**ANNEXURE C**

**BIOCONTROL RESEARCH, IMPLEMENTATION, AND MASS REARING**

**PROJECT SPECIFICATIONS**

**Project 2: Arid Area Habitats**

1. **SCOPE AND EXTENT OF WORK**

**Section 1:   Pre-release studies**

The pre-release studies will include exploration work and quarantine testing in South Africa on new biocontrol agents on target weeds that have been prioritized by the Department of Forestry, Fisheries and the Environment (DFFE) based on the 20 (twenty) weeds identified by Canavan *et al*., 2021 (Annexure G). The list is as follows:

1. *Cylindropuntia pallida* – Thistle cholla
2. *Opuntia elata* – Orange tuna
3. *Opuntia engelmannii* – Small round-leaved prickly pear
4. *Trichocereus spachianus* – Torch cactus
5. *Tephrocactus articulatus –* Pinecone cactus

The deliverable on this section will be the progress achieved per plant species in the quarter.

**Section 2: Post-release evaluation**

The post release evaluation section deals with:

1. quantifying the population impact of the biological control agents released in the past
2. socio-economic studies and
3. recovery studies.

The following AIS will be the Department’s focus for post release evaluation based on the available budget allocated.

1. *Prosopis* spp.
2. *Opuntia aurantiaca –* Jointed cactus
3. *Opuntia stricta –* Australian pest pear
4. *Opuntia humifusa –* Creeping prickly pear
5. *Cylindropuntia imbricata* – Imbricate cactus
6. *Cylindropuntia leptocaulis –* Pencil cactus
7. *Cereus jamaracu* – Queen of the night
8. *Harrisia martinii* – Moon cactus
9. *Harrisia pomanensis* – Midnight lady
10. *Harrisia balansae* – Strangler prickly apple
11. *Harrisia undulata –* Night-blooming cactus
12. *Pereskia aculeata –* Barbados-gooseberry

The deliverable on this section will be progress achieved on points i-iii per quarter.

**Section 3: Mass rearing**

The mass rearing of the agents identified in section 2 over the 5 (five) year period and agents in section 1 as they become available for release. The following will be prioritized.

|  |  |  |  |
| --- | --- | --- | --- |
| **Plant species** | **Estimated no. agents/ quarter** | **Total/year** | **Total** |
| Prosopis spp. | 10 000 | 40 000 | 200 000 |
| *Pereskia aculeata -*Barbados gooseberry | 3 000 | 12 000 | 60 000 |
|  | **Estimated no consignments/quarter** | **Total/year** | **Total** |
| Opuntia aurantiaca – Jointed cactus | 1 000 | 4 000 | 20 000 |
| *Opuntia stricta –* Australian pest pear | 1 000 | 4 000 | 20 000 |
| *Opuntia humifusa –* Creeping prickly pear | 1 000 | 4 000 | 20 000 |
| *Cylindropuntia imbricata* – Imbricate cactus | 1 000 | 4 000 | 20 000 |
| *Cylindropuntia pallida –* Pink flowered sheathed cholla | 500 | 2 000 | 10 000 |
| *Cylindropuntia leptocaulis –* Pencil cactus | 500 | 2 000 | 10 000 |
| *Opuntia ficus- indica –* Sweet prickly pear | 1 000 | 4 000 | 20 000 |
| *Cereus jamaracu* – Queen of the night | 2 000 | 8 000 | 40 000 |
| *Harissia martinii* – Moon cactus | 2 000 | 8 000 | 40 000 |
| *Harissia pomanensis* – Midnight lady | 500 | 2 000 | 10 000 |
| *Harrisia balansae* – Strangler prickly apple | 500 | 2 000 | 10 000 |
| *Harrisia undulata –* Night-blooming cactus | 100 | 400 | 2 000 |

The deliverable under this section will be the number of agents reared per species per quarter.

This deliverable needs to be clearly identified and mentioned on the quarterly report.

1. **COMPETENCY AND EXPERTISE REQUIREMENTS**
2. The bidder is required to demonstrate that they have past and/or ongoing experience and competency in the fields of biocontrol, research, mass rearing or similar.
3. The bidder needs to provide evidence of previous projects successfully completed, including project values, and track records of deliverables achieved.
4. The bidder is required to provide evidence that their team has the relevant technical experience, in research and mass rearing of biological control agents or similar field, required to ensure the deliverables of this work.

The bidder is required to provide evidence that their core team has the relevant qualifications required to ensure the efficient delivery of the work

1. **PROJECT MANAGEMENT AND REPORTING**

The Project Manager shall do the ongoing management of the Service Level Agreement (SLA)/Memorandum of Agreement (MOA).

The appointed service provider shall submit four (4) quarterly reports per year for each of the three (3) EP deliverables as follows; 1. Pre-screening studies, 2. Post-release evaluation and, 3. Mass rearing. Therefore, twelve (12) quarterly reports in total per year will be required.