

# Executive Summary

## “THE AGRICULTURE DECISION SUPPORT SYSTEM COMPLETE PROJECT REPORT JULY 2006 – JULY 2008”

Until recently, the agriculture sector of Pakistan has been comparatively operating (from an administrative point of view) in a very primitive, non-technical and unsystematic way that has undoubtedly undermined the capacity for its growth and, ultimately, its success. While this is a dire-enough situation for the sector itself, it has become nothing short of a catastrophe for our nation in terms of its economic health—and wealth. For wheat, the case is even more distressing—rather than having a surplus for export, this world-renowned agrarian nation has had to import wheat to feed its people! There is definitely something wrong somewhere, and something needs to be done about it.

Taking into consideration just two of the major crops grown in Pakistan (and for which we are known in the world), cotton and rice, the historic facts associated with their cost of cultivation and level of production point to a serious lack of effective management and direction with regards to the internal workings of the industry. While Pakistan is currently the fifth-largest cotton-growing country in the world (out of 111 such countries), the truth is that it was not able to meet even the production target (in bales) set by its own Government, let alone satisfy the demands and needs of the rest of the world.

Back in 2004, there was a proposal put forward to integrate Information Technology into the Agriculture system i.e. introduction of Agro-Informatics in Pakistan. This merger between the two is the foundation upon which our faltering agricultural sector can be rebuilt, re-structured and re-vitalized. Furthermore, it carries with it innumerable benefits and promises platforms of success all the way from uplifting the plight of the typical farmer in Pakistan, to boosting the national economy, to garnering positions in the world's agricultural sector which Pakistan is more than capable of securing.

This pivotal revolution has been made possible through the Agriculture Decision Support System (ADSS) and the ADSS Project. This ADSS Project, funded with Rs. 30.58 million by the National ICT R & D Fund, was commissioned to undertake the study of the historic and current condition of the cotton and rice scouting data under the patronage of Dr. Amir Muhammed at FAST National University

Islamabad. This mammoth mission, the first-ever of its kind in the history of Pakistan (with few parallels in the World) has been spear-headed by Prof. Dr. Ahsan Abdullah, Head of the Center for Agro-Informatics Research (C@IR). Dr. Abdullah and his team of 35 dedicated IT professionals embarked on this 26-month long project out of the purpose-built premises located at FAST House, Rohtas G-9/4, Islamabad.

Using proven IT tools and techniques and the indigenously developed technique conceived by Dr. Abdullah, the ADSS Project has been able to 'zero in' on the difficulties existing in the agriculture sector, published through a dozen Technical reports. With this hitherto unknown information then being made available to the policy-makers, regulators and relevant concerned authorities, these bodies should be in a position to formulate exact remedies in the form of customizing the extension services to the farmers, tightening up regulations to improve the system, making decisions that will simultaneously benefit all concerned parties and implementing procedures and policies aimed at achieving the success that has so far eluded the agricultural sector of this country.

The comprehensive document completely covers the 25 months of the project (as it goes to press before the end of project) includes 12 chapters such as the background to the creation of the Center for Agro-Informatics Research, an introduction to the internal mechanisms of the Agriculture Decision Support System, a description of the ADSS computational applications, a briefing of the 13 Technical Reports compiled from the results of the analysis generated through the application of the various ADSS tools and a presentation of the summary of eight quarterly reports of the ADSS. Rounding out this volume is an introduction to the C@IR team members as well as an overview of the six training workshops conducted on the tools, the data validation field visit that was made by selected members of the team in 2007 and the external coverage of ADSS in both the Media and on the Web.

For the agriculture sector and interested parties, this is nothing short of a must-read compendium on the 'saviour solution' for it—the Agriculture Decision Support System and the two-year Project that has been associated with it.