# LAND BANK JOURNAL

VOLUME 50 ◆ MARCH 2012 ◆ ISSUE IV

NATIONAL CO-OPERATIVE AGRICULTURE AND
RURAL DEVELOPMENT BANKS' FEDERATION LTD.

**Volume 50** **Issue IV**

# LAND BANK JOURNAL
## (QUARTERLY)

## MARCH 2012

**K. K. RAVINDRAN**
Managing Editor

***Published by:***

**NATIONAL CO-OPERATIVE AGRICULTURE AND RURAL DEVELOPMENT BANKS' FEDERATION LIMITED**

701, BSEL TECH PARK, 7th Floor, A-Wing,
Opp. Railway Station, Vashi, Navi Mumbai-400 703
Phone No. (022) 27814114, 27814226, 27814426
E-mail : nafcard@vsnl.com
Website : www.nafcard.org • Price ₹ 15/. per copy

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# EDITORIAL

Tackling overdues in loan accounts is a serious challenge faced by institutions in Long Term Credit Structure. The total demand of all units in the structure during 2011-12 was about ` 9500 crores. This amount comprised of fresh instalments amounting to about ` 4300 crores and unpaid instalments of previous years representing the entire balance of ` 5200 crores. Against this, the collections were about ` 4500 crores which works out to 47% of demand, leaving overdues to the extent of 53% of demand. Total collections during the year represent amounts received in nearly 80% of loan accounts. It is seen that majority of loanees with outstanding dues are regular in paying a major portion of their dues. But since they are unable to pay the total outstanding dues including overdues in the past, they continue to be defaulters to the bank and their accounts continue to be classified as NPAs.

The LTCCS issues primarily Long term loans in the farm and non-farm sectors for a period ranging from 5 to 15 years. Serious shortcomings have been noticed in the appraisal system followed by banks, which is largely based on standardized models for different purposes. Economics of the activities financed, including income generation and repaying capacity considered for sanctioning the loan, therefore, do not always reflect the actual situation. This gap widens over a period of time even in cases where appraisal is done somewhat realistically. This could be the reason for irregular repayment in a good number of overdue loans. However, Agriculture and Rural Development Banks generally ignore such signals and their only response to loan default is to initiate recovery measures, instead of addressing the reasons for such default. The fact that more than half of the borrowers of these institutions are able to make only part payment against demand is a clear indication of inadequate repaying capacity in relation to the installments fixed by the bank. This mismatch can be corrected only by restructuring the loan. Farmers also suffer crop losses in some years and also have to incur unanticipated bulk expenditure in the family leading to loan default. Similarly, a large number of

loan accounts of ARDBs became NPA in the aftermath of ADWDR scheme announced in 2008. Loanees who defaulted repayment in subsequent years started repayment under these accounts after 2 years or more. By that time, the accumulated defaults with penal charges had gone beyond their capacity to clear in a single year. The loan accounts which turned NPAs due to the above reasons are unlikely to become regular again unless restructured. Banks have to decide on restructuring of loan accounts on a case to case basis. The purpose of the exercise should be to bring down the size of installments within the capacity of the borrower to pay. Banks can consider restricting restructuring to accounts where borrower is prepared to clear interest overdues, if any. By restructuring the principal overdues on payment of interest dues will help borrowers to keep their loan accounts regular and become eligible for fresh loans as well as interest subvention for prompt repayment given in some states like, Haryana, Karnataka etc. This will also help banks to improve assets quality on a sustainable basis.

**K. K. Ravindran**
**Managing Editor**

# सहकारिता से कृषि विकास पर राष्ट्रीय संगोष्ठी - एक रपट

डॉ. भागचन्द्र जैन*

छत्तीसगढ़ राज्य सहकारी संघ मर्यादित, रायपुर, भारतीय राष्ट्रीय सहकारी संघ, नई दिल्ली और इंदिरा गांधी कृषि विश्व विद्यालय, रायपुर के संयुक्त तत्वावधान में सहकारिता से कृषि विकास विषय पर राष्ट्रीय संगोष्ठी आयोजित की गई, जिसका उद्घाटन करते हुये राज्यपाल श्री शेखर दत्त ने कहा कि 'किसान विकास की धुरी है, जहां अब केवल उत्पादन पर ध्यान न देकर उसके विपणन पर ध्यान दिया जाना चाहिए। विपणन और कच्चे माल की उपलब्धता में सहकारिता महत्वपूर्ण योगदान दे सकती है।'

कार्यक्रम की अध्यक्षता करते हुये सहकारिता मंत्री श्री ननकीराम कंवर ने कहा कि सहकारिता का लाभ गांव, गरीब और किसान तक पहुंचा है। उन्होंने सहकारिता के माध्यम से किये जाने वाले उपार्जन की सराहना की। इस अवसर पर कृषि मंत्री श्री चन्द्रशेखर साहू ने कहा कि छत्तीसगढ़ में स्वतंत्रता संग्राम सेनानी द्वय ठाकुर प्यारेलाल सिंह और पंडित वामन बलीराम लाखे ने सहकारिता की नींव डाली। पूरा विश्व वर्ष २०१२ में अंतराष्ट्रीय सहकारिता वर्ष मनाने की तैयारी में जुटा हुआ है, तब ऐसी संगोष्ठी का आयोजन छत्तीसगढ़ में नया मोड़ लायेगा। उन्होंने फसल, पशुपालन, मत्स्य पालन आदि के लिए ३ प्रतिशत ब्याज पर ऋण देने को महत्वपूर्ण बताया। कृषि को खाद्यान्न आपूर्ति का साधन बताया और कृषि को मंहगाई में कमी लाने का माध्यम बताया। कुलपति डां. एस. के. पाटील ने संगोष्ठी में कहा कि छत्तीसगढ़ में लघु और सीमांत किसानों की संख्या क्रमशः २५ प्रतिशत और ५० प्रतिशत है, जिनके पास क्रय शक्ति की कमी है। इन किसानों को संगठित करने में सहकारिता महत्वपूर्ण योगदान दे सकती है। अंतर्राष्ट्रीय सहकारी परिसंघ, नई दिल्ली के उपाध्यक्ष श्री घनश्याम भाई अमीन ने दुग्ध सहकारिता पर बल दिया।

**मध्य क्षेत्र सहकारी सम्मेलन**

राष्ट्रीय संगोष्ठी के दूसरे दिन मध्य क्षेत्र सहकारी सम्मेलन का आयोजन किया गया, जिसमें मुख्य अतिथि के रूप में संबोधित करते हुये भारत सरकार के कृषि एवं स्वाद्य प्रसंस्करण उद्योग राज्य मंत्री डॉ. चरणदास महन्त ने कहा कि सहकारिता को उपभोक्त्ता तक पहुंचना चाहिए और बाजार में दिखना चाहिए, जिससे आम आदमी लाभान्वित हो सके। सहकारिता के माध्यम से ऐसे प्रयास किये जायें जिससे पात्र व्यक्ति को समय पर कृषि ऋण उपलब्ध हो सके। इस अवसर पर छत्तीसगढ़ केकृषि मंत्री श्री चन्द्र शेखर साहू ने कहा कि किसानों को दिये जाने वाले ऋण की प्रक्रिया सरल हो, इसके लिए भारतीय रिजर्व बैंक द्वारा ऋण प्रक्रिया के नियमों में संशोधन किया जाए। मध्यप्रदेश के सहकारिता मंत्री श्री गौरीशंकर बिसेन ने कहा कि किसानों की जोतें दिनोंदिन छोटी होती जा रही हैं, जिसमें सहकारी खेती ही कारगर हो सकती है। कार्यक्रम की अध्यक्षता करते हुये भारतीय राष्ट्रीय सहकारी संघ के अध्यक्ष डॉ. चन्द्रपाल सिंह ने कहा कि भारतीय अर्थव्यवस्था में सहकारिता का महत्वपूर्ण स्थान है, जिससे कृषि का विकास संभव है। उन्होंने सहकारी शिक्षा और प्रशिक्षण पर बल देते हुये कहा कि कक्षा १२ वी तक सहकारिता को पाठ्यक्रम में शामिल किया जाना चाहिए।

इंदिरा गांधी कृषि विश्वाविद्यालय, रायपूर के कुलपति डॉ. एस. के. पाटील ने कहा कि आम आदमी तक सहकारिता को पहुंचाने के लिए सहकारी प्रशिक्षण को प्रभावी बनाना चाहिए। भारतीय रिजर्व बैंक के कार्यकारी निर्देशक श्री व्ही. के. शर्मा ने कहा कि भारत सरकार द्वारा गठित वैद्यनाथन समिति की अनुशंसायें कमजोर सहकारी संस्थाओं के लिए वरदान साबित हो सकती हैं। इस सत्र में विशिष्ट आतिथि के रूप में नेशनल हैवी इन्जिनियरिंग को-

प्राध्यापक (कृषि अर्थशास्त्र), प्रचार अधिकारी, कृषि महाविद्यालय, रायपुर - ४९२०१२ (छत्तीसगढ़)

आपरेटिव के अध्यक्ष श्री शिवाजी राव जी. पाटिल, कुलपति डॉ. एस. के. पाटिल, अंतर्राष्ट्रीय सहकारी परिसंघ, नई दिल्ली के उपाध्यक्ष श्री घनश्याम भाई अमीन, भारतीय राष्ट्रीय सहकारी संघ, नई दिल्ली के मुख्य कार्यकारी डॉ. दिनेश, छत्तीसगढ़ के पंजीयक श्री एस. के. जायसवाल उपस्थित थे।

मध्य क्षेत्र सहकारी सम्मेलन के पहले तकनीकी सत्र की अध्यक्षता राष्ट्रीय सहकारी आवास संघ, नई दिल्ली के अध्यक्ष श्री सत्यनारायण शर्मा ने की। इस सत्र में राष्ट्रीय सहकारी कृषि और ग्रामीण विकास बैंक संघ के प्रबंध निदेशक श्री के. के. रविन्द्रन ने सहकारी नीति पर बल दिया। छत्तीसगढ़ के अपर पंजीयक श्री पी. आर. नाईक ने सहकारी संस्थाओं के पंजीयन की जानकारी दी। इसी सत्र में छत्तीसगढ़ राज्य सहकारी विपणन संघ, रायपुर के अध्यक्ष श्री राधाकृष्ण गुप्ता ने धान-मक्का के उपार्जन के बारे में बताया। मध्य प्रदेश राज्य सहकारी संघ, भोपाल के अध्यक्ष श्री अरूण सिंह तोमर ने सहकारी संस्थाओं को अधिक व्यवहारिक बनाने का सुझाव दिये।

सहकारी सम्मेलन के दुसरे तकनीकी सत्र की अध्यक्षता करते हुये छत्तीसगढ के पंजीयक श्री एस.के. जायसवाल ने कहा कि फसल बीमा का निर्धारण ग्राम पंचायत स्तर पर आनावारी में किया जाना चाहिए। इस सत्र में छत्तीसगढ़ राज्य सहकारी संघ, रायपुर के मुख्य कार्यपालन अधिकारी श्री व्ही.के. शुक्ला ने छत्तीसगढ़ में पर्यटन और परिवहन सहकारिता की जरूरत बताई, उन्होंने बताया कि सहकारी समिति को ५० कार्य निर्धारित किये गये हैं, जिनमें से केवल २ या ३ कार्य ही सहकारी समिति कर पाती है। इस सत्र में जिला सहकारी केन्द्रीय बैंक मर्यादित, राजनांदगांव के अध्यक्ष श्री शशिकांत द्विवेदी ने कहा कि सहकारी संस्थाओं को टोकन मनी पर जमीन उपलब्ध करायी जानी चाहिये। उन्होंने आशा व्यक्त की कि श्रम सहकारिता में श्रमिक, श्रमिक न रहकर वे मालिक हो जायेंगे। उत्तराखण्ड के डॉ. एम. एल. चौहान ने विभिन्न प्रदेशों में सहकारी संस्थाओं के कार्यकाल की अवधि एक जैसी होने पर जोर दिया। महासमुंद क्षेत्र के सांसद श्री चंदूलाल साहू ने अपेक्षा की, कि सहकारिता से अधिक से अधिक जनता जुडे, जिससे इसका लाभ व्यापक क्षेत्र में पहुंच सके। मध्यप्रदेश राज्य सहकारी बैंक, भोपाल के महा प्रबंधक श्री एस. के. गुप्ता ने बताया कि मध्य प्रदेश में किसानों को एक प्रतिशत ब्याज दर पर ऋण दिया जा रहा है, जिससे कृषि लागत में कमी आयी है। इस अवसर पर छत्तीसगढ़ राज्य कृषि एवं ग्रामीण विकास बैंक, रायपुर के अध्यक्ष श्री देवेन्द्र पाण्डेय ने दीर्घकालीन ऋण योजनाओं की जानकारी दी। छत्तीसगढ़ राज्य सहकारी संघ मर्यादित रायपुर के उपाध्यक्ष श्री दिलीप पाणीग्रही ने कहा कि सुगंधित धान ओर बदंरग धान का प्रसंस्करण सहकारिता के माध्यम से होना चाहिए। इस सत्र में नागरिक सहकारी बैंक, रायपुर की अध्यक्ष श्रीमती सत्यबाला अग्रवाल ने भी विचार व्यक्त किये। सत्र का संचालन भारतीय राष्ट्रीय सहकारी संघ, नई दिल्ली के निदेशक श्री मोहन मिश्रा ने किया।

**समापन**

राष्ट्रीय संगोष्ठी का समापन भारतीय राष्ट्रीय सहकारी संघ, नई दिल्ली के अध्यक्ष डॉ. चन्द्रपाल सिंह के मुख्य आतिथ्य एवं कुलपति डॉ. एस. के. पाटील की अध्यक्षता में किया गया। मध्य क्षेत्र सहकारी सम्मेलन की अनुशंसाओं को भारतीय राष्ट्रीय सहकारी संघ, नई दिल्ली के मुख्य कार्यकारी डॉ. दिनेश ने प्रस्तुत करते हुये कहा कि:

- कमजोर सहकारी समितियों के लिए राज्य सरकारों द्वारा कोष स्थापित किया जाना चाहिए।
- अंतर्राष्ट्रीय सहकारी वर्ष-२०१२ के अवसर पर सहकारी मेले आयोजित किये जायें।
- वर्ष २००४ के पहले सहकारी समितियों को आय कर नहीं देना पडता था, वर्तमान में आयकर से रियायत दी जाये।
- विद्यालयों में कक्षा १२ वीं तक सहकारिता अनिवार्य विषय हो।
- रेल्वे आदि में श्रमिक सहकारिता द्वारा रोजगार उपलब्ध कराया जाये।
- आवास सहकारी संस्थाओं को कम से कम ३० प्रतिशत भूमि उपलब्ध करायी जाये।

# Cost analysis and Profitability of major rabi and kharif crops in Madhya Pradesh

Shri H. K. Niranjan*
Shri B.B.Beohar*
Ms. S.C.Meena*
Shri S.K.Singh*

Agriculture plays a dominant role in the Indian economy. From the human civilization with the progress of agricultural practices, human are directly or indirectly depend upon agriculture. The farming society in our country is not homogenous in respect of social, economic and other developmental process. Apart from the economic differentiation arising from land ownership, productivity and application of improved production technologies, there are the socio-economic gradations resulting from the deep rooted farming system. Agriculture is now growing on industrial footing. The present trend of population growth is putting heavy pressure on agricultural land, especially on the face of fact that with the growth of industries and civilization everything is increasing except agricultural land. The only alternative for boosting our economy now rests with increasing productivity on whatever land is available. The improved agricultural technology is based on high yielding variety seeds, heavy dose of fertilizer, frequent irrigation and use of insecticides and pesticides, which involve heavy expenditure towards production and created doubts in the mind of farmers, whether the adoption of improved technologies is actually beneficial to the cultivator or not? Or it may be said that whether improved technology giving better returns to the cultivators in proportion to investment made on their farm. In present study with the view of above statements, the emphasis has been given as to know that how many of these improve practices are being adopted by the respondents and what is the effect of these on agricultural production, employment and income. The study is paramount important to show the change occurred due to different dimensions as the rapid advancement of technological knowledge will become the part of the farming community. The result of this study will become a base for future technological adoption

* Department of Agricultural Economics & FM, JNKVV, Jabalpur (M.P.)
E-Mail: agrianss@gmail.com

which would lead to further progress in agricultural production.

