**GUIDELINES FOR DEVELOPING RESEARCH PROPOSALS**

**CRC-EMPRES/CR Collaborative Research Initiative**

***1. Introduction***

Applied research on Desert Locust has been conceived as one of the major components of the FAO Emergency Prevention System (EMPRES) Programme that was launched in the Central Region in 1997.

The EMPRES Central Region Programme and the Commission for Controlling Desert Locust in the Central Region (CRC) have formulated a conceptual framework for a joint research approach, which aims at strengthening the research capacity of locust-affected countries in the Region.

This research programme of CRC and EMPRES/CR is designed to promote relevant and high quality research on various aspects of Desert Locust management with the aim of improving survey, early detection and environmentally sound interventions. The CRC are providing limited funds to augment ability of interested researchers in Desert Locust affected countries of the Central Region to support their own programmes.

Such research projects, supported by the research entities themselves, and augmented by CRC, are being created with the intention of attracting donor support as the selected projects make progress in their identified topics.

The CRC agreed to provide support to applied research on Desert Locust undertaken by national scientists, in kind, of up to a maximum of USD 20,000 per project. However, in case of significant results a prolongation of another year can be agreed.

The guidelines presented herein are intended to give instructions to prospective researchers who wish to apply for supplementary funds to support their applied research in priority areas on Desert Locust under the CRC Collaborative Research Initiative. The funds provided are meant as a contribution to complement existing resources in the national institutions.

***2. Priority Areas of Research in the Central Region***

The following are general areas of applied Desert Locust research that have been identified as priority under the CRC Collaborative Research Initiative.

***2.1 Population Dynamics***

• Identification and characterisation of non-traditional potential Desert Locust breeding areas.

• Identification of biotic and abiotic factors that influence the Desert Locust behaviour and migration pattern;

• Determination of parameters that trigger Desert Locust gregarization and migration;

• Development of applied methods to identify and describe important vegetation types, plant communities and plant species in Desert Locust habitats in the Central Region;

• Field observation to investigate Desert Locust / host-plant relationship with regard to food preferences, shading, migration, egg deposition, protection, and roosting;

• Investigation on natural mortality factors and their impact on Desert Locust hopper populations;

***2.2 Improved Early Detection methods***

• Ground verification surveys for fine-tuning of satellite imageries;

• Investigation on survey techniques and methods to enhance the detection probability of Desert Locust populations;

• RAMSES based case studies to analyse outbreak and upsurge situations;

GIS application related to Desert Locust operation;

***2.3 Alternative locust control methods***

• Field-testing of the efficacy of bio-control products;

• Field-testing of the efficacy of Desert Locust pheromones such as Phenyl-Aceto-Nitrile (PAN) and mixtures of PAN with chemical and / or biological control products;

• Field-testing of Insect Growth Regulators (IGR) with regard to its effective mode of action;

***2.4 Improvement of Pesticide Application techniques and methods***

• Assessment of appropriate parameters for barrier treatment;

• Field-testing of the appropriateness of Insect Growth Regulators and phenylpyrazole group for barrier treatment;

• Testing and improvement of spray equipment;

• Testing of reduced pesticide doses and mixtures;

***2.5 Assessment of Environmental Impacts of Control Operations***

• Development / improvement of rapid environmental assessment methods;

• Identification of non-target key organisms to standardize the assessment of environmental impact of pesticide;

***2.6 Economic Impact of Desert Locust***

• Development of methodologies and models to estimate crop losses caused by Desert Locust infestations;

• Analyse the economic impact of Desert Locust campaigns.

***3. How to Develop a Proposal?***

• Proposals must be confined to one or more of the topics identified by CRC, Each researcher may submit more than one proposal, but only one can be approved for funding.

• The proposal should be highly relevant to the available national expertise and access to locust-infested areas.

• Research should be conducted, as much as possible, in collaboration and coordination with other concerned organizations and institutions in the country.

• Research should be based on available resources in the country that could be augmented by CRC funds.

***3.1 Outline of research project proposal***

The outline research project proposal should include the following elements (*4 pages maximum, see Standard Application Form*). Proposals that do not contain the requirements outlined below cannot be considered for approval by the CRC.

• Research Project title

• Duration of project (starting and finishing date of the project)

• Full name and address of the supervisor (if student thesis)

• Full name and address of host institution

• Full name and address of principal investigator (CV must be attached)

• Full name(s) and address(es) of other researcher(s) who would participate in the project

• Purpose of the project

• Concise summary of the proposed research project (including the purpose, background, and means of achieving the intended objectives)

• Information on background work already done or currently being pursued towards the objectives of this project (including concise and relevant literature review)

• Experimental details (clearly thought out materials and methods of the field work)

• Expected results

• Detailed work plan (description of the proposed activities and timing)

• Location of the proposed work (in which areas will it be conducted?)

• Detailed breakdown of the costs of the project (equipment, supplies and material, incountry

travel, labour, subsistence, others).

o Major resources available at the host institution to operate the project (personnel, vehicles, material, etc.);

o Supplementary equipment needed;

o Level of funding expected from CRC (maximum USD 20,000).

***4. Evaluation, Submission and Follow up of Research Proposals***

4.1 The proposals should be endorsed first by the Head of Locust Control Unit in the respective country or by Secretary of the Commission if the researcher does not belong to the Ministry of Agriculture;

The Head of Locust Control Unit should make sure of the following:

• The standard “Project Application Form” is properly being used;

• The research project meets the priority areas of the agreed CRC Research Initiative;

• The expected results are relevant for the national Locust Control Unit requirements;

4.2 The Head of Locust Control Unit will pass the endorsed project proposal to the CRC Secretary for assessment and finial approval.

***5. How to Submit Proposals?***

All proposals should be sent to:

***Mamoon Al Alawi***

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