

**Sector:**

**Agriculture**

**Project Title:**

**Agriculture Extension Centers**

**Project Description:**

Information Technology (IT) has played a key role in exhibiting the intellectual might of India. IT industry not only is a major foreign exchange earner but is also the key employment provider to the Country's skilled workforce. However, till date, the major use of IT has been in sectors such as finance, banking and engineering and it has yet to be applied in sectors with large social importance such as healthcare and agriculture.

In one such initiative, the Government of Madhya Pradesh (GOMP) envisages to implement IT towards alleviating agriculture development and ameliorate various present concerns of the State farmers. Towards this end, the GOMP wishes to establish "Agriculture Extension Centers" at various strategic locations across the State. The proposed extension would be high-end information kiosks that would use an online multilingual, multimedia agro dedicated portal for disseminating information to the grassroots agriculture community.

The system would combine various tools and support functions such as interface technology systems, customized software's, hardware's, databases, networking, internet and various other peripherals to create a unique service offering. It would provide customized solutions to various concerns of farmers along with dissemination of valuable information related to modern cultivation techniques, hybrid seeds, organic manure etc. Further, it would provide real time information regarding, mandi rates across various yards, available warehousing capacity, information on corporation interested in buying agro goods etc.

The three key component of the system would be:

- *aAqua* – which stands for "Almost all Questions Answered" is a farmer-expert Q&A database supporting Indian languages or any other customized database of similar nature.
- *Bhav Puchiye* - a web based application for viewing the price and price history information of agrarian products across various Mandis.
- *A Digital Crop Library* - which would be a repository of various agriculture documents form experts, journals and research institutes.

These extensions centers would be manned by trained persons who would be designated as *Sanchalak*. Farmer's queries would be posted on the portal and

would be answered by the experts. The response time would be around 36 to 45 hrs. Further, for effective interaction the system would facilitate attachment and transfer of digital images such as pictures of disease crops and livestock's to the experts, who after careful examination would suggest an effective solution.

The kiosks would operate on fee for information basis and the cost of information would be in a range easily affordable by farmers. These extensions would be linked to various agriculture research institutes and universities and Information related to new researches and innovation would be uploaded to be accessed by farmers.

The key feature of services offered by extensions would be:

- Affordable
- Timely, customized and localized service offerings
- Up to date
- Searchable

For the envisaged project the government invites participation from the leading IT companies and private investors.

### **Project Rationale:**

Across the globe, development in technology and advance research have completely transformed the way agriculture is practiced Use of mechanized cultivation techniques, hybrid seeds, advance pest control methods etc. have led to tremendous increase in agriculture production and have enhanced the socio-economic prosperity of farmers. However, these advances have yet to be embraced by Indian agriculture community on a mass scale.

Agriculture not only is the key contributor of MP's economy but the sector has tremendous socio-economic importance as it supports more than 70% of the State rural population. Contributing almost one third to the State GSDP, the sector forms the backbone of MP's economy. Despite this, farmers are among the poorest population segments in the State and true potential of the technical advances have yet to reach them.

To extend benefits of technical advances to the State farmers, there is an urgent need to create modern technical infrastructure such as the envisaged extension centers. Madhya Pradesh being agro predominant State provides ample scope for implementing such systems. The State has a traditionally well developed agriculture sector with large customer base for the implementing agency.

Further, substantial opportunities are opening up in agriculture sector. With a positive market forecast for FMCG, food processing, cosmetic and herbal industry, there would be significant demand for various agro products used in these industries. The envisaged extension centers would assist farmers leverage these upcoming opportunities by facilitating access to information regarding cultivation of commercial crops, organic farming, opportunities in contract farming etc.

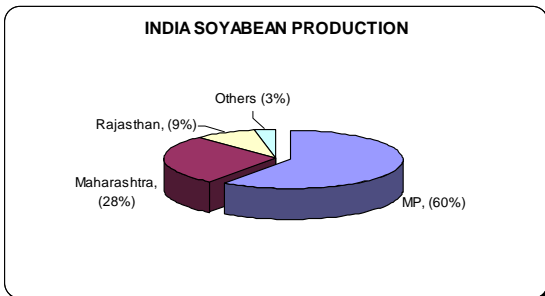
**Market Potential and Demand Dynamics:**

Madhya Pradesh offers substantial scopes for implementing IT integrated advanced solutions for assisting farmers realize higher value potential from the agriculture. It is second largest State in the Country with an estimated population of about 60 million and agriculture contributes almost one third to the State GSDP.

The State has 5 crop zones, 11 agro climatic regions and 4 soil types, which add to the biodiversity in the State and acts favorable for the production of various agriculture and horticulture crops.

<b>Cereals</b>	Wheat, Sorghum (Jowar), Maize, Paddy
<b>Oilseeds</b>	Soybean, Mustard, Linseed
<b>Pulses</b>	Gram, Pigeon Pea (Tur), Lentil (Masoor)
<b>Vegetables</b>	Green Peas, Cauliflower, Okra, Tomato, Onion, Potato
<b>Fruits</b>	Mango, Guava, Orange, Papaya, Banana
<b>Spices</b>	Chillies, Garlic, Coriander, Ginger, Turmeric

Madhya Pradesh is the largest producer of pulses and oilseeds in the Country. The State has a major share of the national agriculture production. About 25% of pulses and 40% of grams are grown in the State. The State is the largest producer of soya bean and gram and the second largest producer of jowar and masoor in the Country. The agricultural land in the district Narsinghpur is considered to be the most fertile land all over Asia. The district is famous for its rich agricultural production.



The State leads in spices production with the largest production of garlic, accounting for 37% of the total national production. It is the second largest producer of coriander in the Country. Further, its share in the total national production of Pea is 15 %.

The commodities that have an immense production potential are potato, spices (in the western parts), pulses (in the central part of the State), wheat (in the western and central regions) and oranges (south districts). Thus MP has a

significant and diversified product portfolio of agriculture commodities for domestic consumption, industrial processing and exports.

Given the high prowess of MP in agriculture, the extension centers would be a key step towards redefining the present agriculture practice and assist state's agriculture community realize newer growth avenues.

### **Why Madhya Pradesh?**

- Over 24,000 kms of optic fiber has been laid to cover all 313 development blocks across 45 districts in the State making it one of the leading States in the Country with highest optical fiber coverage.
- MP is the most biodiverse State in the Country with 11 agro climatic zones, 5 crop zones and 4 zones varying in soil types.
- The soil and agro climatic conditions are suitable for rapid agricultural development.
- The State has a well established agriculture industry.
- About 75% of the population of the State is largely dependent upon agriculture for their livelihood. This ensures ample availability of economic manpower.
- The State has a large network of primary agricultural co-operative societies, which plays a crucial role in supplying agricultural inputs including seed, fertilizer and pesticides in the far flung areas.
- The State has sufficient notified agricultural market yards and sub market yards which provide facilities for sale of agricultural produce.
- The State has a well developed mandi system with 299 small and large mandis distributed across the State.

### **Location Analysis:**

Various prospective locations for establishing extension centers are:

- Ratlam
- Katni
- Mandsaur
- Ujjain
- Neemuch
- Narsinghpur etc.

### **Proposed Investment:**

The total investment for around 10 extension counters is estimated around USD 4.4 mn or INR 2 crore.

### **Returns:**

The project is estimated to generate an IRR of 15-18%

**Coordinating Agency:**

**Department of Agriculture, GOMP**