

# Agritech Interventions Harbingers of Prosperity

2010



**Division of Agricultural Extension**  
Indian Council of Agricultural Research  
New Delhi 110 012

[www.icar.org.in](http://www.icar.org.in)



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PRATIBHA DEVISINGH PATIL



राष्ट्रपति  
भारत गणतंत्र  
PRESIDENT  
REPUBLIC OF INDIA

## Message

I am happy to learn that the Indian Council of Agricultural Research (ICAR) is organizing a National Conference on Krishi Vigyan Kendras (KVKs) 2010 on December 22, 2010 at Udaipur and bringing out a document on "Agritech Interventions-Harbingers of Prosperity-2010".

Agriculture plays a significant role in addressing poverty, hunger, malnutrition and livelihood security of millions of people in India. Since independence, the country has made significant strides in agriculture, to meet the growing demands of our growing population. The ICAR as an apex body that caters to the needs of Agricultural Research, Education and Extension in the country undertakes action as well as policy based empirical research in the field of agricultural sciences. It also promotes ecologically sustainable agriculture and has established a wide network of Krishi Vigyan Kendras (KVKs), under the umbrella of ICAR Institutes.

On this occasion, I extend my warm greetings and felicitations to the organizers and the participants and all those associated with the Council and wish the Conference every success.

New Delhi  
December 14, 2010

(PRATIBHA DEVISINGH PATIL)



शरद पवार  
SHARAD PAWAR



कृषि, उपभोक्ता मामले  
खाद्य और सार्वजनिक वितरण मंत्री  
भारत सरकार

MINISTER OF AGRICULTURE & CONSUMER AFFAIRS  
FOOD & PUBLIC DISTRIBUTION  
GOVERNMENT OF INDIA

## Message

Indian Council of Agricultural Research (ICAR) plays a major role to ensure the country's food security and farmer's prosperity. In spite of varying climatic conditions, declining farm resources, the country could achieve higher production especially in food grains due to hard working Indian farmers as well as the strenuous efforts of National Agricultural Research System and the concerned Public and Private agencies.

Many scientific technologies go un-noticed by the farming community due to lack of awareness. In order to overcome this problem, the ICAR is disseminating various agricultural technologies through its large network of Krishi Vigyan Kendras (KVKs) across the country.

I am happy to note that the ICAR has identified and compiled various success stories as well as case studies of KVKs for the benefit of other farmers in the country. The publication entitled '**Agritech Interventions—Harbingers of Prosperity 2010**' has several useful and easily adoptable technologies through which agricultural production can be sustained.

I am sure this publication would be useful for the scientists, extension personnel, policy makers and also for Indian farming community especially for upscaling of these successful technological interventions.

I congratulate the ICAR for taking all efforts to document this valuable information

New Delhi  
December 9, 2010

(SHARAD PAWAR)



प्रो. के.वी. थॉमस  
PROF. K.V. THOMAS



कृषि, उपभोक्ता मामले  
खाद्य और सार्वजनिक वितरण राज्य मंत्री, भारत सरकार  
नई दिल्ली  
MINISTER OF STATE FOR AGRICULTURE  
CONSUMER AFFAIRS, FOOD & PUBLIC DISTRIBUTION  
GOVERNMENT OF INDIA  
NEW DELHI

## Message

Sustainable growth in agriculture and its allied sectors is a major challenge for global and Indian agriculture. Technologies emerging out of research and their dissemination to the farmers with the help of Development Departments and Infrastructural Institutions would continue to be the major strategy for increasing agricultural production in the country.

Indian Council of Agricultural Research (ICAR) is the fulcrum of research activities in agriculture and its allied sectors. As an integral part of ICAR, Krishi Vigyan Kendras (KVKs) function as knowledge and Resource Centres of farm technologies. There are 589 KVKs in the country which play a major role in fostering the growth of agriculture through technological backstopping.

In order to upscale some of the successful technologies emerged through the interventions of KVKs, the Division of Agricultural Extension of ICAR has brought out a publication entitled 'Agritech interventions – Harbingers of Prosperity 2010'. The publication contains details of successful technologies made by the KVKs under varied agro- climatic conditions that can be replicated where similar conditions exist. I am sure that this publication would be of immense use to Indian farmers, researchers, planners and policy makers.

I congratulate ICAR and all the contributors who are responsible for bringing out such valuable and useful publication.

New Delhi  
December 9, 2010

(PROF. K.V. THOMAS)





डा. एस. अय्यप्पन  
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SECRETARY AND DIRECTOR GENERAL



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GOVERNMENT OF INDIA  
DEPARTMENT OF AGRICULTURAL RESEARCH & EDUCATION  
AND  
INDIAN COUNCIL OF AGRICULTURAL RESEARCH  
MINISTRY OF AGRICULTURE, KRISHI BHAWAN  
NEW DELHI

## Foreword

Research and Development efforts since sixties have brought the agricultural production to a level of self sufficiency in the country. However, Indian agriculture exhibits a fluctuating trend in recent past mainly due to the changing trends of monsoon. The country's total food grain production was 234.47 million tonnes during 2008-09 which has slipped to 218.19 million tonnes during 2009-10 due to drought like situations in the country.

