



Expression of Interest for Call : "Climate Smart Agriculture"

Project: Monitor TVC and SCC of milk and how climate changes affect them

Outline: The Total Viable Count (TVC) and the Somatic Cell Count (SCC) of milk can be used as indicators of the health status of the animals that produced it and the conditions in the farm. The general idea of this project is to use them as indicators of the inflammatory condition of the utter.

The objective of the project will be to monitor the changes in TVC and SCC over time and relate them to climate changes. This will enable looking into how the TVC and SCC were altered over the past years using previously recorded data. Sampling will be performed for different geographic locations in the pilot sites of the participating countries to investigate how these patterns look today, monitor them for a period of time and then with the use of modeling tools to predict what will happen in the future. Other factors related to production and health will also be monitored. These include amount of milk, births, abortions, deaths at birth etc. Very important here to notice is that TVC and SCC are critical regarding the productivity of the producers, as they determine biological quality which is very important.

A dedicated software system will be developed that will enable the collection of information at the selected sites-farms that will describe the animal population and reflect health conditions. Data will be inserted in the system by authorized users who will act under a contract with the local authorities as their legal representatives (e.g. vets). Information will be stored in a database and will be projected in a layered form through a GIS system, which will accommodate spatio-temporal data combining climate conditions and animal related factors (production, health). Computationally intelligent and statistical methods will be used to model how climate changes affected and may continue to affect TVC and SCC over time.

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