

2010

RPF I

PROFORMA FOR SUBMISSION OF RESEARCH PROJECTS

PART -1 : GENERAL INFORMATION

| | | |
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| 200 | Project code | |
| 2001 | Institute Project Code No. | IGFRI CI 3.10 |
| 2002 | ICAR Project Code No. | |
| 201 | Name of Institute and Division | |
| 2011 | Name & Address of Institute | Indian Grassland and Fodder Research Institute Jhansi - 284003 India |
| 2012 | Name of Division/section | Crop Improvement Division |
| 2013 | Location of Project | IGFRI, Jhansi |
| 202 | Project Title | Genetic improvement of Berseem for root rot resistance, late maturity and biomass. |
| 203 | Priority area | Genetic improvement of forage crops |
| 2031 | Research Approach | Applied Research Basic Research Process /or technology Development Transfer of Technology |
| | | 01 02 03 04 |
| | | 01, 02 and 03 |
| 204 | Specific area | Forage crop improvement |
| 205 | Duration of Project | |
| 2051 | Date of start | 2010 |
| 2052 | Date of completion | 2015 |
| 206 | Total cost /expenditure incurred | Not applicable |
| 2061 | Foreign Exchange component (if any) | No |
| 207 | Project profile summary | Please see annexure. |
| 208 | Key words | Genetic improvement, <i>Trifolium alexandrinum</i> , interspecific hybridization, yield, fodder crops, gene introgression, germplasm |

ITMU/99
05/08/2010

Part - II: Investigator Profile

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| 210 | Principal investigator | (after two year Dr. Mridul Chakraborti will be PI) |
| 2101 | Name | Dr. D. R. Malaviya |
| 2102 | Designation | Principal Scientist |
| 2103 | Division/section | Seed Technology Division |
| 2104 | Location | Jhansi |
| 2105 | Institute Address | IGFRI Jhansi – 284003 |
| 211 | Co-investigator | |
| 2111 | Name | Dr. A. K. Roy |
| 2112 | Designation | Principal Scientist |
| 2113 | Division/section | GSM Division |
| 2114 | Location | Jhansi |
| 2115 | Institute Address | IGFRI Jhansi – 284003 |
| 212 | Co-investigator | |
| 2121 | Name | Dr. Mridul Chakraborti |
| 2122 | Designation | Scientist |
| 2123 | Division/section | Crop Improvement Division |
| 2124 | Location | Jhansi |
| 2125 | Institute Address | IGFRI Jhansi – 284003 |
| 213 | Co-investigator | |
| 2131 | Name | Sri. R. B. Bhaskar |
| 2132 | Designation | Sr Scientist |
| 2133 | Division/section | Crop Improvement Division |
| 2134 | Location | Jhansi |
| 2135 | Institute Address | IGFRI Jhansi – 284003 |

Part - III : Technical Details

220 Introduction and objectives:

2201 Origin of the project: (Problem identification)

Berseem is one of the most important winter season fodder crop grown in about 2 m ha area. The crop is reported to highly susceptible to disease as root rot and stem rot which a complex of more than one causal organism. Resistance sources are available only across the species. Narrow genetic base is another impediment in improvement of this crop for this trait as well as the other desirable traits such as extending vegetative growth period and increasing yield. Efforts have been made standardize the protocol for development of interspecific hybrid using embryo rescue because as such the incompatibility barrier exists at post fertilization stage. In the process five hybrids have been developed. Hence, there is need to evaluated the segregating population of theses hybrids and also to develop more hybrids.

2202 Definition of the project:

The work aims at evaluation of three interspecific hybrids developed at this institute for root rot resistance, late maturity and biomass. Further efforts will be made to develop hybrids, evaluated segregating population for various traits,