In view of this, Indian agriculture has multi-faceted challenges in the form of declining productivity of land, labour and water. In spite of declining resources, technologies continue to play a major role in achieving sustainable production in agriculture and allied sectors. Therefore the National Agricultural Research System has to focus on Farmer's First- to provide them Profit and Prestige through Partnership.

The wide network of KVKs of ICAR across the country aims at the assessment, refinement and demonstration of location specific technology modules in agriculture and its allied enterprises. The technological modules demonstrated by the KVKs would focus on the agriculture prosperity at district in particular and meeting the future demand of farm products both at state and national level.

At the right time, the Division of Agricultural Extension of ICAR has brought out a publication entitled 'Agritech Interventions – Harbingers of Prosperity 2010' which contains the impact of inspiring interventions in agriculture and its allied sectors. I am sure that this publication would be useful to Indian farmers and all the concerned in the National Agricultural Research System and other Development Departments and Infrastructural Institutions.

I congratulate Division of Agricultural Extension for their efforts in bringing out this document.

New Delhi  
December 6, 2010

  
(S. AYYAPPAN)



डा. कि.द. कोकाटे  
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DEPUTY DIRECTOR GENERAL  
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कृषि अनुसंधान भवन I, पूसा, नई दिल्ली  
INDIAN COUNCIL OF AGRICULTURAL RESEARCH  
KRISHI ANUSANDHAN BHAWAN I  
PUSA, NEW DELHI

## Preface



Technology is the base for increasing agricultural productivity and production. In this direction, the Indian Council of Agricultural Research (ICAR) is playing a pivotal role in the generation of need based agricultural technologies and improving the quality of agricultural education as well as extension towards knowledge based advancements in agriculture and allied sectors.

Our responsibilities have increased manifold due to alarming climate change, scarcity of irrigation water, complexity of farming systems and global food crisis. In view of this, the ICAR has created a network of Krishi Vigyan Kendras across the country for assessment, refinement and demonstration of technology at micro situation. Besides, the KVKs at district level are providing effective technological backstopping and advisory through need based interventions. As a testimony, efforts have been made to identify successful interventions of KVKs which are motivating and encouraging other farmers across the country. These experiences are documented in the form of present publication entitled '**Agritech Interventions – Harbingers of Prosperity 2010**'. This publication includes 101 inspiring technological interventions that can be emulated by other farmers where similar micro-agro-ecosystems exist.

In this context, I appreciate the efforts made by all Zonal Project Directors, the Director of DRWA, all Programme Coordinators of respective KVKs and my colleagues at the Division for bringing out this publication. I am sure that this publication could certainly serve as reference to policy makers, researches, extension personnel, farmers and agripreneurs.

New Delhi  
December 5, 2010

(K.D. KOKATE)

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The document entitled, 'Agritech Interventions-Harbingers of Prosperity-2010' portrays the 101 Success Stories of farmers who have adopted and taken advantage of the technologies provided by KVVs across the Country. Their contributions are duly acknowledged.

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# INTRODUCTION

The National Agricultural Research System (NARS) is playing a pivotal role in enabling food security by continuous generation of technologies in agriculture and allied sectors in the country. The Indian farming mostly characterized with diversified agro-ecologies, water scarcity, unpredicted rains due to vagaries of monsoon and high cost of technological inputs. Based on the changing scenario of agriculture year by year, It requires promotion of proper management of natural resources like soil, water and micro environment, besides wellbeing of all stakeholder involved in the food production and consumption chain. This is primarily possible by technological empowerment of farmers.

As part of such a strategy, the Indian Council of Agricultural Research (ICAR) is playing a crucial role in providing technologies generated by NARS after its assessment, refinement, demonstration in the micro farming situations, in addition to updating the knowledge and skill of farmers and extension personnel by taking up innovative approaches through its network of 589 Krishi Vigyan Kendras (KVKs), which act as knowledge and resource centres for empowering all the partners in the agricultural development process.

Over the years, there is a change in agrarian structure, though 80% of farmers are operating small and marginal land holdings and having a weak access to critical production resources. It is expected that India will have the largest agricultural manpower dominated by youths under 30 years of age by 2020. Majority of the Indian youth live in villages and are engaged in agricultural activities. Keeping in view such a situation, the KVKs are effectively addressing the felt needs of farming community especially rural youth by following plough to plate approach and creating an enterprising environment. In order to reach the farmers efficiently, a number of activities are carried out by the entire KVK system to bring out location specific technology modules and appropriate extension approaches. It is therefore very important to review and analyze the input, output, outcome and impact of technological interventions implemented by KVKs by documenting the success achieved and to reorient the strategies for effective functioning of KVKs for fulfilling its mandate.

In this direction, the Division of Agricultural Extension of ICAR has made a critical review of success stories emerged from KVKs through a rigorous process followed by the Programme Coordinators at district level, the Zonal Project Directorates at Zonal level and by the Division at national level. Altogether 101 salient technological interventions which proved success have been chosen as a testimony of hard work put in by KVK system and are presented in the form of this document.

There is no denying the fact that until the full potential of technology modules tested and demonstrated by KVKs are harvested by the millions of farmers in the country, success cannot be truly translated into production gains at the field level. It is hoped that this attempt may direct the KVKs and the farming community for up-scaling and replication of successful enterprising interventions for teaching the untaught and reaching the unreached.

