PGR Management and Use – COMPONENT I

Annual Progress Report for the year 2015-16

1. **Name of the Crop**: Cotton
2. **Name of the Lead Centre**: CICR, Nagpur
3. Name of the Nodal person with designation: Dr Punit Mohan, Principal Scientist
4. **Name of the collaborating centres**:
5. Name of Nodal person with designation:
6. **Number of accessions received from ICAR-NBPGR**: 847
7. **Number of accessions sown for characterization/multiplication**: 2150
8. **Number of accessions germinated as data were recorded**: 2130
9. **Experimental design**:Augumented block design
10. **Checks used**: 1. AKA 7 Gossypium arboreum (Local Check)
    2. G.cot 23 Gossypium herbaceum (Local Check)
    3.CNHO - 12 Gossypium hirsutum (Local Check)
    4.NH 615 Gossypium hirsutum (Local Check)
11. **Details of the characterization**:

Sl. No.	**Name of the Centre**	**No. of accessions characterized/ multiplied**	**Date of sowing (From – to)**	**No. of descriptors***	**Date of harvesting (From – to)**	**Date of dispatch of data and seed material to NBPGR**	
						Seed	Data
1	CICR, Nagpur	565(G.herbaceum) 1223(G.hirsutum) 332(G.arboreum)	24- 26 June 2015	31	3 – 30 December 2015	26 November 2015	18 January 2016

*Please attach the list of descriptors/descriptor status

12. **Same descriptors were used at all the locations**: Yes

- **Detailed report on salient achievements of characterization with details of promising lines identified for important characters**:
- 565 germplasm accessions of *G. herbaceum* (Diploid Cotton) were characterized and seed deposited in LTS at NBPGR, New Delhi.
- 10 out of 26 existing wild species of *Gossypium* and 1223 accessions of *G. hirsutum* (including 723 accessions of exotic) and 332 arboreum were characterized as per cotton descriptor. Seeds of the above lines (excluding 10 wild species) were deposited in LTS, NBPGR, New Delhi.

- Elite germplasm lines were identified for economic attributes e.g. seed cotton yield, boll weight, ginning outturn and fibre quality traits.
- 104 *G.hirsutum* germplasm accessions were evaluated for drought tolerance traits exposed to hot & dry summer condition (tested both in dry and irrigated conditions). Identified 44 germplasm lines of *G.hirsutum*, drought tolerant (17) & moderately drought tolerant (15) and susceptible (12) based on RWC, mid-day water potential, epicuticular wax and stay green character of cotton plants. 600 *G.hirsutum* germplasm accessions were also characterized for morphological and drought tolerance traits.

13. **Details of monitoring**:

Sl. No.	**Name of the Centre**	**Date of monitoring**	**Crop stage at the time of monitoring**	**Monitoring team members**
1	CICR, Nagpur	20th November, 2015	Boll bursting Stage	Dr Anjali Kak, Dr Punit Mohan

14. **Papers Published**:

(i) Papers published in peer reviewed journal (NAAS rating may be given)

(ii) Papers presented at scientific meetings:

1. Punit Mohan, B.G.Solanki, Vinita Gotmare, Saravanan. M and D.V.Patil

   Evaluation of Genetic Resources of *Gossypium herbacem* for economic traits.
   Poster presented during the UGC sponsored "National Conference on Innovations in Agri-Biosciences" to be held during 26-27 February, 2016 at Dr Ambedkar College, Deekshabhoomi, Nagpur
2. Patil DV, Punit Mohan and KR Kranthi . Desi cotton *Gossypium herbaceum* and their utilization in crop imporvemnet for cotton growing tract of Central India.
   Poster presented during the UGC sponsored "National Conference on Innovations in Agri-Biosciences" to be held during 26-27 February, 2016 at Dr Ambedkar College, Deekshabhoomi, Nagpur.

(iii) Manuscripts under preparation:

15. **Patents/varieties and products developed or in pipeline**:

Signature:

Name:

Designation:

Principal Investigator:

Date:

Director/Project Director/Project Coordinator