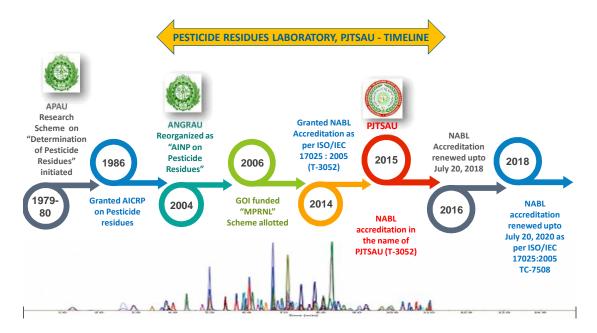
About AINP on Pesticide Residues, PJTSAU, Hyderabad

The first laboratory in the University to receive NABL (National Accreditation Board for Testing and Calibration Laboratories) accreditation as per ISO/IEC 17025:2005 for chemical testing in 2014 in the undivided ANGRAU, All India Network Project (AINP) on Pesticide Residues is a premier laboratory specializing in Pesticide Residue analysis in fresh agricultural produce, soil and water. The lab has demonstrated its proven ability for delivering accurate and traceable analysis reports by way of renewal of NABL accreditation in 2016 and 2018 under the banner of PJTSAU, valid up to July 2020 with a scope of residue analysis of 71 pesticides on LC-MS/MS through internationally accepted standards and methods.

Genesis:

The chronology of events from initiation to the present day is depicted below



Schemes Operating:

AINP on Pesticide Residues (Indian Council of Agricultural Research) Monitoring of Pesticide Residues at National Level (Government of India project)

What we do:

-) Study the dissipation pattern of various new pesticides on different crops for determination of Maximum residue limits and safe waiting periods by Food Safety and Standards Authority of India (FSSAI) and Central Insecticides Board and Registration committee(CIBRC)
- Generate data on dissipation through residue analysis studies for non recommended pesticides on food crops to facilitate label claim expansion
-) Evaluate and recommend risk mitigation and processing methods for pesticide residue free produce and food

Develop and validate methods of analysis for the spectrum of pesticides recommended by CIBRC on sophisticated equipment

J Monitor various agricultural commodities for pesticide residue contamination

) Create awareness on safe use of pesticides among all the stakeholders from farm to home.

How and who does it benefit:

- The laboratory is an important research centre generating data on dissipation pattern of yet to be registered pesticides for the purpose of registration, label claim expansion with the CIBRC and for fixing Maximum Residue Limits (MRLs) and safe waiting periods. The laboratory has brought out a compilation of the research work carried out from 1983 to 2012 in "Glimpses of AINP on Pesticide Residues Hyderabad Centre". Since 2012 to date data has been generated on dissipation pattern and half life of pesticides through 52 Supervised Field Trials in different field and horticultural crops of which 24 pertained to insecticides, 21 to fungicides, 6 to herbicides, and 1 to growth regulator for fixing of MRLs and safe waiting periods.
- Data generated through dissipation studies from 70 GAP trials consisting of 11 pesticides in Chilli, 9 in bitter gourd, 9 each in Capsicum and Cauliflower, 8 each in Cucumber and okra, 4 each in tomato and brinjal and 3 in Cabbage helped in label claim expansion.
-) Various risk mitigation methods were studied in tomato and brinjal, 2 hrs after pesticide application and it was found that washing with 2 % salt water followed by cooking decreased the residues up to 95%.
-) The research findings of the monitoring project over the years have helped in building a database of pesticide residue levels in various food commodities in the states of Telangana and Andhra Pradesh which were conveyed to the respective State Departments of Agriculture by the Joint Secretary, Ministry of agriculture, GOI, enabling corrective measures for reduced pesticide usage and awareness building in all the stakeholders viz., farmers, pesticide dealers, traders and consumers.
-) The laboratory is a prestigious and valuable asset to the farming community of the state as a testing lab for pesticide residues to farmers, small scale entrepreneurs, researchers and the student community of the university providing accurate results with high degree of traceability at affordable rates.
-) The laboratory trains scarce technical human resource in the field of Pesticide Residue Analysis in view of the growing demand for quality assurance as per food quality safety and standards. The scientists of the laboratory have been offering a course on "Advanced Insecticide toxicology" ENT-607 to PG students of Departments of Entomology and Plant Pathology and several students have been trained at the laboratory in pesticide residue analysis as part of their PG research.

Extension activities:

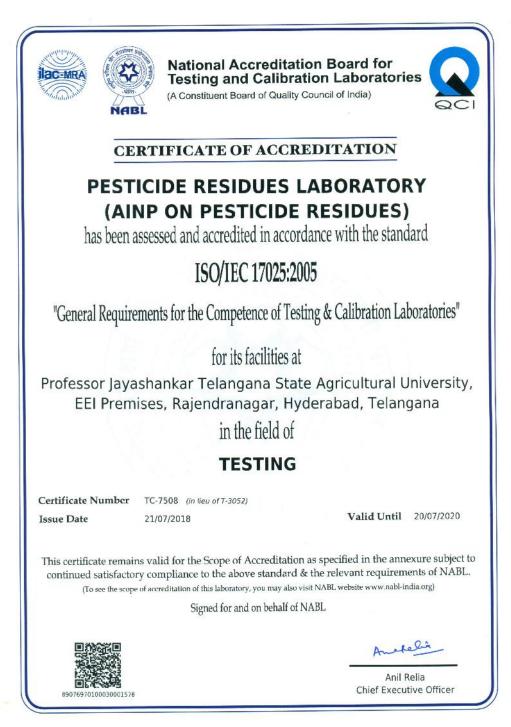
The scientific staff of the laboratory are actively involved in spreading awareness on safe use of pesticides, risk mitigation methods for both producers and consumers in various forums through training programs to extension functionaries of University, State Department of Agriculture, pesticide dealers and farmer groups. The laboratory also produces knowledge material in the form of posters, brochures and CDs on the safe use of pesticides for distribution to various stakeholders. The research findings of the project are published in the Annual Report of the University and in peer reviewed journals.

Testing facilities: Pesticide Residues Laboratory is providing analytical services for Pesticide residues in fruits/ vegetables/cereals/ pulses/ spices in LC-MS/MS and GC-MS/MS on payment basis. For details, contact

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NABL ACCREDITATION CERTIFICATE



Facilities available



LC-MS/MS (SHIMADZU 8040)



UPLC (WATERS)



GC-ECD & NPD (Agilent)



PRL Team in Action

Publications Released:

