

# An Interactive Web Application and Data Management System for Hosting and Managing PGR and Associated Intellectual Property Records



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## Introduction

ICAR- National Bureau of Plant Genetic Resources besides being a conservator and curator of the germplasm, is a nodal organization for registering unique germplasm and facilitating registration of plant varieties including farmers varieties with the Protection for Plant Variety and Farmers Rights Authority, India. Documentation and maintenance of the information related to Intellectual Property associated with PGR including plant varieties and germplasm registrations is a prerequisite for facilitating benefit sharing procedure. PGR-IP is meant for structured documentation and maintenance of the data being generated at ICAR-NBPGR and endeavors to bring PGR information in public domain.

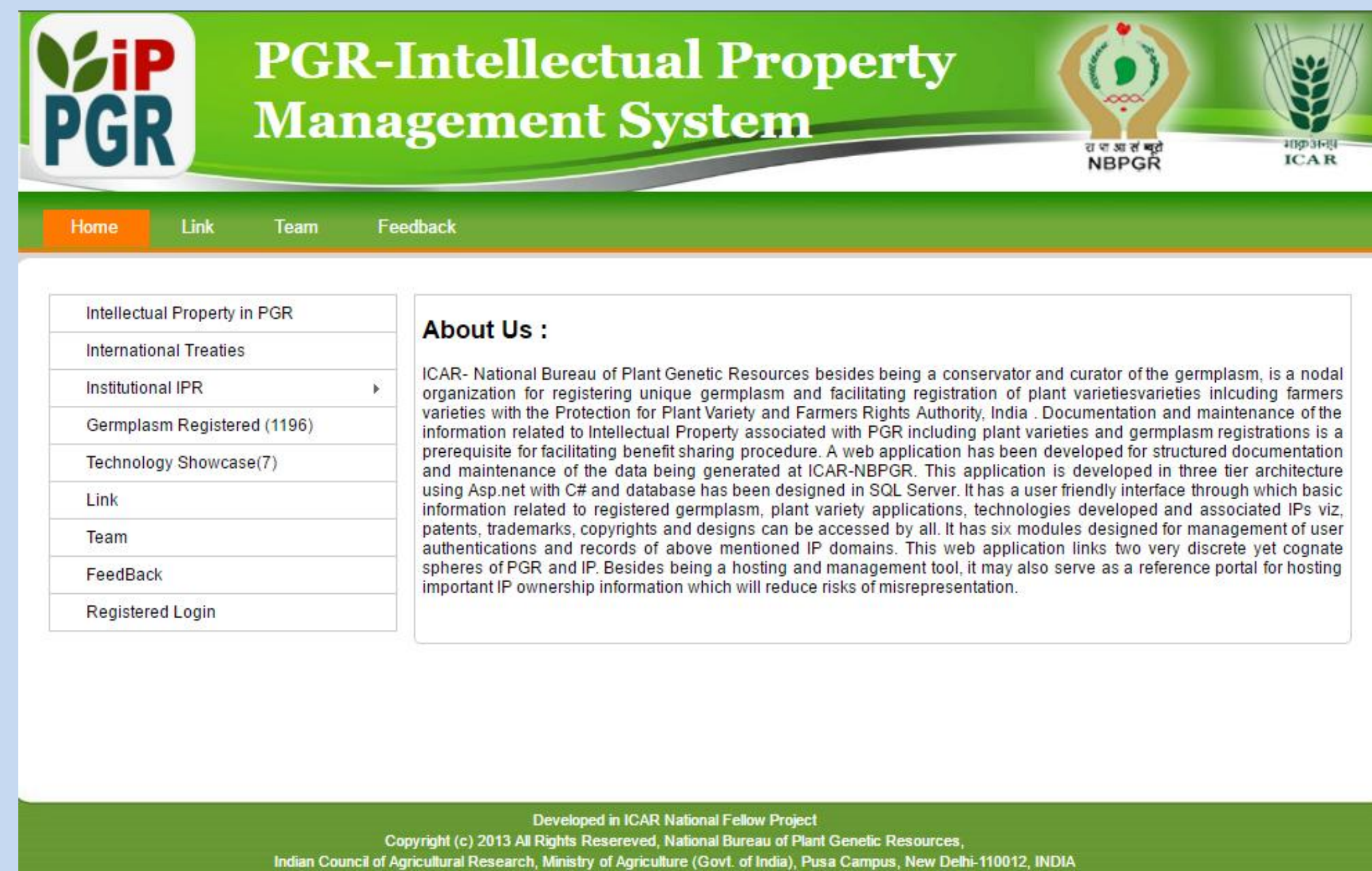
This is in public domain



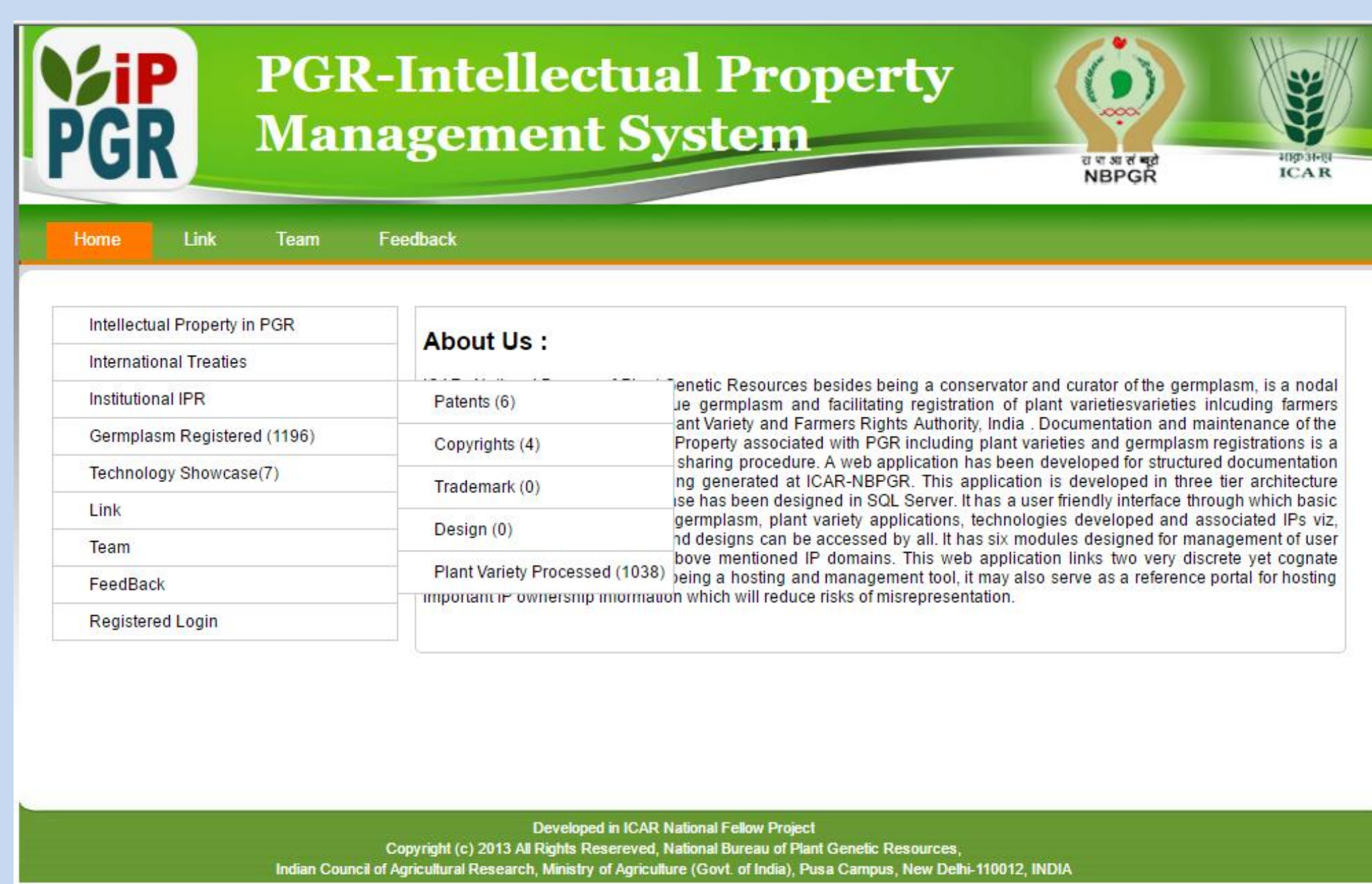
## Objectives

- Managing and tracking the IPR and IP applications viz. patents, designs, copyrights of the institute
- Managing and tracking the plant variety applications being processed by the institute
- Interface for accessing the IP and PGR information being maintained by the institute
- Exhibiting the technologies developed and PGR being curated available for commercialization
- Serve as a reference portal for hosting important PGR ownership information

## RESULTS



Information on Institutional IPRs can be accessed by clicking on the relevant tabs on the home page.



A framework for inventorization and documentation of plant germplasm is available at the Bureau in the form of Germplasm registrations.

The main purpose of plant germplasm registration is to bring the trait-specific germplasm in public domain and to disseminate the information thereof for using the same effectively in developing new varieties.

This information can be accessed by clicking relevant tab on the home page of PGR-IP.

Crop Name	Historical Name	National Accession	Donor Country	Year	Progenies	Dev.
Cotton	Osteospermum album	IC29680	USA	1987	Osteospermum album var DS-5 of race bangianse	DP Singh, BPSL
Mung bean	Vigna radiata	IC29679	India	1997	LM 694-ML33	VP Singh, RK Va Singh
Mustard	Brassica juncea	IC29681	India	1997	Somatic hybrid, Trachystema ballii + Brassica juncea	PG Viji, Shyam L, Shukla, Vinod K, Chopra
Mustard	Brassica juncea	IC29682	India	1997	Somatic hybrid, Trachystema ballii + Brassica juncea x Brassica juncea cv Pusa Bold	PG Viji, Shyam L, Chopra and TMA
Pea	Pisum sativum	IC29677	India	1997	Asama x P03	RK Yadav, VP Singh, R Divakar and AK Singh
Pea	Pisum sativum	IC29678	India	1997	Local germplasm	RK Yadav, VP Singh, R Divakar and AK Singh
Wheat	Triticum aestivum	IC29681	India	1997	Open pollinated strain of Francis	RK Yadav, VP Singh, R Divakar and AK Singh
Castor	Ricinus communis	IC29674	India	1998	Pollinated local -1	K Anjan, MA Ra Hanumantha Ra
Castor	Ricinus communis	IC29675	India	1998	SH-6 Collection	K Anjan, MA Ra Hanumantha Ra
Chickpea	Cicer arietinum	IC29681	India	1998	ICCC-32	RP Dix, SK Shu
Cotton	Osteospermum album	IC29680	India	1998	ICAN-148 (CAN-144)	GV Unnikar
Cucumber	Cucumis sativus	IC29689	India	1998	Local Germplasm	OP Patwari, DK

Details of plant variety applications facilitated by NBPGR are available under the institutional IPR tab.

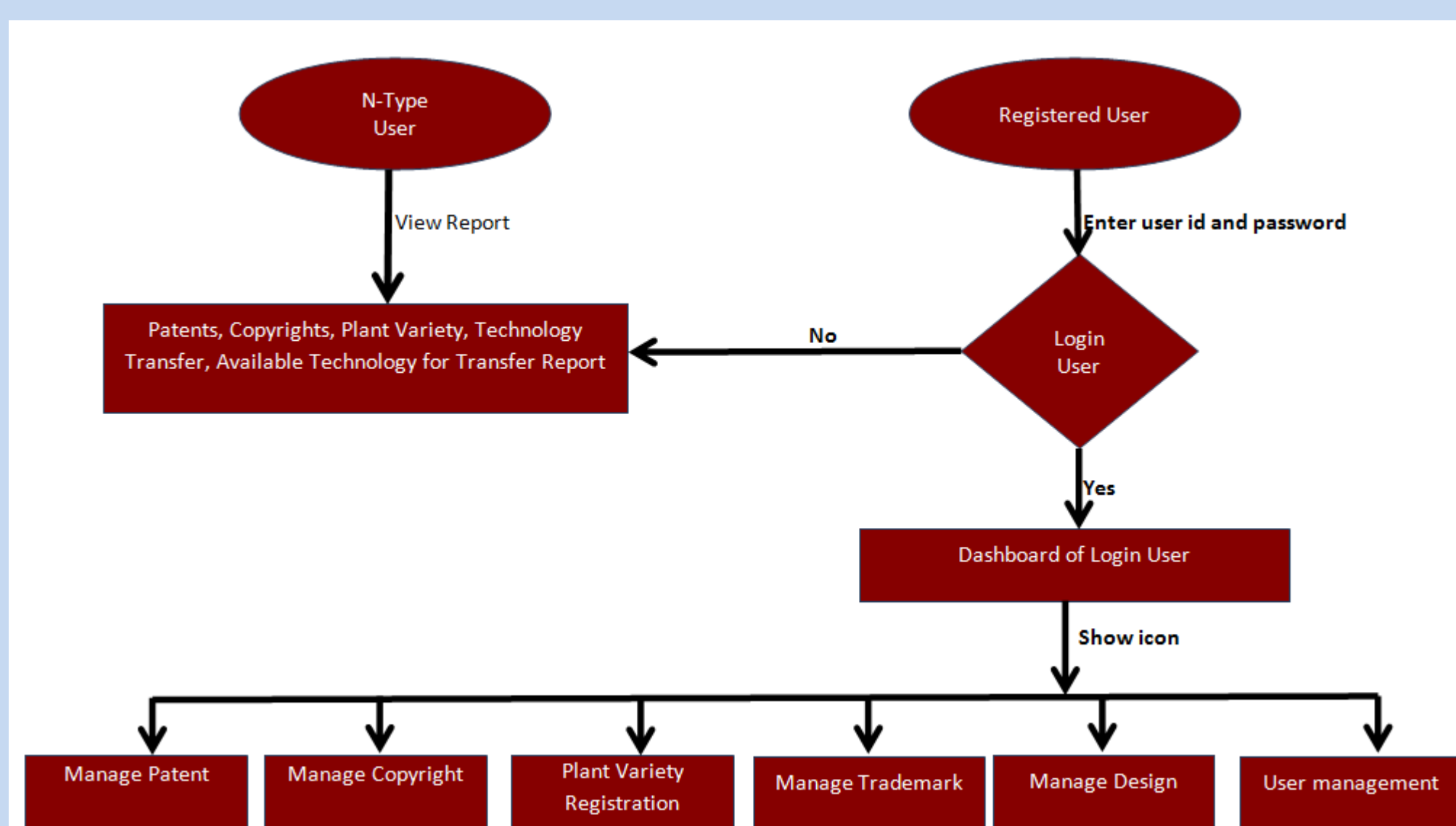
Bibliographic details are available with a preliminary search option.

Detailed reports can be generated on Advanced Report option wherein search reports based on various parameters can be generated on single click.

Sl. No.	Historical Name	Crop Name	Variety Name	Category	Variety Type	Developing Research Station	Developers Name	NSIPGR Status	ACK/Receipt No.	Pub. Ref.
18	Arachis hypogaea L.	Groundnut	GAS-22	Extant	Typical	Main Citrus Research Station, Anugupah Agricultural University, Anugupah, Jharkhand-202001	Dr. K.L. Dobariya, Dr. J.H. Nayak, Dr. L.L. Jha, Dr. V.K. Singh, Dr. H. G. Shukla, Shri J.N. Pal, Faisla	Accepted	REG/2015/120	U
19	Arachis hypogaea L.	Groundnut	GAS-17	Extant	Typical	Main Citrus Research Station, Anugupah Agricultural University, Anugupah, Jharkhand-202001	Dr. K.L. Dobariya, Dr. J.H. Nayak, Dr. L.L. Jha, Dr. V.K. Singh, Dr. H. G. Shukla, Shri J.N. Pal, Faisla	Accepted	REG/2015/121	U
18	Glycine max (L.) Merril	Soybean	RAUS-5 (Pratap Soy-1)	Extant	Typical	Agricultural Research Station, Mahanada, University of Agricultural and Technology, Udaipur, India-314 001, Rajasthan	Dr. Mahesh Ali	Accepted	REG/2015/119	U
19	Glycine max (L.) Merril	Soybean	Pratap Soy-2 (PUS-18)	Extant	Typical	Indian Council of Agricultural Research, ICAR Research Complex for Soybean, Patancheru, New Delhi-502 324	Dr. Mahesh Ali, Dr. Pratap Singh, Dr. V.P. Gupta, Dr. R. Chandan, Dr. R. Prasad, Dr. M. V. Deo, Dr. M. V. Deo	Accepted	REG/2015/118	U
19	Citrus					Agricultural University, Kota				

## Architecture

This application is developed in three tier architecture using Asp.net with C# and database has been designed in SQL Server. It has a user friendly interface through which basic information related to registered germplasm, plant variety applications, technologies developed and associated IPs viz, patents, trademarks, copyrights and designs can be accessed by all. It has six modules designed for management of user authentications and records of above mentioned IP domains.



Status of IP applications or registered IPR's highlighting any actions pending along with due dates are displayed on dashboard for ready reference of the registered user.

Registered users can access the management dashboard by logging into the system.

There are six modules: five for managing each form of IP and a sixth one for managing user authentications. Registered users can be given selective access according to their role.

New records can be created, old records can be edited and reports based on multiple choices can be generated by registered users from this dashboard.

## Conclusion

This web application links two very discrete yet cognate spheres of PGR and IP. Besides being a hosting and management tool, it may also serve as a reference portal for hosting important IP ownership information which will reduce risks of misrepresentation.