahaunia* and *AonLa* based silvi-hortipasture system. (PI: H V Singh)

SRR Station, Dharwad


RSD 15: Participatory fodder production under mango orchards. (PI: N Biradar, B.G. Shivakumar and Vinod Kumar)

RSD 16: Optimizing Seed production and seed standardization protocols in range grasses and legumes. (PI: Vinod kumar, K. Sridhar)

RSD 19: Studies on insect fauna and its influence on forage and seed yield in lucerne. (PI: N. S. Kulkarni and Vinod kumar)

RSD 20: Training needs analysis of clientele on fodder promotion and development. (PI: N Biradar)

RSD 21: Studies on commercialization and utilizations of fodder technologies. (PI: N Biradar, Vinod Kumar and R.P. Nagar)

RSD 22: Physiological interventions for improving seed yield in *Brachiaria* species. (PI: Edna Antony, Vinod Kumar and K. Sridhar)

RSD 23: Agro-ecological evaluation of different hortipastoral systems for peninsular India. (PI: BG Shivkurnar, N.S. Kulkarni)

RSD 24: Physiological evaluation of perennial legumes for forage potential. (Edna Antony)

"Breeding dual purpose cowpea genotypes with better yield, quality and biotic tolerance" PI: K Sridhar, Vinod Kumar and NS Kulkarni

**Seed Technology**

STR 3.7: Developing seed standards and enhancing seed production in forages. (PI: D. Vijay and C.K. Gupta)

STR 3.15: Morpho phonological studies of seed setting and germination in Range grasses. (PI: D. Vijay, C.K. Gupta, A Maity, D.R. Malaviya)

STR 3.8: Low input, eco-friendly storage offORAGE seeds. (PI: D. Vijay and H.V. Singh)


STR 3.13: Crop management practices for maximizing seed production in cowpea and oat. (PI: Vinod Kumar Wasnik, Vikas Kumar and S.R. Kantwa)

STR 3.14: "Chemical weed control in berseem for seed production. (PI: V.K. Wasnik, A. Maity and SR Kantwa)


STR 3.17: Identification of physiological and harvesting maturity stage in dinanath and berseem crop. (PI: C.K. Gupta & D. Vijay)

PAR Division
PAR 3.1: Methane production potential of tropical fodders/feeds vis-a-vis efficacy of tree foliages secondary metabolites for defaunation and methanogenesis. (PI: Sultan Singh, B.K. Bhadoria (Retired))


PAR 4.3: Endozoochorus dispersal of seeds through sheep and goat feacal pellets: Recovery, germinability and emergence of range grasses, legumes and shrubs species. (PI: N. Das & D. R. Malaviya)

PAR 5.3: Development of nutritionally balanced and economic feeding system for livestock through cereal-legume intercropping. (PI: SB Maity, KK Singh, A. Maity, G. Prabhu & N. Das)

PAR 5.4: Potential of nano zinc oxide on zinc bioavailability and its effect on blood biochemical changes in sheep. (PI: KK Singh, A. Maity and S B Maity)

Social Science Division

SS- 2.04: Technological gap analysis of fodder production technologies in Bundelkhand. (PI: Manju Suman, Ashok Kumar, Vikas Kumar)
SS 2.05 Empowering farm women through building their capacity on livestock rearing practices (PI: Sadhna Pandey)

SS- 3.02: Livelihood improvement of farmers through quality seed production of fodder crops. (PI: Vikas Kumar and Sadhna Pandey)

Externally funded projects: (Left over projects)

DUS PPVFRA: Developing guidelines for conduct of DUS testing for Oat, Cowpea and guinea grass. (PI: VK Yadav, P Kaushal, S Ahmed, G Sahay and DC Joshi)

DAC-ICARDA: Enhancing grasspea production in Eastern and North-Eastern states for animal feed, safe human food and sustainable rice-based production system in India. (PI: VK Yadav, MM Das, M. K. srivastava and P Sharma)


CIWA: Empowerment of farm women through livestock technologies. (PI: P Sharma and Mukesh chaudhary)