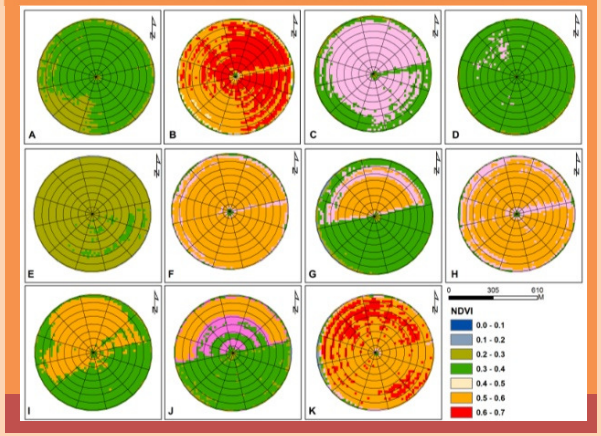
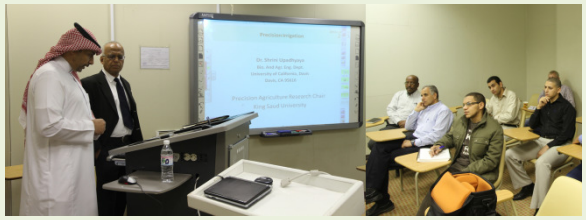
(v) Mapping and Impact Assessment

- Base map of agricultural area (farm).
- Maps of field soil compaction, soil deterioration, salinity and other negative impacts can be mapped out for informative decision making.
- Maps of soil physicochemical properties (soil texture, EC_a, compaction, soil nutrients, etc.).
- Maps of time series crop health and biophysical parameters (LAI, NDVI, SAVI, water use efficiency, etc.).
- Prescription maps for the different agricultural inputs, early yield prediction maps and water productivity.



(vi) Technical Training

Through the availability of high-tech equipment in PARC laboratory and out in the field and the qualified PARC personnel, PARC has the capability of providing professional training services in different aspects of the precision agriculture technology and in the concept of sustainable agriculture in general. These aspects include, but not limited to, the areas of precise soil sampling, crop sampling and crop health monitoring, crop yield sampling and mapping, delineation of management zones, preparation of prescription maps, satellite image analysis and interpretation of satellite data.



Key Partners

- ***Todhia Arable Farm.***
- ***National Agricultural Development Company (NADEC).***
- ***Saudi Agricultural Development Company (INMA).***

Contact Us

Precision Agriculture Research Chair,
College of Food and Agriculture Sciences,
King Saud University.

Building No. 68, 1st Floor, Office No. 7,
Riyadh 11415, Saudi Arabia.

Phone: +966-11-4691904 & 4678396
Email: parc@ksu.edu.sa
Website: http://parc.ksu.edu.sa

Precision Agriculture Research Chair (PARC)

King Saud University

SERVICES OFFERED BY PARC

Overview

Through the technologies of precision agriculture, PARC provides all the information needed to make effective, informative and successful decisions regarding agricultural production and sustainability. Services provided by PARC are aimed to enhance more accurate, efficient and effective spatial and/or temporal management of crop production inputs, including soil, water and agrochemicals.

(i) Soil Sampling and Analysis

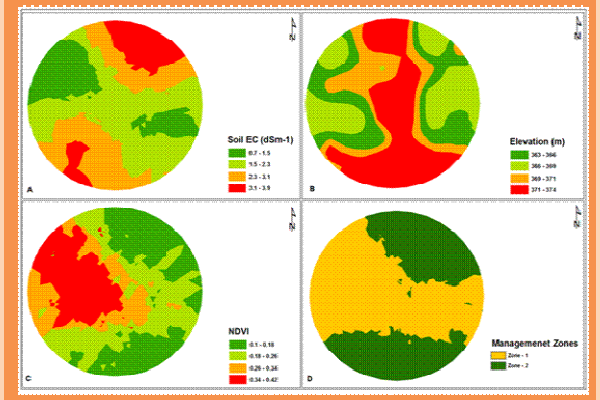
RTK GPS-assisted soil sampling can be provided. Soil analysis for physicochemical properties, such as texture, soil organic carbon, EC_a, soil nutrients (N, P, K, Ca, Cu, Fe, Mg, Na, Zn, etc.), topography and compaction is also offered.

(ii) Crop Sampling, Performance and Yield Assessment

Plant sampling and analysis for nutrient concentration (N, P, K, Ca, Cu, Fe, Mg, Na, Zn, etc.) can be provided. Crop monitoring services, including measuring bio-physical parameters (leaf area index – LAI, NDVI and crop vigor), chlorophyll concentration, crop health and productivity parameters (yield sampling, data interpretation and yield mapping) are also available.

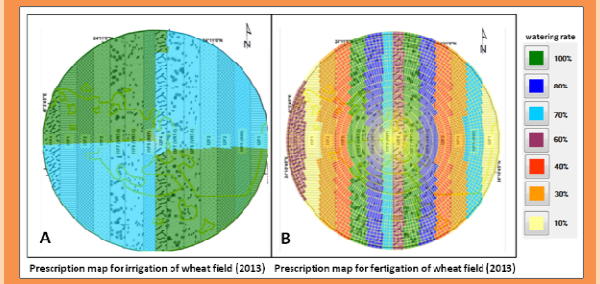
(iii) Delineation of Management Zones for Agricultural Fields

In order to optimize crop productivity, PARC provides services of delineating the fields into management zones based on the assessment of time series of satellite images, along with agro-meteorological, soil, crop performance and yield data.



(iv) Preparation of Prescription Maps for Various Agricultural Inputs

Based on analyzed soil physicochemical and crop biophysical properties, PARC can provide services of developing prescription maps for different farming inputs, such as water, seeds and agrochemicals with respect to delineated management zones.



Prescription map for irrigation of wheat field (2013) Prescription map for fertigation of wheat field (2013)