## MATERIALS AND METHOD

The primary data was recorded on general information of respondents and regarding their farm economy. The data was also collected regarding input utilization pattern in production of these crops and their respective yield. The required secondary data was collected from Department of Agriculture, and other statistical data were collected through published record of Statistical Department.

The design of the study was three stages stratified sampling. Out of 9 blocks in Rewa district, Rewa block was purposively selected due to well acquaintance of the researcher about the area. The selection of villages was made from a list of villages in the block which was prepared with their respective irrigated area under cultivation. Among these villages three villages having higher percentage of the cropped area under irrigation namely Khaddi, Ajgahara and Tola Ram Pyare were selected for present study, The list of all viable farmers in the selected villages was prepared. Further, these cultivators were categorized into three different size groups i.e. 1.00 to 2.00 ha. (Small), 2.00 to 5.00 ha. (Medium) and more than 5.00 ha. (Large) size groups respectively.

### Statistical tools

Collected data was edited and checked for their adequacy and accuracy. The classified and tabulated data was further processed in terms of average and percentage to arrive at conclusive figures for interpretation of data. In present study following statistical and econometrics tools were used.

### Profitability concepts

For the estimation of profitability, the following efficiency measures were used in this study:

$$\text{Cost of production (₹ /quintal)} = \frac{\text{Total cost (Cost C3)-Value of by product}}{\text{Main product}}$$

### Profitability Concept

For estimation of farm profitability the following income measures were used.

1. Net Farm Income = Gross Income - Cost $C_3$
2. Farm Business Income = Gross Income - Cost $A_1$
3. Family Labour Income = Gross Income - Cost $B_2$
4. Benefit cost ratio = $\frac{\text{Gross income}}{\text{Gross expenses}}$

**Results and discussion**

**Economic analysis of different crops on adopters and non-adopters farms:**

Return from paddy production

Paddy has become very popular and common kharif crop growing in the area. It was found that on an average 33.47% of total gross cropped area was captured by the paddy in the farm of selected farmers under study. The table 2(a) represented the detail analysis of economic of production of paddy and wheat on the sample farmers in different size of group as well as to show the variation accord in the costs on the farm of adopter and non-adopter farm situations.

The average gross return from cultivation of paddy on adopter farm was found to ₹20138 per hectare which gave the net return to the average ₹8926 per hectare. The return found to decrease with decrease in size of farm due to lower yield on per unit of area which was caused by the lower use of yield attributing inputs on small and medium farm respectively. The average benefit cost ratio of paddy cultivation was found to 1.80. It is interesting to note that on investment of per ₹ the return was found to increase with decrease of size of holding. On the other hand the gross return from non-adopter farms of paddy cultivation was found to on an average ₹17031 with the net return of ₹7300 and 1.75 of cost benefit ratio respectively. The return on different size group shows that the large farms produced highest return.

The level of output on adopter farm situation was maximum i.e. 20.78 quintal per hectare with large farm to 18.95 quintal/hectare with small farm size and average yield was obtained 19.58 quintal / hectare. This was found quite satisfactory and reasonable with the adoption level of improved technology used in paddy production. The average productivity of paddy on non-adopter farm was quite below than the obtained from adopter farm i.e.16.53 quintal per hectare. The yield was found to decrease with the decrease in the size of holding. This was mainly due to lower use of yield attributing inputs by small and medium farmers in the area.

**Return from wheat production**

The average gross return from cultivation of wheat on adopter farm was found to ₹26926 per hectare which gave the net return to the average ₹14056 per hectare. The return found to decrease with

decrease in size of farm holding due to lower yield on per unit of area which was caused by the lower use of yield attributing inputs on small and medium farm respectively. The average benefit cost ratio of wheat cultivation was found to 2.08. It is interesting to note that on investment of per rupees the return was found to increase with increase of size of holding. On the other hand the gross return from non-adopter farms of wheat cultivation was found to on an average ₹22214 with the net return of ₹11072 and 1.99 of cost benefit ratio respectively. The return on different size group shows that the large farms produced highest net return and higher benefit cost ratio also.

The level of output on adopter farm situation was maximum i.e. 25.31 quintal per hectare with large farm to 20.80 quintal per hectare with small farm size and average yield was obtained 23.27 quintal per hectare. The average productivity of wheat on non-adopter farm was quite below than the obtained from adopter farm i.e.19.15 quintal per hectare.

## Return from gram production

Data in Table 2(b) presents the average gross return from cultivation of gram on adopter farm was found to ₹23226 per hectare which gave the net return to the average ₹11955 per hectare. The

**Table: 2(a), Economics of Paddy and Wheat production on different size groups.**

(₹/hectare)

| Cost particulars | Paddy | | | | | | | | Wheat | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Size group (Adopter) | | | | Size group (Non-Adopter) | | | | Size group (Adopter) | | | | Size group (Non-Adopter) | | | |
| | Small | Medium | Large | Average | Small | Medium | Large | Average | Small | Medium | Large | Average | Small | Medium | Average | Medium |
| Cost of cultivation (₹) | | | | | | | | | | | | | | | | |
| Cost C3 | 10441 | 10847 | 12348 | 11212 | 8958 | 9592 | 10642 | 9730 | 11773 | 12980 | 13856 | 12870 | 10056 | 11256 | 12113 | 11142 |
| Total yield (quintal) | | | | | | | | | | | | | | | | |
| Main product | 18.95 | 19.02 | 20.78 | 19.58 | 15.26 | 16.42 | 17.90 | 16.53 | 20.80 | 23.72 | 25.31 | 23.27 | 18.10 | 29.25 | 20.10 | 19.15 |
| By product | 37.50 | 38.10 | 42.27 | 39.60 | 30.00 | 33.40 | 34.10 | 32.50 | 38.10 | 44.30 | 45.72 | 42.70 | 34.30 | 35.32 | 38.10 | 35.91 |
| Gross income (₹) | 19160 | 19629 | 21626 | 20138 | 15707 | 16955 | 18430 | 17031 | 24128 | 27278 | 29372 | 26926 | 20996 | 22330 | 23316 | 22214 |
| **Net income (₹)** | **8719** | **8782** | **9278** | **8926** | **6749** | **7363** | **7788** | **7300** | **12355** | **14298** | **15516** | **14056** | **10940** | **11074** | **11203** | **11072** |
| **Benefit cost ratio** | **1.83** | **1.80** | **1.75** | **1.80** | **1.75** | **1.77** | **1.73** | **1.75** | **2.04** | **2.10** | **2.11** | **2.08** | **2.08** | **1.98** | **1.92** | **1.99** |
| **Labour income (₹)** | **2807** | **2599** | **2823** | **2743** | **2541** | **2334** | **2487** | **2454** | **2926** | **3021** | **2994** | **2980** | **2631** | **2792** | **2799** | **2741** |

return found to decrease with decrease in size of farm due to lower yield on per unit of area which was caused by the lower use of yield attributing inputs on small and medium farm respectively. The average benefit cost ratio of gram cultivation was found to 2.06. The highest benefit cost ratio of this crop was found to 2.09 in case of medium farm. On the other hand, the gross return from non-adopter farms of gram cultivation was found to on an average ₹18732 with the net return of ₹9658 and 2.06 of cost benefit ratio respectively. The return on different size group shows that the large farms produced highest return.

The level of output on adopter farm situation was maximum i.e. 11.93 quintal per hectare with large farm to 10.25 quintal per hectare with small farm size and average yield was obtained 11.06 quintal per hectare. The average productivity of gram on non-adopter farm was quite below than the obtained from adopter farm i.e.8.92 quintal per hectare. The yield was found to decrease with the decrease in the size of holding.

## Suggestions

1. The result of the study showed that adoption of new agricultural technology has lagged far behind and only small proportions of the farmers have adopted on their farms. The crop productivity could be increased in the area through the higher adoption of improved inputs and practices. For that purpose required amount should be financed by the financing agencies.

**Table: 2 (B), Economics of gram production on different size groups.**

(₹/hectare)

| S.N. | Particular | Size group (adopter) | | | | Size group (Non adopter) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Small | Medium | Large | Average | Small | Medium | Large | Average |
| | Cost of cultivation (₹) | | | | | | | | |
| | Cost C3 | 10170 | 11037 | 12606 | 11271 | 8310 | 9206 | 9707 | 9074 |
| | Total yield (quintal) | | | | | | | | |
| A. | Main product | 10.25 | 11.00 | 11.93 | 11.06 | 8.10 | 8.95 | 9.70 | 8.92 |
| B. | By product | 11.10 | 12.90 | 13.42 | 12.47 | 9.20 | 9.49 | 10.21 | 9.63 |
| 3. | Gross income (₹) | 21525 | 23100 | 25053 | 23226 | 17010 | 18795 | 20370 | 18732 |
| 4. | Net income (₹.) | 11355 | 12063 | 12447 | 11955 | 8700 | 9589 | 10663 | 9658 |
| 5. | Benefit cost ratio | 2.11 | 2.09 | 1.99 | 2.06 | 2.04 | 2.04 | 2.09 | 2.06 |
| 6. | Labour income (₹) | 2569 | 2516 | 2564 | 2550 | 2172 | 2137 | 2092 | 2134 |

2. The technological development involves a fair balance between welfare and productive services. This feature departs a great deal from the present methods of cultivation and allocation of resources on redrawn priorities. Hence, farmers should given priority to use their resources on the basis of economic viability with proper management of their farm.

3. Social services in respect of agricultural development such as education, training and other extensive activities have a strong case both on economic and welfare grounds. But if they do not lead to productive efficiency then they are sterile and consume an over increasing recurrent allocation causing depletion of resource for productive purposes. Hence, even in the sphere of education and extension works emphasis needs to be laid on enhancing productive capacity of the population and the agricultural field.

4. The extension worker and agencies engaged in extension activities must be strengthened for advocating adopting improved technology on their farms. They should be exhibited the impact of improved technology on farmers field. This process will be helpful in solving food scarcity and unemployment problems in the area.

**References**

Kawadia,G. (1986). Contribution of HYV programme to the growth of agricultural output in Madhya Pradesh. Agricultural Situation in India. 41(4): 209-212.

Rathore,B.S. and Patel,R.K. (1966) "Returns to investment in Agricultural research for technological change". I.J.A.E. 21 (1):197-140.

Sharma,R.P. and Kushwah,S.S. (2003). Impact of first line demonstration of mustard on yield, technological gap and extension gap. Bhartiya Krishi Anusandhan Patrika. 18 (3/4): 130-134.

Singh,S.P.; Shrikant Chitle; Patel,J.R.; Shrivastava,S.K. and Ashish-Thakre (2002). Effect of improved and farmer's techniques on the grain yield and economics of soyabean. Bhartiya Krishi Anusandhan Patrika. 17(2/3): 160-163.

Singh,R.P. (1972). "Impact on new technology on efficiency of resources use on small farms". I.J.A.E.: 263.

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# Role Of National Rural Employment Guarantee Act (NREGA) in Socio-Economic Development In Hoshiarpur District Of Punjab

Dr. Sukhdev Singh*
Ms. Neha Wasal **
Shri Nirmal S Jaura***

## Introduction

Socio-economic development of weaker sections of the society has been the prime agenda of the government formed after independence in India. Right from the Community Development Programme till Swarnjayanti Gram Swarozgar Yojana , there is a long list of rural development programme implemented in India for socio-economic welfare of the rural people. As the benefits of rural development programmes were not percolating down, target group approach was followed by the government and more attention was given towards the poorer sections of the countryside since 1970 (Vanaik 2008). All the rural development programmes implemented till 2006 showed some achievements during their times but no programme could give guarantee regarding to the employment. With a view of provide guaranteed employment, Indian government started National Rural Employment Guarantee Act (NREGA), presently known as Mahatama Gandhi National Rural Employment Guarantee Act (MGNREGA). Under this Act, there is a legal guarantee for 100 days employment in a financial year to at least one member of every household whose adult member volunteer to do unskilled manual work at the minimum wage rate prescribed in a State or else an unemployment allowance to enable them to achieve socio-economic betterment (Singh 2006; Roy 2007; Jha et al 2008). In the first phase, NREGA was implemented in 200 most backward districts of India. In 2007, it covered another 130 districts and from April, 2008, this Act is implemented in all the districts of the country (Vanaik 2008).

In this paper an effort is made to assess the role of National Rural Employment Guarantee Act (NREGA) in socio-economic development in Hoshiarpur District.

*Professor of Sociology **Research Student, Deptt. of Eco & Sociology, PAU, Ludhiana
***Dy Director, Centre for Communication & International Linkages, PAU, Ludhiana

**Objectives of the Study**

1. To study procedural efficiency of NREGA and major works undertaken in this programme.
2. To assess the role of NREGA in socio-economic development of the beneficiaries.
3. To identify the factors which hamper NREGA's success and reasons for not joining this programme.
4. To render suitable suggestions for further improvement in the NREGA programme.

**Methodology and Sample**

This paper is based on the study conducted in Hoshiarpur district . This district was chosen purposively as it was the first district of Punjab where NREGA programme was launched in 2006. Of all the ten blocks of Hoshiarpur district two blocks namely Tanda and Dasuya were selected for study. Dasuya block was having the highest number of beneficiaries while Tanda possessed less number of NREGA beneficiaries at the time of study. Two villages each namely Harsi Pind and handali Narungpur from Tanda block and Badla and Dadiyal from Dasuya block were taken randomly. From the lists of NREGA beneficiaries of selected blocks and villages, 60 beneficiary respondents (30 from each block) were selected. Further, 60 non beneficiaries respondents who were possessing by and large and similar socio-economic characteristics but did not join NREGA, were selected for data collection. Data were collected personally with the help of a structured and pre-tested interview schedule. Some tables are not given in the text for sake of brevity.

As regards the sample of respondents the socio-economic characteristics of them indicated that most of the beneficiary respondents were between 31-40 years, hailed from Hindu religion and Sikh religion, were from Schedule Caste. As far as education level for concerned, it was found from the data that 46% of the beneficiaries were illiterate and 18% of the beneficiaries were matriculate. On the other hand 35% of non-beneficiaries were matriculate. More than half (65%) of the beneficiary respondents held that they were having annual income of ₹10000-15000 while 70 per cent of the non-beneficiaries were having annual income of more than ₹250000. Most of the respondents were living in nuclear families. The data pertaining to beneficiaries of NREGA indicated

that benefits of this programme are, by and large, going to the deserving ones.

**Findings of the study**

**1. Source of awareness regarding NREGA & main person who helped**

What was the source of information about NREGA who helped them for getting work in it ? This question was put to the respondents and the data (T.1) revealed that majority of respondents (63.33%) got to know about NREGA from Sarpanchs of their respective villages while 35 % of the respondents got this information through their friends and 1.67% respondents came to know about this Act through relatives. Overall data is indicated that village Sarpanch proved to be the main source of awareness about NREGA programme. Another issue which probed during study was the person who helped the beneficiaries to join NREGA programme and the data in this regard indicated that a large number of respondents (88%) were helped/encouraged by village Sarpanch to join NREGA programme. While 6.67% of respondents were also encouraged by State Employment Guarantee Council (SEGC) and only 5% were encouraged by the fellow villagers of the beneficiaries. Overall data indicated that village Sarpanch was main person who helped NREGA respondents to join the programme.

**Table 1. Sources of awareness about NREGA and main person who helped.**

**Source of awareness about NREGA**

| Source | Number | Percentage / Rank |
|---|---|---|
| Relatives | 1 | 1.67 (3) |
| Friends | 21 | 35.00 (2) |
| Sarpanch | 38 | 63.33 (1) |
| Total | 60 | 100.00 |
| **Main person who helped to contact NREGA** | | |
| **Particulars** | **Number** | **Percentage/ Rank** |
| Fellow villagers | 3 | 5.00 (3) |
| Village Sarpanch | 53 | 88.33 (1) |
| SEGC | 4 | 6.67 (2) |
| Total | 60 | 100.00 |

**Time in getting work under NREGA**

As per NREGA Act, beneficiaries of NREGA programme can get work within 15 days from the application submitted for seeking under NREGA. During the field work efforts were made to find out whether the beneficiaries got the desired work within the strive limit or not. It came out that only a negligible (3.33%) percentage of respondents got work within 15 days while 1/3rd of the respondents got the work within 15 to 30 days and majority of them (63.33%) took much longer time i.e. more than 30 days to get the work under NREGA which indicated beneficiaries of NREGA waited for long time to get the work under NREGA programme.

**Table 2 Time in getting work under NREGA**

| Time (Days) | Number | Percentage |
|---|---|---|
| | | |
| Up to 15 days | 2 | 3.33 |
| 15-30 days | 20 | 33.33 |
| More than 30 days | 38 | 63.33 |
| **Total** | **60** | **100.00** |

Z-value (<30 vs >30days) = 2.92***

**Kind of works under NREGA**

What kind of works are being done under NREGA in the area of study? An effort was made to know the ground reality. Data indicated that majority of the respondents (66.66%) were engaged in rural connectivity works like construction and repair of link roads etc. Hoshiarpur district bears different type of topography in Punjab where water conservation is also one of the important issues. So, these type of works were expected and it was supported by data also. About 11.66% of the respondents were found engaged in work of plantation usually on road side or the open public places.13.33% of the respondents were engaged in cleanliness of village and ponds. Overall data indicated that most of the respondents were engaged in the works of construction and maintenance of rural roads followed by water conservation and plantation.

**Table 3 Distribution of respondents according to work under NREGA**

| Kind of work | Number | Percentage | Rank |
|---|---|---|---|
| Rural connectivity | 40 | 66.66 | (1) |
| Water conservation | 5 | 8.33 | (4) |
| Plantation | 7 | 11.66 | (3) |
| Cleanliness of village and ponds | 8 | 13.33 | (2) |
| **Total** | **60** | **100.00** | |

**Area and distance of work under NREGA:** As per the NREGA Act, work should ordinarily be provided

within 5 km radius of the village. In case work is provided beyond 5 km, extra wages of 10% are payable to meet additional transportation and living expenses. The data collected on this question showed that a large majority (97%) of the beneficiaries of NREGA were engaged in work in their respective village whereas only a few of them had to go for work outside their village. Overall data is indicative that beneficiaries of NREGA programme were getting works in their respective villages

**Table 4 Distribution of respondents according to area and distance for work under NREGA**

| Works | Number | Percentage |
|---|---|---|
| Within your village | 58 | 96.67 |
| Within the radius of 5km | 2 | 3.33 |
| Out of the radius of 5km | - | - |
| **Total** | **60** | **100.00** |

**Wage rate, regularity and wage rate for men and women:** What is the wage rate of work under NREGA? Whether the people get regular of that work? These questions were also probed and the responses given in Table 3. All the respondents informed that they were getting wages as provided under Act i.e.₹123/- for a day and it was also encouraging that most of the beneficiaries (88.33%) were getting their wages regularly while 12 per cent told that there was irregularity in getting wages. On the question of difference in wages of men and women, it came out that all the beneficiaries were getting equal wages irrespective of their gender.

**Table 5 Distribution of respondents according to wage, regularity and wage rate.**

| Wage rate (₹/day) | ₹123 | |
|---|---|---|
| **Wage paid on time** | **Number** | **Percentage** |
| Yes | 53 | 88.33 |
| No | 7 | 11.66 |
| **Wage rate for men and women under NREGA** | | |
| Yes | 60 | 100 |
| No | - | - |

**Occupational change after joining NREGA:** One of the important issues of this study has been to assess whether there was occupational mobility among the beneficiaries of NREGA? To this 8.33% (Table 6) of the respondents said that they use to do work in the fields of farmers in the village before joining NREGA, now NREGA beneficiaries have been experiencing freedom from the farmers. More then1/5th of the beneficiaries was unemployed before joining NREGA. Now they have become part of NREGA schemes. After joining

**Table 6 Distribution of respondents on the basis of occupational change after joining NREGA.**

| Main means of income | Before | | After | | Z-value |
|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | |
| Agricultural labour | 5 | 8.33 | 1 | 1.67 | 1.67NS |
| Unemployed | 14 | 23.33 | 0 | 0.00 | 3.98*** |
| labour | 41 | 68.33 | 59 | 98.33 | 4.41*** |
| **Total** | **60** | **100** | **60** | **100** | |

NREGA 98.33% of the respondents were engaged in labour work. It seems an encouraging fact that NREGA started involving unemployed persons in productive works.

## Priority to spend money

Priorities of different respondents differ with their income. It was quite important to know about the priority to spend the money which they got through NREGA wages. During the course of study it was found that more than half of the respondents (58.33%) were willing to spend their income through NREGA on their household needs, as it was the main need of their family to be fulfilled. 11.67% answered that their main priority to spend the money on sanitation, 10% wanted to spend their money on health facility while an equal per cent of respondents gave priority to education and social ceremonies. So, it can be concluded that most of the respondents wanted to spend their wages which they get from NREGA on household needs and allied needs.

**Table 7 Distribution of respondents on the basis of their priority of spending their money.**

| Priority to spend NREGA income | Number | Percentage | Rank |
|---|---|---|---|
| Health facilities | 6 | 10.00 | (3) |
| Education | 6 | 10.00 | (3) |
| Sanitation | 7 | 11.67 | (2) |
| Household needs | 35 | 58.33 | (1) |
| Social ceremonies | 6 | 10.00 | (3) |
| **Total** | **60** | **100** | |

**Impact of NREGA on Economic aspect of beneficiaries**

Table 8 indicate the economic impact of NREGA on the beneficiaries of NREGA. Data indicated that 58.33% beneficiary respondents felt that main economic impact of NREGA had been the increase in their wage rate. Now they get more wages under NREGA. It was also tried to know whether beneficiary respondents had created some durable assets with the help of NREGA and the data indicated that 11.66% of the beneficiary respondents opined that they were able to create assets with the help of NREGA, mean they can have economic benefits from created assets. During the field work respondents replied that relief from economic dependence on others have given them a sense of confidence. Similarly economic independence was also found to be encouraging as 28.33% of the beneficiary respondents replied that now they feel more economically independent. Data show that 21.66% of the beneficiary respondent felt that dependence on the farmers has reduced due to NREGA. 11.66% of the beneficiary respondents told that it had increased the employment opportunities which give them more chance to earn. They were getting more options to choose where they want to work. 11.66% of the beneficiary respondents opined that it had reduced their indebtedness. Amount of debt had decreased after getting engage with NREGA. Further 6.66% of the beneficiary respondents replied that its main economic impact was that it increased the rural connectivity through which they were getting more chance to connect with world. Whereas 8.33% of beneficiary respondents

**Table 8 Distribution of respondents on the basis of economic impact of NREGA (Multiple Responses)**

| Economic impact | Beneficiaries | Rank |
|---|---|---|
| Shift in mode of labour | 05(8.33) | 6 |
| Dependence on farmers has reduced | 13(21.66) | 4 |
| Daily wage rate has gone up | 35(58.33) | 1 |
| Demand for labour has increased | 15(25.00) | 3 |
| Opportunities of work have increased due to NREGA | 07(11.66) | 5 |
| Increase in durable assets | 07(11.66) | 5 |
| Increase in rural connectivity | 04(6.66) | 7 |
| More economic independence | 17(28.33) | 2 |
| Decrease in indebtedness | 07(11.66) | 5 |

opined that it had shifted the mode of labour. On the whole data indicated that after joining NREGA, beneficiaries under the study area recognized it as a good act which increased the wage rate, the economic independence, rural connectivity, durable assets, reduced indebtedness, and created more job opportunities for the people.

**Social impact:** Social development of the beneficiaries through economic development have been one of the important objectives of by and large all the rural development programs started by Indian government from time to time. NREGA contains some optimistic objectives in which social impact and social objectives have a special place. The result discussed in the Table 9 indicated that 38.33% of the beneficiary respondents felt really better as far as their work or job is concerned 25% of the beneficiary respondents told that now they feel more socially recognized. Now many people know about them and their activity and show more interest in interacting with them. Data further show that 28.33% of the beneficiary respondents recognized social equality as the most important social impact of NREGA on the respondents. Every person has a particular place in this society. The person who is earning will have more respect in the society. Now beneficiary respondents felt that they get equal place in the society. And they can contribute more to the society because their interaction has also increased now. On the issue of empowerment to the women 26.66% respondents opined that it has empowered women. After joining NREGA women's participation in social activities had been increased to a good extent and this encourage women empowerment in our society. Women respondents told that they become more self dependent now.

Study further revealed that change in social status of poor people had become possible through this act. 16.66% of the beneficiary respondents felt that it has changed the social status. As it is known that social status of a person depends on many aspects, but economic empowerment is very important for social aspect. Joining of NREGA further showed encouraging results as 25% of the beneficiary respondents told that their inter personal relationships has become good after joining NREGA group. Data showed that 16.66% of beneficiary respondents felt that it

had also affected the occupational change of poor people. 30% of the beneficiary respondents opined that NREGA gave a right to live with self respect which was also the main social impact. Had respondents felt any change regarding their standard of living after joining NREGA? Yes, in case of 26.66% of the beneficiary respondents felt a positive change in their standard of living, as there was improvement in their houses, sanitation conditions, medical facilities etc. This was largely attributed to the change in their economic position after joining NREGA. Thus, on the whole results show that after joining NREGA respondents felt more confident as it had removed idleness of most of the respondents which directly or indirectly improve the living standard of the respondents. It provided a feeling of equality to the respondents and their social status increased. Their inter personal relationships had become good.

**Factors responsible for NREGA's failure**

During the course of study efforts were made to pin point the factor responsible for leading NREGA towards failure and the response in this regard is given in Table 10. Data revealed that less wage rate was the prime cause of failure. Data further showed that 23.33% of the respondent's perceived NREGA wage is less. 20% of the respondents said that irregularity of work was another cause of NREGA's failure. About 15% of the respondents opined that less

**Table 9 Impact of NREGA on the social aspects of the beneficiaries. (Multiple responses)**

| Social impact | Beneficiaries | Rank |
|---|---|---|
| Social recognition | 15(25.00) | 5 |
| Feeling of equality in society | 17(28.33) | 3 |
| Women empowerment | 16(26.66) | 4 |
| Occupational change | 10(16.66) | 6 |
| Change in social status of poor people | 10(16.66) | 6 |
| Right to live with self respect | 18(30.00) | 2 |
| It removes idleness | 23(38.33) | 1 |
| Better inter-personal relationships | 15(25.00) | 5 |
| Good standard of living | 16 (26.66) | 4 |
| Participation in social activities | 10 (16.66) | 6 |

**Table 10 Factors responsible for NREGA's failure**

**Multiple responses**

| Factors for NREGA'S failure | Number | Percentage | Rank |
|---|---|---|---|
| Irregularity of work | 12 | 20.00 | 2 |
| Less wage rate | 14 | 23.33 | 1 |
| Less interest of workers in NREGA work | 9 | 15.00 | 4 |
| Social barriers | 10 | 16.66 | 3 |
| Lack of adequate work | 6 | 10.00 | 5 |
| Biasness in distributing work by sarpanch or village leader | 6 | 10.00 | 6 |
| Lack of facilities at work site | 3 | 5.00 | 7 |

interest of worker in NREGA work was also main reason of its failure. Whereas 16.66% of the respondents told that social barriers had been the biggest hurdle in joining NREGA. 10% of the respondents told that the biasness in distributing work was also main factor of its failure. While 10% of the respondents replied that there was lack of adequate work and 5% replied that lack of facilities at work site (particularly for women) was also one of the important failure factors for NREGA.

**Reason of not joining NREGA**

Efforts were made to pin point the reason for not joining the NREGA programme by the respondents and the data in regard is presented in Table 11. The result showed that 28% of the non beneficiary respondent did not join NREGA after observing irregularity in the NREGA works; 1/4th each of the respondent attributed less wage rate and social inhibitions to work in village as main reason for not joining NREGA programme. 21% of the respondents held that they did not join NREGA as their were some problem at village panchayat level.

**Perception of non-beneficiaries**

During the course of study efforts were made to know the perceptions

**Table 11 Reasons for not joining NREGA (non-beneficiaries).**

| Reason | Number | Percentage |
|---|---|---|
| Less wage rate | 15 | 25.00 |
| Irregular work | 17 | 28.33 |
| Problems at village panchayat level | 13 | 21.66 |
| Social inhibition | 15 | 25.00 |
| **Total** | **60** | **100.00** |

**Table 12 Perceptions of non beneficiaries about NREGA (Multiple responses)**

| Perceptions | Yes | No | Z-value |
|---|---|---|---|
| Fulfillment of responsibilities without NREGA | 42(70%) | 18(30%) | 4.38*** |
| NREGA would have helped to fulfill their responsibilities | 29(48.33%) | 31(51.67%) | 0.36NS |
| NREGA payment is sufficient or not? | 43(71.67%) | 17(28.33%) | 4.75*** |
| Proper guidance for NREGA provided to them | 40(66.67%) | 20(33.33%) | 3.65*** |
| NREGA could have changed their status | 22(36.67%) | 38(63.33%) | 2.92*** |
| Helpful in reducing distress migration | 45(75%) | 15(25%) | 5.48*** |
| Helpful in reducing indebtedness | 43(71.66%) | 17(28.33%) | 4.75*** |
| Economic independence to women | 36(60%) | 24(40%) | 2.19** |
| Increase in purchasing power | 41(68.33%) | 19(31.67%) | 4.02*** |
| NREGA is beneficial or not? | 33(55%) | 27(45%) | 1.10NS |

of the non beneficiary respondents regarding NREGA programme. To the various queries 70% opined that they were able to earn their livelihood and meeting socio-economic needs from the other sources hence they did not join NREGA programme. Also they attributed non proper guidance (72%) as main reason for not joining NREGA programme. On the positive aspect 3/4th of the non beneficiary respondents maintained that NREGA seems helpful in reducing indebtedness of the people. Further they also told that the arrival of NREGA programme is providing independence to the women in the village and also increasing the purchasing power. 55% of the respondents viewed NREGA programme as beneficial one for the people. However 72% of the respondents told that wages given under NREGA are not sufficient.

## Conclusion and suggestions

The study revealed that village Sarpanch proved to be the main source of awareness about NREGA programme and helped the respondents in getting works under this programme. As regards the state machinery's role, only 6.67% of respondents were also encouraged by State Employment Guarantee Council (SEGC) and 5% were encouraged by the fellow villagers of the beneficiaries for getting work under NREGA. A few of the beneficiaries (3.33%) got work within the stipulated time i.e. 15 days while1/3rd of the respondents got the work within 15 to 30 days and a vast majority of them (63.33%) took much longer

the work under NREGA which indicated beneficiaries of NREGA waited for long time to get the work under NREGA programme. Rural connectivity, cleanliness of village and ponds, plantation and water conservation were the major works in which NREGA beneficiaries were engaged and most of them got work within their own village. Three fourth of the respondents work for 15 days in a month under NREGA while 22% informed that they work for 12 days in a month under NREGA. Majority of the respondents opined that the wages under NREGA were paid on time and the wage rate was same for men and women under NREGA. Most of the beneficiaries experienced occupational mobility with the arrival of NREGA programme. To meet the household needs, followed by the health, education and sanitation were the priority areas for spending the money by the respondents. One of the important economic impact of NREGA has been the increase in wage rate and demand of the labour has increased and lot of women are also getting benefits from this programme. 1/3rd of the respondents experienced economic independence after joining this programme while 1/5th held that dependence on farmers has reduced. As regards the social impact NREGA programme proved helpful in removing idleness and beneficiaries experienced increased social recognition, self respect and improved living standard. Less wage rate, irregular and inadequate work, less interest of worker in NREGA, social inhibitions, lack of facilities at site of work were major factors making the NREGA a non-success. On the issue of non joining to NREGA by the respondents data revealed that less wage rate, irregular works and social inhibition to work in own villages were major reasons for not joining the NREGA programme though they perceived this programme a good one which may prove beneficial to the needy in many ways. On the basis of the study some suggestions are being made which may be helpful to improve the functioning of the NREGA

1. The grants for NREGA programme should be sanctioned regularly and timely so that interest of people should be maintained because many people join other works in absence of regular under NREGA programme.
2. Wage rate under NREGA programme should be increase to attract the people in the programme as most of the non

beneficiaries did not join NREGA programme largely due to less wage rate under NREGA. Wages should be fixed in between ₹225 to 250 per day.

3. Appropriate work should be generated under NREGA programme so as to make this programme beneficial for the society.

**REFERENCES**

Bhai L T, Karuppiah C and Geetha B (2004) Micro credit and social capitalism in rural Tamil Nadu. Social Welfare 50 (10): 30-35.

Bakshi D C (2007) Religious Shrines and Rural Employment: Yojana 51(2): 68-69.

Chakraborty P (2007) Implementation of Employment Guarantee: A Preliminary Appraisal. Econ and Pol Weekly XLII (6) 548-51.

Dreze J (2007) Employment Guarantee. Yojana 51(1):80.

Jha R, Gaiha R and Shankar S (2008) Reviewing the National Rural Employment Guarantee Programme. Econ and Pol Weekly XLII(11): 44-47.

Khera R (2008) Empowerment Guarantee Act. Econ and Pol Weekly XLIII (34): 8-10.

Mathur L (2008) Fulfilling the Promise: Yojana 52 (8): 5-8.

Mandal K S (2009) Privatizing poverty alleviation: Towards Business Solutions for poverty. Poverty Unemployment and Rural Development Programmes.(ed). Ashish Vachhani , NK Kumaresen Raja, Centre of Rural Studies, Lal Bahadur Shastri National Acdemy of Administration, Mussoorie

Panda S (2007) Socio-economic profile and development of Tribes in Orissa. Kurukshetra 55(10): 31-38.

Roy R R (2007) Ensuring Employment to Rural People: Kurukshetra 55(3): 44-45.

Singh P (2006) National Rural Employment Guarantee Scheme- A Task Ahead. Kurukshetra 54(7): 42-47.

Saldi R (2007) Priorities for Rural Development: Kurukshetra 55(7): 33-35.

Tripathy I G and Tripathy K. K (2008) Rural Development. Yojana 52(8): 49-52.

Vanaik A (2008) Tale of Two Villages: Yojana 52(8): 15-17.

# एस. आर. आई. विधि द्वारा धान की खेती

एस. आर. आई. विधि से धान की खेती की विधि की निम्नलिखित विशेषताएं हैं:

**बीज की मात्रा:** एस.आर.आई. विधि में सिर्फ ५-७.५ किलोग्राम प्रति हेक्टेयर बीज की जरूरत पड़ती है जब की पारंपरिक तरीके में ५० किलोग्राम प्रति हेक्टेयर बीज लगता है.

**नर्सरी की तैयारी :** नर्सरी को सूखे में दो या तीन बार जुताई कर दें जिससे की मिट्टी हल्की तथा भुरभुरी बन जाए. इस विधि में नर्सरी की जगह ८०० वर्ग मीटर से घटकर १०० वर्ग मीटर ही रह जाती है. मिट्टी में ५० किलोग्राम सड़ा हुआ गोबर या ५० किलोग्राम वर्मीकंपोस्ट मिला दें.

**बीज का उपचार:** एक बाल्टी में दो भाग पानी डालें. फिर उसमें एक अंडा या आलू डालें. अंडा या आलू जब पानी में डूब जाए तब उसमें नमक डालकर घोल बनाया जाता है. जब अंडा या आलू पानी में तैरने लगे तब घोल को तैयार समझें. जितना धान ऊपर आए उसको निकाल कर बाहर फेंक दें फिर नमक के घोल से धान निकालकर बोरे पर या बाँस की टोकरी में फैला दें. धान में से जब पानी निकल जाये और सिर्फ नमी बची रहे तो प्रति किलोग्राम बीज में दो ग्राम विक्सरीनया विटैक्स हाथ से मिलाकर जूट के बोरे में बांधकर ठंडी जगह में रख दें, २४ घंटे के बाद बीज अंकुरित होने लगेंगे. अब अंकुरित बीज को प्रत्येक बेड में १/२ किलो के हिसाब से छींटना है. बीज के ऊपर सड़े हुए गोबर का चूड़ा या राख या वर्मोकंपोस्ट छींट दें ताकी धान दिखाई न दे और धान चिडिया न खाएं.

**खेत की तैयारी:** इस विधि में परंपरागत विधि के समान ही खेत की तैयारी की जाती है, लेकिन खेत को समतल करना जरूरी हो जाता है. पौध रोपने के १२ से २४ घंटे पूर्व खेत की तैयारी करके खेत में पानी दें. ध्यान रहे कि खेत में तीन सेंटीमीटर से ज्यादा पानी नहीं रखना चाहिए ताकि निशान लगाने में कोई असुविधा न हो. पौधा रोपण से पूर्व खेत में मार्कर से १० x १० इंच की दूरी पर निशान लगा दिए जाते हैं. निशान लगाने का कार्य पौधा रोपने से छह घंटे पहले ही कर लेना चाहिए.

**नर्सरी में से पौध उठाने का तरीका:** श्री (SRI) विधि में ७ से १४ दिन के पौधों को खेत में रोपा जाता है. जब पौधों में दो पत्तियां निकल आएं तो वे रोपण के लिए तैयार मानी जाएंगी. नर्सरी से पौधों को निकालते समय इस बात की सावधानी बरतें की पौधों के तनों और जड़ के साथ लगा बीज न टूटे. सावधानी से एक-एक पौधा अलग करें और उनका रोपण करें. ध्यान रहे नर्सरी से निकालने के एक घंटे के अंदर पौधा रोप दिया जाना चाहिए.

**पौधे लगाने की विधि:** पौधा रोपने के लिए हाथ के अंगूठे और तर्जनी का इस्तेमाल करें. खेत में लगाए गए निशानों की प्रत्येक चौकड़ी पर एक पौधा रोपा जाना चाहिए. नर्सरी से निकाले गए पौधे की मिट्टी धोएं नहीं. उसे ऐसे ही खेत में लगाएं. पौधा धान के बीज सहित लगाएं. पौधा ज्यादा गहराई पर न लगाएं, रोपण करने के अगले दिन खेत में हल्की सिंचाई करें.

**खरपतवार नियंत्रण:** इस विधि के अंतर्गत प्रभावशाली खरपतवार नियंत्रण के लिए हाथ से चलाए जाने वाले वीडरों का इस्तेमाल किया जाता है. वीडर चलाने से खेत की मिट्टी हल्की हो जाती है और इससे हवा का आवागमन ज्यादा होता है. इसके अतिरिक्त खेतों में पानी

सौजन्य:- सृजना

न भरने देने की स्थिति में खरपतवार उगने की संभावना अधिक होती है. खरपतवार को जमीन के अंदर दबा दिया जाए तो ये खाद का काम भी करती है जिससे भूमि में जैविक खाद की बढोतरी होती है. पौधे के आसपास की खरपतवार, जो लाइन में वीडर से छूट जाती है, उन्हें हाथ से निकाल लिया जाता है. पौध रोपण के पश्चात पंद्रहवें दिन वीडर चलाना चाहिये, दूसरी बार तीसवें दिन और तीसरी बार ४५ वें दिन वीडर चलाना चाहिये । वीडर के अधिकाधिक उपयोग से मिट्टी में जिवाणुओं की क्रिया में वृद्धि होती है और पौधों को अधिकाधिक मात्रा में पोषक तत्व मिलते हैं.

**सिंचाई एवं जल प्रबंधनः** श्री विधि के तहत खेत में पौध रोपने में बाद पर्याप्त नमी बनी रहनी चाहिए. इस प्रकार केवल इतनी भर कर रखने की आवश्यकता न पड़े. एक सिंचाई से दूसरी सिंचाई के बीच का समय भूमि के प्रकार एवं वर्षा के अनुसार तय किया जाना चाहिए. जब जमीन पर हल्का सा दबाव दिखाई दे तभी सिंचाई करनी चाहिए. वीडर चलाते समय खेत में १ से ३ सेंटीमीटर पानी होना चाहिए. बालियां निकलने से लेकर दाने बनने तक खेत में एक इंच पानी भर कर २० से २५ दिन तक रखना चाहिए. कटाई से २०-२५ दिन पूर्व सिंचाई बंद कर देनी चाहिए.

**कल्लों का निकलनाः** १८ से ४६ दिन के बीच धान के पौधे में सबसे ज्यादा कल्ले निकलते हैं क्योकि इस समय पौधों को धूप, हवा व पानी पर्याप्त मात्रा में मिलता है. अनुभवों के आधार पर यह पाया गया है कि जहां केवल एक ही बार वीडर का उपयोग किया गया है, वहां एक पौधे से निकलने वाले कल्लों की संख्या १५ से २५ थी. तीन बार वीडर का उपयोग करने पर एक पौधे से अधिकतम ८० तक भी कल्ले निकलते हैं.

**रोग व कीट प्रबंधनः** इस विधि के प्रयोग से रोग व कीटों का प्रकोप प्रायः कम होता है क्योंकि पौधे से पौधे की दूरी अधिक होती है और इसमें जैविक खाद का उपयोग किया जाता है. कीट प्रबंधन के लिए प्राकृतिक तरीकों व जैविक कीटनाशकों का इस्तेमाल किया जाना चाहिए.

**कटाईः** जब पौधों की कटाई की जाती है तो पौधे का तना हरा रहता है जबकि बालियां पक जाती हैं. बालियों की लंबाई व दानों का वजन परंपरागत विधि की अपेक्षा ज्यादा होता है. बालियों मे खाली दानो की संख्या कम होती है.

**श्री विधि से लाभः**

- बीज बहुत कम लगता है (प्रति एकड़ मात्र दो किलोग्राम)।
- पानी की जरूरत कम होती है।
- किसान जो परंपरागत धान की खेती करता है, वह भी इस विधि से धान की खेती कर सकता है।
- श्रमिक कम लगते हैं।
- खाद एवं दवा का इस्तेमाल परंपरागत खेती की अपेक्षा कम होता है।
- परंपरागत खेती की तुलना में प्रति पौधा कल्लें की संख्या ज्यादा होती है।
- परम्परागत खेती की तुलना में बालियों मे दानों की संख्या ज्यादा होती है।
- परंपरागत खेती की तुलना में दानों का वजन ज्यादा होता है।
- परंपरागत खेती की तुलना में उपज दुगुनी होती है।

# THE MEGHALAYA CO-OPERATIVE APEX BANK LTD.

**HEAD OFFICE : SHILLONG**
**(Government of Meghalaya Sponsored Bank)**
**Estd. 16th February, 1971**

**Phone : 0364-2224166 / 2224160**
**E-mail : apexbank@sancharnet.in**
**mcab@dataone.in**

**Fax : 0364-2222026**
**Website : www.mcab.gov.in**

A premier State Cooperative Bank in the North-Eastern Region having democratically elected Board of Directors since inception and managed by professionals.

## FINANCIAL HIGHLIGHTS

| | | (As on 31.03.2009) | | (As on 31.03.2010) | |
|---|---|---|---|---|---|
| • Paid up Share Capital & Reserves | : ₹ | 2448.88 | Lakhs | ₹ 3146.22 | Lakhs |
| • Deposits | : ₹ | 79440.40 | Lakhs | ₹ 91168.85 | Lakhs |
| • Loans & Advance | : ₹ | 20602.27 | Lakhs | ₹ 26323.76 | Lakhs |
| • Investments | : ₹ | 27461.65 | Lakhs | ₹ 35812.34 | Lakhs |
| • Net Profit | : ₹ | 1498.02 | Lakhs | ₹ 1938.24 | Lakhs |
| • Working Capital | : ₹ | 96949.44 | Lakhs | ₹ 110074.94 | Lakhs |

## Our Banking Products & Services

- *Current Deposits*
- *Savings Bank Deposits*
- *No Frills Savings Deposits*
- *Fixed Deposits*
- *Recurring Deposits*
- *Monthly Income Deposits*
- *Double Benefit Scheme*
- *Cash Certificates*
- *Fixed Deposit linked with Recurring Deposits*
- *Housing Loan Linked Deposits*
- *Children Education Deposits*
- *Crop Loans for Agriculture through KCC / SHG / Cooperatives*
- *Term Loans for Agril. & Allied Agriculture*
- *Aquaculture Development-One Thousand Ponds Scheme*
- *Loans for Housing / Housing Complex*
- *Loan for SRTO*
- *Consumer Durables Loans*
- *Loans to Technocrats & Professionals*
- *Loans to educated unemployed youths*
- *Cash Credit & Overdraft Facilities*
- *Loans for Children Education*
- *Integrated Village Development Scheme*
- *Term Loan for Tourism Development*
- *Personal loan to salary earners*
- *Bank Guarantee*
- *Safe Deposit Lockers & Other Ancillary Services*
- *Loans to Tribals under NSTFDC Schemes*

## BRANCHES ALL OVER MEGHALAYA

"A Bank of the people, by the people & for the people"

***Please bank on us for all your banking needs***

***Mr. D.F. War***
*Managing Director*

***Mr. Mukul Das***
*Ex-MLA*
*Vice-Chairman*

***Mrs. R. Warjri***
*Chairperson*

# THE HARYANA STATE COOPERATIVE AGRICULTURE AND RURAL DEVELOPMENT BANK LTD.

**Sahakarita Bhawan, Bay No. 31-34, Sector - 2, Panchkula**

The Haryana State Cooperative Agriculture and Rural Development Bank Ltd., is the specialised institution in the State, which caters to the Long Term credit needs of the farmers for the upliftment of the economic position of the agriculturists and allied fields.

The bank advances Long Term loans to the farmers for the following purposes :-

## Scale of finance and periodicity of Major Sectors

### Farm Sector

| Sr.No. | Name of the Scheme | Period | Scale of finance |
|---|---|---|---|
| 1. | Minor Irrigation | 9 years | ₹ 36,000 to 1,50,000 |
| | i. WCS/UGPL | -do- | 90% of the project cost |
| 2. | Farm Mechanisation | 5-9 Years | 85% of the cost of the Machinery |
| 3. | Purchase of Agriculture Land | 10 Years | Upto Rs. 10.00 Lacs |
| 4. | Horticulture/Plantation | 5-9 Years | ₹ 40,000 to 1,55,000 per Acre |
| | i. Medicinal & Aromatic Plants | -do- | 90% of the project cost |
| 5. | Animal Husbandry | 5-7 Years | 90% of the project cost |
| 6. | Rural Godowns | Upto 10 Years | 75% of the project cost |

### Non Farm Sector

| Sr.No. | Name of the Scheme | Period | Scale of finance |
|---|---|---|---|
| 1. | Rural Housing | Upto 10 Years | Upto ₹ 5.00 Lacs |
| 2. | Marriage Palaces | Upto 10 Years | 90% of the Project Cost |
| 3. | Community Halls | Upto 10 Years | 90% of the Project Cost |
| 4. | Village Cottage Industry | Upto 10 Years | 90% of the Project Cost |
| 5. | PublicTransport Vehicles | Upto 10 Years | 85% of the Project Cost |
| 6. | Rural Educational Infrastructure | Upto 10 Years | 90% of the Project Cost |
| 7. | Other SSI Units | Upto 10 Years | 90% of the Project Cost |

### Rate of Interest

The Loans for the purpose of non-farm sector, Rural Housing and Purchase of land are being advanced @ 13.25% p.a. w.e.f. 1.4.2011. All other loans are being advanced @ 12.25% p.a. w.e.f. 1.4.2011 and a rebate of 25% w.e.f. 1.12010-31.3.2012 is allowed on all slabs to regular paymasters.

### Note:-

For further details, kindly contact The Haryana State Coop. Agri. & Rural Dev. Bank Ltd., Panchkula or the District Co-op. Agri. and Rural Dev. Banks at District level and its branches at Tehsil & Sub-Tehsil level in the State.

**Satbir Sharma**
Managing Director
Phone:0172-2587040
Fax:0172-2587069

# ग्रामीण विकास में कृषक क्लब कार्यक्रम का योगदान

भारतीय अर्थ व्यवस्था का मुख्य आधार कृषि है. देश की लगभग ६० प्रतिशत कृषि पर निर्भर है और कुल घरेलू उत्पाद में इसका योगदान १८ प्रतिशत है. समय के साथ कृषि क्षेत्र को नई-नई चुनौतियों का सामना करना पड़ रहा है. ये चुनौतियां हैं - प्रतिकूल मौसम, प्राकृतिक आपदाएं, कृषि में बढ़ती लागत, अधिक उत्पादन होने की स्थिति में कृषि मूल्यों में गिरावट, किसान की अल्प भंडारण क्षमता, नवोन्मेषी तकनीकों को अपनाना, कृषि उत्पादों का मूल्य संवर्धन एवं अंतरराष्ट्रीय बाजार में प्रतिस्पर्धा.

**कृषक क्लब**

वर्ष १९८२ में राष्ट्रीय कृषि और ग्रामीण विकास बैंक (नाबार्ड) ने विकास वालंटियर वाहिनी (वीवीवी) (कृषक क्लब कार्यक्रम) की शुरुआत की. किसान के खेत तक नवीनतम कृषि तकनीक पहुंचाने, किसानों को बैंकों से बेहतर संबंध बनाने के लिए प्रेरित करने, फसल की कटाई हो जाने के बाद अघतन तरीकों से फसल रखरखाव की तकनीक, मूल्य संवर्धन आदि व निविष्टियों की खरीद और अपने उत्पादों के लिए यह कार्यक्रम सर्वाधिक उपयुक्त है. सामूहिक सौदेबाजी के माध्यम से लाभ प्राप्त करने के लिए यह कार्यक्रम सर्वाधिक उपयुक्त है. कृषक क्लब कार्यक्रम, पहले विकास वालंटियर वाहिनी (वीवीवी) के नाम से जाना जाता था. इसके अंतर्गत राष्ट्रीय कृषि और ग्रामीण विकास बैंक, ग्रमीण क्षेत्रों में कृषक क्लबों के गठन एवं संवर्धन के लिए बैंकों को प्रोत्साहित करता है. नाबार्ड ने वर्ष १९८२ में ऋण के माध्यम से विकास के पाँच सिद्धांतों के प्रचार-प्रसार हेतु इस कार्यक्रम की शुरुआत की. वे पाँच सिद्धांत इस प्रकार हैं:

- ऋण का उपयोग विज्ञान और प्रौघोगिकी की सबसे अधिक उपयुक्त विधियों के अनुसार किया जाए
- ऋण के नियम व शर्तों का पूरा पालन किया जाए
- कार्य को पूरी दक्षता के साथ किया जाये, जिससे उत्पादन और उत्पादकता में वृद्धि हो सके
- ऋण द्वारा सूजित अतिरिक्त आय के एक हिस्से की बचत की जाए
- ऋण की किस्तें समय पर और नियमित रूप से चुकाई जाएं जिससे ऋण का पुनर्निवेश हो सके

विकास वालंटियर वाहिनी (वीवीवी) कार्यक्रम के पूर्व के मिशन का पुनरावलोकन कर वर्ष २००५ में इसका नामकरण कृषक क्लब कार्यक्रम रखा गया. ३१ मार्च २०१० की स्थिति के अनुसार देशभर में कृषक क्लबों की संचयी संख्या ५४,००० से अधिक हो गई.

कृषक क्लब किसानों के लिए आधारस्तर का एक अनौपचारिक मंच है. नाबाई के समर्थन और वित्तीय सहायता से बैंकों की ग्रामीण शाखाएं अपने और गांव के किसान सामुदाय/ग्रामीण लोगों के पारस्परिक लाभ के लिए इन क्लबों को गठित करते हैं. कार्यक्रम के आगे बढंने के साथ-साथ गैर सरकारी संगठन, स्वयंसेवी संस्थाएं, कृषि विज्ञान केन्द्र, कृषि विश्वविद्यालय आदि जैसी अन्य एजेंसियों को कृषक क्लबों के गठन ओर संवर्धन के लिए शामिल किया जाता है.

**कृषक क्लब की संरचना**

कृषक क्लब, गांबों में एक अनौपचारिक मंच है. सामान्यतः बैंक के परिचालन क्षेत्र में गाँव/गाँवों के समूह

सौजन्यः- सूजना

में क्लब का गठन किया जा सकता है. क्लब में कम से कम १० सदस्य होने चाहिए और अधिक सदस्यों के लिए कोई ऊपरी सीमा तय नहीं की गई है. प्रत्येक क्लब में तीन पदाधिकारी होंगे, एक मुख्य समन्वयकर्ता, दुसरा स्वयंसेवक (वॉलंटियर) और तीसरा सहायक समन्वयकर्ता. ये पदाधिकारी क्लब के सदस्यों द्वारा लोकतांत्रिक आधार पर चुने जाएंगे और उनका कार्यकाल भी क्लब द्वारा ही निर्धारित किया जाएगा. पदाधिकारी, क्लब के परिचालन क्षेत्र के निवासी होने चाहिए. गैर सहकारी संस्था या कृषक क्लब को प्रमोट करनेवाली एजेंसी के प्रतिनिधि क्लब के पदाधिकारी नहीं बन सकते.

**कृषक क्लब के कार्य**

कृषक क्लबों के कार्यो का विस्तृत वर्णन इस प्रकार है:

- क्लब के सदस्यों को ऋण सहायता प्रदान करने तथा बैंक और उधारकर्ता के बीच बेहतर संबंध सुनिश्चित करने के लिए बैंकों के साथ समन्वय करना।
- प्रति माह एक बैठक आयोजित करना तथा आवश्यकता होने पर माह में दो-तीन बैठकों का आयोजन. इन बैठकों में अन्य व्यक्ति जो क्लब के सदस्य नहीं है, उन्हें भी भाग लेने के लिए आमंत्रित किया जा सकता है।
- तकनीकी जानकारी के अद्यतनिकरण के लिए कृषि के विभिन्न क्षेत्रों के विशेषज्ञों, कृषि विश्वविद्यालयों, विकास विभागों, अन्य संबंधित एजेंसियों के एक्सटेंशन कार्मिकों के साथ आमने-सामने बात-चीत करना. अतिथि व्याख्यानों के लिए गांव के या आस-पास के गाँवों से अनुभवी किसानों को आमंत्रित किया जा सकता है।
- सदस्यों की ओर से थोक निविष्टियों की खरीद हेतु कारपोरेट आपूर्तिकर्ताओं से संपर्क करना।
- सदस्यों के लाभ के लिए मूल्य संवर्धन, प्रसंस्करण, थोक निविष्टियों की सामूहिक खरीद और कृषि उत्पादों का विपणन आदि जैसे संयुक्त कार्य करना/करने में सहायता करना. कृषक क्लब, स्वयं सहायता समूहों का गठन कर सकते है या समूह को प्रयोजित कर सकते है।
- सामाजिक -आर्थिक और विकास कार्य करना जैसे- सामूदायिक कार्य, शिक्षा, स्वास्थ्य, पर्यावरण और प्रकृतिक संसाधन प्रबंधन आदि।
- ग्रामीण उपज और उत्पादों का विपणन।

कृषक क्लबों की स्थापना का मुख्य उद्देश्य उसके परिचालन क्षेत्र में ऋण, तकनीकी और विपणन परामर्श से समग्र रूप से कृषि का विकास करके किसानों को समृध्द बनाना है। गत वर्षो में कृषक क्लबों की भूमिका और उसके कार्यो को और विस्तृत किया गया है. इसका उद्देश्य यह है कि ये क्लबों एक पथप्रदर्शक का कार्य करें और प्रौद्योगिकी अंतरण, बीज गाँव संकल्पना, कृषि विस्तारित सेवाओं का सुदृढीकरण, निविष्टियों की सामूहिक खरीद और वितरण, उत्पादन और विपणन, बिजनेस फेसिलिटेटर/बिजनेस कॉरेस्पोंडेंट (बैंक प्रतिनिधि) के रूप में कार्य करने हेतु सदस्यों का क्षमता निर्माण, स्वयं सहायता समूहों/ संयुक्त देयता समूहों का गठन, उत्पादक संघो/कंपनियों, कृषक क्लब महा संघ और समुदाय से संबंधित कार्यों में सहायता करें.

**भारत सरकार द्वारा कृषक क्लबों को दिया गया महत्व**

वित्तीय समावेशन में कृषक क्लबों की महत्वपूर्ण भूमिका के मद्देनजर, केन्द्रीय वित्त मंत्री ने सभी क्षेत्रीय ग्रामीण बैंकों को प्रति शाखा कम से कम एक कृषक क्लब

का गठन करने हेतु निर्देश दिए हैं. भारत सरकार और नाबार्ड द्वारा कृषक क्लब कार्यक्रम को दिए जा रहे महत्व और इससे संस्थागत एजेंसियों को होने वाले व्यावसायिक लाभ के मद्देनजर, बैंक इस कार्यक्रम को अपनी कार्यनीति के रूप में अपना सकते हैं.

**कृषक क्लब कौन गठित कर सकते हैं ?**

सभी संस्थागत एजेंसियां (वाणिज्यिक बैंक, सहकारी बैंक और क्षेत्रीय ग्रामीण बैक) और आधार स्तरीय संगठन (गैर सरकारी संगठन, पंचायतीराज संस्थाएं, राज्य कृषि विश्वविद्यालय, कृषि विज्ञान केन्द्र, कृषि प्रौद्योगिकी प्रबंधन संस्थान (एटीएमए), पोस्ट ऑफिस कृषक क्लब का गठन करने हेतु पात्र हैं.

**बैंक शाखा को कृषक क्लब से लाभ**

कृषक क्लबों के गठन से उस क्षेत्र में बैंक और उधार लेनेवालों के बीच संबंध बेहतर होते हैं. भारतीय प्रबंध संस्थान, लखनऊ ने कृषक क्लब कार्यक्रम का मूल्यांकन अध्ययन किया जिसमें यह पाया गया कि कृषक क्लब की स्थापना से बैंक शाखा को निम्नलिखिल लाभ होते हैं:

- जमा राशियों में वृद्धि ।
- ऋण प्रवाह में वृद्धि और ऋण विविधीकरण ।
- नए व्यावसायिक अवसरों का सृजन ।
- ऋण वसूली दर में वृद्धि और अनर्जक आस्तियों में कमी ।
- गांव का सामाजिक व आर्थिक विकास ।
- यह कार्यक्रम बैंकर और उधारकर्ता दोनों के लिए सफलता के सुअवसर प्रदान करता है ।

इन लाभों के अलावा, सामाजिक कल्याण के कुछ कार्य जैसे कि-निशुल्क चिकित्सा शिविर, पशु स्वास्थ्य देखभाल शिविर, समूह टीकाकरण शिविर, सामुदायिक कार्यों-सड़क, चेक डैम निर्माण, वृक्षारोपण इत्यादि का कार्य भी कृषक क्लबों द्वारा किया जाता है.

**कृषक क्लबों को दीर्घकाल के लिए बनाए रखना**

कृषक क्लबों को दीर्घकाल के लिए बनाए रखने हेतु यह जरूरी है कि क्लब के नियमित आय स्त्रोत हों और किसी सहायता राशि के बिना भी क्लब निरंतर कार्य करता रहे. निम्नलिखित उपायों के माध्यम से क्लब स्तर पर एक समूह निधि (कॉर्पस) बना कर कृषक क्लबों की दीर्घकालिकता सुनिश्चित की जा सकती है:

- सदस्यता शुल्क (सदस्यो द्वारा निर्धारित) ।
- मासिक बचत (सदस्यों द्वारा निर्धारित) ।
- स्वयं सहायता समूहों/ संयुक्त देयता समूहों के ऋण आवेदन-पत्र बैंकों को अनुशंसित करने के लिए क्रमशः ०.५% और १% की दर से सेवा प्रभार (यह दर केवल सुझावात्मक है और क्लब के सदस्यों द्वारा निर्धारित किया जा सकता है) ।
- बीमा उत्पादों की बिक्री हेतु कमीशन/ प्रोत्साहन (बीमा कंपनी के साथ हुई बात-चीत के आधार पर) ।
- बिजनेस फेसिलिटेटर/बिजनेस कॉरेस्पोंडेंट (बैंक प्रतिनिधि) के रूप में कार्य करने हेतु कमीशन/ प्रोत्साहन (बैंक के साथ हुई बात-चीत के आधार पर) ।
- अन्य संस्थाओं के लिए सेवा प्रभार ।

**कृषक क्लबों द्वारा किए जा रहे नवोन्मेषी कार्य**

देशभर में विभिन्न राज्यों में कार्यरत कृषक क्लबों द्वारा अनेक नवोन्मेषी कार्य किए जा रहे हैं. इन क्लबों के कार्यों से न केवल क्लब को आर्थिक लाभ हुआ है बल्कि अन्य क्लब भी प्रेरित होकर इन कार्यों को दोहरा कर लाभ

प्राप्त कर रहे हैं. ये नवोन्मेषी कार्य निम्नानुसार हैंः-

- किसानों द्वारा सफलतापूर्वक चावल सधनीकरण योजना (एस.आर.ई) को अपनाया जाना.
- किसानों द्वारा उन्नत प्रजातियों का विकास.
- किसानों द्वारा फूलगोभी की प्रजाती को आई.ए.आर.आई के माध्यम से पेटेंट करवाया जाना.
- कई क्लब बैंकों के एक्सटेंशन-काऊंटर के रूप में कार्य करते हैं एवं सभी प्रकार के फार्म अपने पास रखते हैं. इसका लाभ सभी ग्रामवासियों को प्राप्त होता है. इसीके साथ कई बचत खाते खोले गए.
- इसके अलावा क्लब फलों के निर्यात, डेयरी व्यवसाय, लघु उद्योगों से संबद्ध होकर अपने सदस्यों को बेहतरीन सुविधाएं प्रदान कर रहे हैं.

यह सूची अंतिम नहीं है. ऐसे कितने ही प्रयोग स्थान विशेष की परिस्थितियों को ध्यान में रखते हुए किए जा सकते हैं और अप्रत्याशित सफलता पाई जा सकती है.

वर्ष १९८२ में विकास वालंटियर वाहिनी (कृषक क्लब कार्यक्रम) के नाम से शुरु हुए इस कार्यक्रम ने २८ वर्षो की अवधि में काफी प्रगति की है. ५४,००० से अधिक कृषक क्लब आज विकास के महत्वपूर्ण अंग बन गए है. किसान के हित में सभी कार्य करने में सक्षम कृषक क्लब हमारे देश में कृषि क्षेत्र की प्रगति में महत्वपूर्ण भूमिका निभा रहा है. यह निश्चित है कि वित्तीय समावेशन के अंतर्गत अर्थव्यवस्था के निचले हिस्से के विशाल समुदाय तक बैंकिंग सेवा को पहुंचाने मे कृषक क्लब का अहम योगदान होगा.

## Award of PHD in Management to Bhagwati Prasad

Shri Bhagwati Prasa, Vice Chairman, Sahakari Awas Nirman Evam Vitt Nigam Ltd., Lucknow and Ex-Chief Executive, National Cooperative Union of India, New Delhi has completed his PHD from Guru Jambheswar University of Science and Technology, Hisar, HARYANA under the Supervision of Prof. B. S. Bodla and Prof. M. S. Turan. His Topic of Research is "Management of Primary Health Care Services: A Case Study of Haryana". Universty has awarded the degree of PHD in management to him on 09-012012.

Telegram : "BHOOKOSH"
Telephone : 2621137
2621437
2623837
Fax : 0177-2620503

# The Himachal Pradesh State Co-op. Agriculture & Rural Development Bank Ltd

H.O.: KASUMPTI, SHIMLA-171009

***The Bank was established in 1961 to extend long term and medium term loans to farmers for agriculture and allied agriculture activities and Non Farm Sector, presently through 49 branches respectively in the State of Himachal Pradesh.***

## THE BANK FINANCES FOR:

| | | |
|---|---|---|
| **Farm Mechanisation** | : | Tractor, Thresher set and other implements, etc. |
| **Horticulture/Plantation** | : | Apple, Stone, Citrus and other plantations, Floriculture |
| **Animal Husbandry** | : | Dairy development, Cattle Sheds, Sheep & Goat rearing Poultry, Sericulture, Fisheries, Mushroom, Piggery, Rabbit rearing etc. |
| **Land Development** | : | Land leveling, Land reclamation etc. |
| **Non Farm Sector** | : | Small Scale Industries, Cottage Industries including Service Sector, Rural Housing, SRTOs' Rural Godowns, Packing & Grading House etc. |
| **Minor Irrigation** | : | Construction/repairs of irrigation well, Tube Well, Deep Tube well, Installation of pumpsets, pipelines, lift irrigation etc. |

**Bank accepts FD for 1 year and above at following rate for Senior Citizens**
1 Year 9.50% 2 Years above 9.75% 0.5% more interest for Senior Citizens.

## SALIENT FEATURES

1. Interest payable: Quarterly/half yearly and yearly as per demand
2. Monthly income schedule is available.
3. TDS is not deducted on maturity of FDs.
4. FD outstanding as on 31-03-2010 is within the own fund limit.
5. All the loans issued by the Bank are theoretically recoverable since they are secured by registered mortgage of land.
6. Loan against FD to the extent of 75% of FD amount.

Bank provides 1% p.a. rebate of interest on loans to the regular loanees.

**FOR FURTHER DETAILS PLEASE CONTACT US OR OUR BRANCHES OF THE BANK IN THE STATE.**

**H. S. Thakur (HPAS)**
Managing Director

**Mohar Singh Thakur**
Vice Chairman

**Sher Singh Chauhan**
Chairman

# THE WEST BENGAL STATE CO-OPERATIVE AGRICULTURE & RURAL DEVELOPMENT BANK LTD.


**REGISTERED OFFICE**

25 D, Shakespeare Sarani, Kolkata - 700 017.

**TELEPHONES**

PBX - 2287-1786, 2287-1787, 2280-6681
Fax : (033) 2287-7128
Email : wbscard@gmail.com, wbscard@dataone.in

**REGIONAL OFFICES**

Western Zone : Burdwan (STD 0342) 2567977
Northern Zone : Siliguri (STD 0353) 2432886
Email : siliguri.wbscard@gmail.com

**TRAINING CENTRES**

ICMARD - 2356-5522, 2356-6522 Fax : (033) 2356-3633

| **Gopal C.H. Maity** | **Gangadhar Pal** | **Sajal Kanti Ghosh** |
|---|---|---|
| Chairman | Vice-Chairman | Managing Director |

# NEWS & NOTES

## 135 Board Meeting of the Federation

The 135th meeting of the Board of Management of the NCARDB Federation was held on 30 January 2012 at Hotel Orchid, Santacruz Mumbai. Shri K. Sivadasan Nair, Chairman presided over the meeting. He welcomed Dr. Bijender Singh, Chairman Delhi SCB & NAFED, Members of the Board and special invitees to the meeting.

Chairman in his address to Board urged the SCARDBs to develop other sources of funds including deposits which are vital for the survival of the institutions in the structure. He also said that even if recapitalization by the Government materializes, the survival of the structure depends on mobilization of own resources and recovery of outstanding overdues which have grown to alarming proportions over the years. Chairman said that UN IYC 2012 would give an opportunity to strengthen the spirit of the cooperation and enhance the image of ARDBs. In his concluding remarks he stated that the meetings of the Board of Management of the Federation would become more meaningful at the level of member banks to pursue the suggestions made by the Board.

Along with other important agendas, the Board took note of the major changes introduced by NABARD in its refinance policy for ARDBs along with the switch over to Loan Systems from Debentures. The Board considered and took note of the revision in the rate of interest on refinance from 9.5% to 10% with effect from 5 November 2011.

The Board after detailed deliberations retained Land Bank Journal as a quarterly publication with improved contents, quality of paper and printing and decided to revise the rate of Journal subscription to cover the deficit in the budget of Journal.

The meeting concluded with vote of thanks to the Chair.

## Vannamei shrimp, falling Rupee boost seafood exports

Year 2011 has been good for the Indian seafood export industry aided by a falling rupee and surging unit value realisations. While the total value realisations have been up almost 25%, the volume of

exports was up tersely at 2-3%. The unit value in dollar terms moved up smartly, Mr Anwar Hashim, Vice-President of the Seafood Exporters Association of India (SEAI). This was accompanied by increased demand from overseas markets such as South-East Asia and China. Also, farmed shrimp production witnessed substantial growth as more areas were brought under the highly productive vannamei cultivation. While shrimp exports continue to dominate India's export basket, the current surge in shrimp exports was made possible through increased production of the vannamei variety. Year-on-year, there has been a 17-18% depreciation in the value of the rupee enabling the seafood exporters to reap rich rewards. While all seafood exporters stood to gain, it was the exporters who had taken the least forward cover in dollar in the currency futures markets who made the most significant gains.

## Contract farming lures Bengal potato growers

According to the West Bengal Cold Storage Association (WBCSA), during the last three years, the area under contract farming for PepsiCo has increased by over $2^{1}/_{2}$ to about 6,000 acres in 2011-12. The number of farmers associated has also increased by over 50% to around 10,000. Bengal is reportedly the largest supplier of potatoes to Frito-Lay's India operations. According to President of WBCSA, the company nearly doubled its procurement from the State to 42,000 tonnes in 2010-11. When contacted, a company spokesperson confirmed the procurement from Burdwan, Birbhum, Hooghly, Bankura and Midnapore (West) districts in West Bengal. “Owing to good growth, our potato requirement has been growing rapidly, requiring us to expand our agricultural footprint,” he said. The company is also reportedly stepping up its processing capacity in the State.

On its part, Pepsico has been buying the potato from farmers without fail. Taking a cue from the trend, a few local brands have reportedly started engaging themselves in contract farming of potatoes in a small way in Abhirampur and its neighbouring villages. “Gee Pee Foods the makers of Pogo brand of chips and flakes has been procuring some 5,000 tonnes of 'Atlanta' and 'Chipsona' varieties at contracted prices for the last couple of years.

## Eyeing 10% agriculture growth

For a sprawling state with 11 agro-climatic regions, Madhya Pradesh has set for itself an ambitious target of 10% growth in agriculture its backbone that accounts for nearly one-quarter of the state GDP. The state's optimism stems from its record production of wheat, soybean, rice and gram among other crops in the recent years, which it attributes to a mix of better implementation of state and central schemes, and populist measures like giving bonus over and above the MSP (Minimum Support Price).

Interestingly, farmers from Punjab have a small role in boosting production in MP. Lured by the availability of cheap land, hundreds of them sold their ancestral land and purchased vast tracts in MP, where they have now settled and making the best of their experience back home. "The state received very good rainfall last year and enough surface water is available. While wheat acreage has grown by 15%, gram acreage has gone up by a whopping 50%," says Commissioner (Statistics) Dr S P Sharma about the state's optimism that was recently conveyed to the Planning Commission. Even today, nearly 65% agriculture is rainfed in MP. The government says it has brought one lakh ha area under irrigation in the last eight years.

Nearly 70% population is still dependent on agriculture and becomes the government's key priority, largely due to political compulsions. The increase in production of cash crops has come at the cost of traditional crops that were once the mainstay of subsistence farming. In 2002-03 the total arrival at the mandis was 106 lakh MT, which rose to 217 lakh MT in 2010-11. While in 2011 the production was not very high compared to previous years, procurement was a whopping 50 lakh MT, more than half of the total produce.

## Mandis' as centres for farm extension services

Almost all institutes of the ICAR, State agricultural universities and government agricultural departments have their Krishi Vigyan Kendras (KVKs), Krishi Gyan Kendras (KGKs) and farmer training centres at district and State headquarters. Progressive and educated farmers benefit from these facilities. However, the reach of these science centres has proved to be limited. Almost all KVKs and KGKs are scattered across numerous cities and towns.

Similarly, the testing facilities for soil, seeds, irrigation water, agricultural chemicals and fertilisers are not situated in one place. Farmers in need of information inputs have to run from pillar to post whether it is to discuss technology issues with the experts concerned, or to seek solutions to seasonal problems.

Hence, it is suggested that all these facilities be established at one place in a town, where farmers visit in large numbers in their normal course of work. Naturally, such a common place is the grain market, i. e. mandi yards and vegetable auction markets. According to a rough estimate, over 50,000 farmers visit Karnal mandi yard during the paddy harvest season, and another 30,000 during the wheat season to dispose of their produce. Further, about 30,000 vegetable producers visit the wholesale vegetable auction market every year. 'Farm knowledge centres' should be established under a single roof in such mandi yards and vegetable auction markets. Laboratories involved in testing the suitability of soil, water, seeds, chemicals and fertilisers should be housed in these centres. There should be lab testing facilities for identification of disease and pests; abnormalities in plant growth can also be identified. These centres can further advise the farmers to decide on the crops to be sown, new crop varieties and crop rotation technology. This arrangement will substantially upgrade farmers' knowledge, confidence and capacity. Information on what constitutes good farm practices can be displayed on notice boards. Literature on the package of practices for rabi, kharif, spring-summer crops and plant protection can also be put up. Videos on seed treatment, handling of high quality seeds and information on the latest high-yielding crop varieties and hybrids can be shown at regular intervals.

Farmers can be advised on the appropriate dosage of fertiliser and chemicals, in order to achieve higher yields and pesticide-free crops. In the process, governments can achieve a measure of control on quality of seeds, pesticides and fertilisers so that farmers are not cheated in agro-inputs. Young farmers can be encouraged to train themselves in technical matters, so that they can, in turn, train others at the village level through the use of videos, and printed literature like folders, calendars and booklets. Agricultural research institutes, State agricultural universities and government agricultural /horticultural departments can put up their sale counters for distribution of books, periodicals and CDs on improved farming.

## Banks must acknowledge, streamline small units loan applications: RBI

The RBI has asked banks to mandatorily acknowledge all loan applications, submitted either manually or online, by micro, small and medium enterprise (MSME) borrowers. Banks have been asked to ensure that a running serial number is recorded on the loan application form as well as the acknowledgement receipt. Further, banks are encouraged to start a central registration for loan applications, the RBI said. The same technology may be used for online submission of loan applications to enable online tracking.

The RBI emphasised that loan application forms have to be so designed that all documents required to be executed by the borrower on sanction of the loan form a part of it. The forms should have a checklist of the documents required to be submitted by the applicant and the formalities to be completed, post-sanction. For micro enterprises, simplified application-cum-sanction form, printed in regional language, should be introduced for loans up to ₹1 crore. Banks should consider introducing a committee approach for sanction of new loans as also rehabilitation cases. This will improve the quality of decision as the members' collective wisdom will be utilised, especially while taking decision on loan applications for greenfield projects in the sector or rehabilitation proposals. The RBI said banks should give it an 'action taken report' on compliance with these directives by the end of this month.

## Imported power tillers, mini-tractors to mechanise hill farming in Himachal Pradesh

Self-sustaining, rainfed and largely manual farming in the hills has never been easy. Farmers in Himachal have always been looking for new technological innovations to catch up with their progressive counterparts in the plains. But with the Himachal Pradesh State Cooperative Marketing and Consumers' Federation (HIMFED), a government agency working for farmers, signing an agreement with Denmark-based firm Texas to import power tillers and a wide range of farming tools, mechanisation seems to be finally taking roots in the state.

Agriculture Director J C Rana admits that mechanisation of

farming has become very important to keep pace with the scientific innovations. "The draft policy paper on the 12th Plan also proposes a special mission to motivate farmers towards mechanisation. The land holdings in Himachal are shrinking very fast. The farmers can't afford to buy heavy machines like power tillers and tractors of 35 or 50 horse power. They need low-cost mini-machines at an affordable cost." The cost of the power tillers supplied by Texas is in the range of ₹ 36,000 to ₹ 60,000.

HIMFED is also working on a new scheme to provide a subsidy to the farmers on buying the range of new hand-driven power tools, as the previous scheme has a long drawn procedure to grant subsidy upto ₹ 45,000 to the farmers buying power tillers or tractors. "The need for mechanisation is also felt due to tough terrain and scarcity of farm labour, the latter being more acute after the implementation of MNREGS in the state," says V C Pharka, Principal Secretary (Horticulture), who feels that power tillers could also be useful in the orchards. HIMFED is also working on a tie-up with a Bangalore-based company for supply of VST Tillers and Captain Tractors (both heavy tillers and mini-tractors) for plain areas of the state.

## Amul to help market stoves of Envirofitin Gujarat

After selling about 2.5 lakh stoves in the four southern States, Envirofit India Pvt Ltd, pioneers in reducing indoor air pollution (IAP), is now focusing on western India through a pilot project in partnership with Amul which will help market improved cook stoves (ICS) to those dependent on biomass for cooking food at home. To start with, Amul and Envirofit, who launched the campaign last week, will reach more than 30 lakh IAP-affected people in Anand and Kheda districts of central Gujarat, according to Mr Harish Anchan, Managing Director, Envirofit India.

As part of its CSR activity, health workers from the Kaira Milk Cooperative Union, that owns and markets Amul brand products, will work on creating awareness about IAP amongst its members. These workers will be trained by Envirofit and the Shell Foundation. Initially, they will reach members in 300 villages and then target six lakh households in 1,000 villages in what is a sustainable CSR-cum-marketing activity.

The ICS, costing ₹1,899, will be sold at a subsidised rate of ₹1,299, including a subsidy of ₹200 from Kaira Union. Envirofit will pay a

subsidy of ₹400 by way of adjustment against the carbon credits it will get. IAP claims 19 lakh lives a year globally, including five lakh in India, where 60% people still use biomass. ICS helps reduce air pollution due to incomplete combustion of biomass by 80%. "In fact, we are introducing 100 per cent smokeless stoves in mid-2012, priced up to ₹3,000, that will be as good as LPG." Envirofit International, a US-based not-for-profit technology organization, has manufacturing plants in the Philippines, Sri Lanka, Aurangabad (India) and Thailand to roll out 50,000 cook stoves every month. Envirofit India has so far partnered with a number of organizations and corporates for marketing its products.

## India Inc ready to join Govt in boosting farm growth

ITC, Nestle and Marico are among the 19 companies that have evinced interest in a new public-private partnership (PPP) initiative that the Government has planned to boost agriculture growth. The Centre has sought views of the States on a draft framework on PPP for Integrated Agricultural Development (PPPIAD) plan under the Rashtriya Krishi Vikas Yojana (RKVY) for facilitating large-scale integrated projects led by private sector firms. The draft has been jointly prepared by Ministry of Agriculture and the Federation of Indian Chambers of Commerce and Industry (FICCI).

Under the proposed plan, corporates will emerge as the single window for delivering all interventions to the farmers. Such interventions could range from delivering subsidies and arranging credit to inputs such as seeds and fertilisers besides creating market linkages for the produce for which farmers will get market determined prices. The project will focus on high value produce such as horticulture, dairy, poultry and fish products, which contribute to as much as 75% of agri GDP value and are favoured by smaller farmers.

Marico has shown interest in safflower farming project in about 1.65 lakh hectares entailing some 23,000 farmers in Maharashtra, Chhattisgarh and Karnataka. Similarly, ITC is interested in taking up paddy, wheat, maize, menthe and vegetable cultivation in Bihar, chillies and cumin in Andhra Pradesh, Tamil Nadu and Rajasthan. ITC is also interested in cultivation of oriental tobacco in AP. Shriram Bioseed is keen to focus on cotton and corn cultivation in AP, Maharashtra, Karnataka and Gujarat.

Companies will have to identify the regions, formulate a strategy and road map based on the availability of land and climate for each of the project that will be spread over three to five years. They have to mobilise a minimum of 5,000 farmers in each of the project either in groups or associations and chart strategy for technology infusion, value addition, marketing and project management among others.

Companies taking up such projects will get a captive market to buy-back the farmers' producer or to sell inputs such as seeds or fertilisers among others. Pilots of such PPP projects are likely to start in 2012-13. Such projects will be independently monitored by agencies like NABARD or others at the end of the period. Based on their performance, the companies will be provided with an administrative overhead cost of up to 8% of the project expenses. The total projected cost of the 33 projects taken in 17 States currently stands at ₹8,630 crore, involving some 6 lakh farmers. The proposed plan talks of a disputes redressal mechanism.

## Agents of banking correspondents can now service customers of more than one bank

A retail outlet or an agent providing banking correspondent services can now provide services of more than one bank. The RBI has permitted interoperability at point of customer interface of BCs. Earlier, while BCs were allowed to tie up with more than one bank, their agents or retail outlets could offer products and services of only one bank. A retail outlet or an agent can provide services of more than one bank provided the technology available with the bank, which has appointed the BC, supports interoperability.

This means that the transactions and authentication at such retail outlets or sub-agents of BCs should be carried out on-line; the transactions should be carried out on the Core Banking Solution (CBS) platform and the banks should follow the standard operating procedures to be advised by the Indian Banks' Association. However, the BC or its retail outlet or sub-agent at the point of customer interface would continue to represent the bank which has appointed the BC. This means though sub-agent or the outlet will have the branding of the bank which has appointed it, it can also offer cash transactions of other banks.

## SB accounts to get interest on end-of-day balance

The RBI advised that interest rates applicable on the domestic savings bank deposits will be determined on the basis of end-of-day balance in the account. While calculating interest on domestic savings bank deposits, banks are required to apply the uniform rate set by them on end-of-day balance up to. ₹1 lakh. For any end-of-day balance exceeding ₹ 1 lakh, banks could apply the differential rates as fixed by them. Banks may ensure that interest rate is applied on the end-of-day balances of all domestic savings deposit accounts and no discrimination is made at any of its offices. Prior approval of the Board/Asset Liability Management Committee (if powers are delegated by the Board) may be obtained by a bank while fixing interest rates on such deposits.

## RBI asks banks to refund unclaimed deposits of ₹ 1,700 cr

The RBI asked banks to locate and refund unclaimed dposits of around ₹.1,700 crore. Keeing in view public interest, it has been decided that banks should play a mored pro-active role in finding the whereabouts of the account holders of unclaimed deposits/ inoperative accounts. "Banks are, therefore, advised that they should display the list of unclaimed deposits/ inoperative accounts, which are inactive/inoperative of 10 years or more on their respective websites," the RBI said in an instruction to banks. A whopping ₹1,723.24 crore in ₹1.03 crore non-operational accounts in different banks were lying unclaimed as on December 2010.

## How long is late before a cheque is credited?

You drop a cheque with your banker for collection. A customer had to wait for 10 years! The case of this customer, call him Mr Dixit, is recounted in the 2010-11 Annual Report of the Banking Ombudsman released recently. Mr Dixit deposited the cheque he received for retirement benefits in 2000.

RBI rules The cheque had been duly debited to the issuer's account and the bank that received the proceeds was where Mr Dixit had an account. After 10 long years of agony, the sum was credited to his account in January. Ten years is unjustifiable under any circumstances, but is there a time limit at all for collection or credit that binds the banks?

In this regard, the RBI mandates banks to comply with a ruling (September 2008) given by the National Consumer Disputes Redressal Commission. According to the commission, for local cheques, credit and debit should be given on the same day or at the most, the next day of their presentation in clearing. For outstation cheques, the maximum time for collection of cheques drawn on State capitals, major cities and other locations is 7, 10 and 14 days respectively. But more importantly, if there is a delay, banks are mandated to pay interest at a rate formulated according to their policy. If nothing is specified, the applicable rate shall be the interest rate on fixed deposits for the corresponding maturity. It is obligatory for banks to display their cheque-collection policy on the notice board at their branches as well. In Mr Dixit's case, not only did the bank cause a 10-year delay but it did not also pay any interest despite representation. He approached the ombudsman.

Know your rights Considering the gross deficiency of service and the lack of any serious efforts by the bank to trace the proceeds of the cheque, the bank was directed to pay interest at the applicable fixed deposit rate plus 2% till July 31, 2007. From August 2007 to January 2010, the bank was directed to pay interest according to its compensation policy, which came into effect in August 2007. The bank was asked to pay a compensation of ₹10,000 in addition. So, if you are faced with a similar problem, be on the vigil. If you know your rights, the bank cannot take you for a ride.

## The farmer outreach 'ambulance'

Srihari Kotela, a chartered accountant, has launched one to reach out to farmers in Andhra Pradesh. Farmers can make a simple phone call to seek a visit by the rythu ratham, a comprehensive information source on farming, be it on fertilizers or crop diseases or government schemes. The concept would encourage good agricultural practices and raise farm incomes, says Mr. Kotela. His company, eFresh Portal, has tied up with the Acharya N G Ranga Agricultural University, the University of North Bengal and the Food Safety and Knowledge Network for this. “We now have one ambulance; we plan to have 20 vans and cover all the States to create awareness and interest among farmers,” he says. The vehicle is equipped with soil-testing kits, pesticide sprayers, protective gear, an LCD projector, a

computer system, and training videos, and so on. The material is shown in villages typically in the shade of trees, on gram sabha platforms and at panchayat offices. Since its launch in August 2011, it has made 18 visits in six districts of Andhra Pradesh.

The company's website: www.efreshindia.com. Farmers could call, toll-free, at 1800 2666 208, from 9.30 a.m. to 6 p.m., except on Sundays. Mr. Kotela could be reached on e-mail at Srihari@efreshindia.com and at 098480 34740

## Govt report on farms calls for reforms to boost investment

A Government report has called for enhancing investment in agriculture and leveraging technology to boost the country's farm sector growth in the years ahead. The report 'State of Indian Agriculture 2011-12,' released by the Agriculture Ministry called for institutional reforms in research set up to make it more accountable and geared towards delivery, conservation of natural resources such as water and land among others. “Achieving a 8-9 % growth in overall GDP may not deliver much in terms of poverty reduction, unless agricultural growth accelerates. The agriculture growth has to be kept at the centre of any reform agenda or planning process, in order to make a significant dent on poverty and malnutrition and to ensure long-term food security for the people,” it said. The report, first of its kind, has emphasised on development of rain-fed agriculture, irrigation, creating infrastructure support for marketing and ensuring increased credit flow to farmers among others. It calls for the need to bridge the yield gaps through technology input and other interventions, while placing thrust on raising productivity.

Strongly advocating public-private partnership in the farm sector, the report said that the Government needs to raise public investment, besides playing a catalytic role to attract more private sector investment.

Increase investments Stating that contribution of agriculture to overall Gross Domestic Product (GDP) has halved in the past two decades to around 14.5 % in 2010-11 from about 30% in 1990-91, the report noted that such a trend is expected in any development process of the economy. The gross capital formation in agriculture has hovered between 6 and 8% as compared to 18% in the early 1980s.

Such a trend suggests that non-agriculture sectors have been receiving higher investments over the plan periods. Keeping in view the high population pressure on agriculture for their sustenance, there is need to increase in investments. The report also calls for reforms to streamline domestic markets and expanding infrastructure and institutions to connect local markets with national and global markets. Besides, deliberating on the consequences of rising population on farming and its capacity to provide employment, the report calls for creation of additional employment opportunities to the rural populace in non-farm and manufacturing sector. Such opportunities could be agro-based rural industries that have area specific comparative advantage in terms of resource endowment and development possibilities.

Water usage Cautioning on the impact of water scarcity, the report calls for efficiency in water usage. It estimates that even a rise of 5% irrigation efficiency can increase the irrigation potential by 10-15 million ha. The report also focuses on problems of imbalanced use of fertilisers, deteriorating soil health and the threats posed by climate change among others.

## Merging agri-schemes may yield 4% farm growth in 12th Plan

Consolidation of various agri-programmes in the 12th Five-Year Plan (2012-2017) would help in achieving the targeted farm growth rate of 4% as per Planning Commission member Abhijit Sen. "The 12th Plan is looking at the way we can consolidate some of agricultural programme. The 12th Plan is still not finalised but we need to concentrate on five missions to further improve the agriculture sector," Sen said at a discussion forum on the Budget 2012-13. He noted that the way the agriculture programmes will be rolled out in the 12th Plan period is "not fully reflected in this year's Budget." In its Budget for 2012-13, the government announced merging of agricultural programmes into a set of mission to address the needs of agricultural development in the 12th Plan. These missions are: National Food Security Mission, National Mission on Sustainable Agriculture, National Mission on Oilseeds and Oil Palm, National Mission on Agricultural Extension... and Technology and National Horticulture Mission.

Sen said agriculture growth rate in the 11th Five Year Plan (2007-12)

is expected to be 3.5%, which is better than most years. However, it is short of the target of 4%. He also stressed the need to improve the per capita income in agriculture as well as productivity levels.

## RBI for waiving ATM charges for senior citizens, differently-abled

The RBI wants banks to do senior citizens and physically/visually challenged customers a good turn. The banking regulator wants banks to see if these category of customers can be allowed unlimited number of ATM transactions at any bank ATM. It also wants the annual ATM card fee waived for these customers. Since senior citizens and physically challenged persons will use ATMs only for genuine purposes, banks could allow them to use any bank ATM for any number of times.

Currently, banks allow their customers to use other bank ATMs without any charge five times a month. With senior citizens travelling across the country either to be with their children, or visit relatives, or on pilgrimage, the liberty to use any bank ATM without a cap on the number of transactions would prove beneficial.

Banks will be willing to waive the annual ATM card fee to encourage senior citizens and handicapped persons to move to alternative banking channel (ATM), said a banker. Some banks charge ₹ 100-500 as annual ATM card fee.

The RBI also wants banks to explore the possibility of providing doorstep banking service to the physically challenged.

## 1,500 litres for 1 kg of grain, 10 times for meat

On average we drink between 2-4 litres of water a day. But it takes 1,500 litres to produce just 1 kg of grain and 10 times that quantity (15,000 litre) to produce 1 kg of meat. To produce enough food to satisfy a person's daily need, it takes about 3,000 litres of water, or a thousand times more than the water we drink.

Today agriculture accounts for 70% of the total water use, followed by 20% for industry and energy, and about 10% for domestic use. In 2007, the estimated number of undernourished people worldwide was 923 million.

Over the period up to 2050, the world's water will have to support agricultural systems that will feed

and create livelihoods for an additional 2.7 billion people. The extent of land under irrigation in the world is 277 million hectares, about 20% of all cropland.

Irrigation increases the yields of most crops by 100-400%, and irrigated agriculture currently contributes to 40% of the world's food production. Poor drainage and irrigation practices have led to waterlogging and salinisation of approximately 10% of the world's irrigated lands. The Intergovernmental Panel on Climate Change predicts that yields from rain-dependent agriculture could be down by 50% by 2020. Due to climate change, Himalayan snow and ice, which provide huge amounts of water for agriculture in Asia, are expected to decline by 20% by 2030.

## Maharashtra allocates ₹275 cr for eco-village programme

The Maharashtra Government has decided to cover 2,226 villages under its eco-village programme by allocating ₹275 crore. Since October 2010 the programme for environment protection is being implemented by the Rural Development Department. Of the 27,920 villages in the State, the eco-village programme is being implemented in 6,835 villages. Under the programme, villages are given funds to plant trees, eradicate open defecation, ensure that solid waste is disposed of properly and promote use of non-conventional sources of energy such as solar, wind and biogas.

Villages with 10,000 people and above receive a grant of ₹10 lakh from the State under the programme. Villages with a population between 7,000 and 10,000 and those between 5,000 and 7,000 population get get ₹7 lakh and ₹5 lakh a year, respectively. For a village to be included in the programme, it needs to have trees equal to the number of residents. Further, about 60% of the families should have access to properly constructed toilets. In the first phase, Pune, Kolhapur, Thane and Raigad districts are being covered. The programme is especially targeted at highly polluted villages having a population of more than 10,000.

**GRAM : KISAN BANK**

Phone : MD 2550280
Fax No.: 0755-2557620, 2576876
E-mail: mpvikasbank@rediffmail.com

## MADHYA PRADESH STATE COOPERATIVE AGRICULTURE & RURAL DEVELOPMENT BANK LTD.

**8, Arera Hills, Old Jail Road, Bhopal - 462 004.**

- The MPSCARDB provides long term loans to agriculturists through its affiliated Distt. ARDBs in the State for various agricultural and rural development activities like Minor Irrigation Schemes, Dry Land Farming, Land Development, Wasteland Development, SGSY, Organic Farming, Horticulture Development, Aromatic & Medicinal Plants, Farm Mechanisation, Dairy Development, Fisheries, Poultry, Bio-gas Plants etc.
- The Bank also disburses long term loans under Non-Farm Sector mainly for setting up of Cottage and Village Industries, SRTO, Establishment of Milk Chilling Plant, various service sector activities in rural areas, for Clinic, Nursing Home and Pathology, Radiology etc.
- To facilitate availability of loans to farmers at nearby place, the affiliated 38 Distt. ARDBs have opened 273 Branches in the State.
- The Bank has, so far disbursed long term loans of ₹2839.59 crores to 9.49 lakhs farmers from its inception in 1961.
- The Bank also accepts Term Deposits from Individuals & Institutions for the period of one year & above. All Distt. ARDBs in the State accept FD on behalf of MPSCARDB in various Schemes i.e. Fixed Deposit, Double Deposit, Recurring Deposit etc.

### Financial Particulars of the Bank as on 31st March 2011 (Provisionals)

| | | | (₹ in crore) |
|---|---|---|---|
| 1. | Paid up Share Capital | : | 44.99 |
| 2. | Reserve and other funds | : | 257.09 |
| 3. | Debentures in circulation | : | 1001.51 |
| 4. | Fixed Deposit | : | 106.99 |
| 5. | Loan Disbursed During the year | : | 13.95 |
| 6. | Loan Outstanding | : | 1140.49 |
| 7. | Investment | : | 37.96 |
| 8. | Working Capital | : | 1476.19 |

**Prakash Khare**
Managing Director

**Kishan Singh Bhatol**
Chairman

# AGRICULTURAL NEWS

## Ragi: Versatile, wonder grain

A large population of children in the country is malnourished and deficient in calcium and protein. No wonder then, that millet and ragi, can be a good solution to all these extremities. Ragi is a crop which can withstand severe drought conditions and can even be grown throughout the year, thereby, proving its suitability and thus, aiding its long-term sustainability. *Eleusine coracana*, also known as African millet or ragi, is widely grown in Africa and Asia. Its adaptability to the higher elevations makes it suitable to grow even at a height of more than 2,000 meters. It is estimated that ragi is grown on approximately 38,000 sq km. It is also, often intercropped with peanuts, cowpeas, pigeon peas or other plants.

Ragi has an important protein component, amino acid methionine, which makes it an important low-cost ingredient for fulfilling the protein intake requirements of millions of poor who generally live on starchy staples e.g. plantain, polished rice, or maize. Apart from important protein components, ragi also has a substantial amount of carbohydrate, minerals, calcium and fibre. Also 328 KCal of energy can be provided by 100 g of ragi. Most of these benefits peg ragi with a potential to improve nutrition, food security, as well as to foster rural development and support sustainable land use.

According to FAO estimates, India produces more than 30% of the total global millet. In the year 2009-10, the total ragi production stood at 1,888 thousand tonnes, which was 7% lower than 2008-09 production. The total area under ragi production is estimated to be more than 1,700 thousand hectares. According to the estimates, around 60% of produced ragi is retained at the farmer level itself, for consumption.

In India, ragi is mostly grown and consumed in Rajasthan, Karnataka, Andhra Pradesh, Tamil Nadu, Orissa, Maharashtra, Kumaon region of Uttarakhand and Goa; of which, Maharashtra, Tamil Nadu and Uttarakhand produce the bulk of ragi in the country.

Post-harvest management of ragi is unproblematic; the seeds are seldom attacked by insects or moulds and combined with a longer shelf life make the finger millet an

important crop in risk-avoidance strategies for poorer farming communities. Government intervention needs to focus on spreading ragi as a 'wonder grain' for the drylands and infant nutrition.

## Agricultural lending: RBI panel for doing away with sub-targets

A RBI working group on priority sector lending has recommended doing away with the sub-targets for direct and indirect agricultural advances. Instead, the group, headed by Mr M.V. Nair, Chairman and Managing Director, Union Bank of India, is understood to have pushed for fixing sub-limits only for lending to farmers in the small and marginal category. Further, it wants loans given for setting up rural infrastructure to be classified as priority sector lending.

## Farm loan defaults rise as crops fail, prices crash

Banks have been witnessing a rise in defaults on agricultural loans on account of crop failures. The defaults have been significantly higher in number in Andhra Pradesh, Tamil Nadu, Orissa, West Bengal and Madhya Pradesh, senior bank officials said.

Banks, on their part, are trying to extend gold loans to farmers to help meet cultivation expenses. “Apart from crop loans we are also giving gold loans as this provides additional security,” said Mr T. M. Bhasin, Chairman and Managing Director, Indian Bank. Close to 1.5% of the bank's total agri advances have slipped into the NPA category. According to Mr M. Narendra, Chairman and Managing Director, Indian Overseas Bank, roughly 30% of the default is on account of the crashing prices. While IOB blames price fluctuations in potato, paddy and cotton as the major culprit, according to sources in State Bank of Travancore, the bank's NPAs are concentrated around the High Ranges of central and north Kerala, because of the plummeting prices of ginger and cardamom.

The Union Government has given a 3% interest subvention for timely repayment of crop loans. This apart, the various State governments also provide an interest subsidy, thereby bringing down the effective rate of interest on crop loans. Banks should educate the farmers on the benefits of timely repayments, said Mr S. L. Bansal,

executive director, United Bank of India and chairman and managing director-designate, Oriental Bank of Commerce.

## Farm technologies not reaching farmers: PM

Farm technologies are not reaching farmers on the ground, Prime Minister Manmohan Singh observed here and said "it represents the failure of the system." He was speaking at the Golden Jubilee convocation of the Indian Agricultural Research Institute (IARI). The annual farm growth rate was expected to be 3.5% in the 12th Plan period ending this year, he said, but there was concern over the gap between crop yield per hectare and the achievable potential under ideal farming practices. "It is the job of the administration to close this gap and our farm strategy must prioritise this effort," he pointed out. "The 3.5% per annum growth rate is commendable but we must improve upon it to reach 4 % or even higher in the 12th Plan," he said.

Dr. Singh said he was worried that the agriculture extension services system responsible for taking the Green Revolution to the farmers was no longer robust. There was a pressing need to revitalise it with the help of Krishi Vigyan Kendras, Agriculture Technology Management Agencies in collaboration with panchayats, farm scientists and district-level officials. Stating that farm research was the key element in achieving higher expansion, he said the agricultural research system should be strengthened to meet future challenges in water and soil management, provision of farm credit and marketing support.

## Efforts on to recapture Kashmir flavor - Saffron

The name 'saffron' is derived from Arabic "zá-faran" which means 'be yellow' and is commonly used to refer both to the spice and the plant itself. Saffron is used as a key spice, fragrance, dye, medicine, preparation of Kashmiri 'kehwa' and as a sweet dish seasoning Saffron leaves (with producing about 1.5 t dry matter each year) can provide forage for about 1,60,000 heads of cattle. Saffron petal is one of the by-products of fields that the amount of this by-product is more than 10,000 t each year.

In India, saffron is exclusively cultivated in Jammu & Kashmir until now. Some cases of saffron

cultivation have been reported recently in Himachal Pradesh and Uttarakhand. In Jammu & Kashmir, district Pulwama accounts for 78.91% saffron area followed by Budgam (12.27%), Srinagar (7.32%) and Doda (1.5%).

Indian Overview

Area under saffron cultivation has declined from about 5,707 ha. in 1996 to just 3,715 ha in 2009-2010. Productivity has also declined from 3.13 kg/ha to 2.50 kg/ha. Two prominent initiatives are going to become game changers for saffron cultivation and enhancement in Kashmir; and are hopeful that by end of the decade, India will recapture the lost glory in saffron production.

The first initiative is the setting up of "National Mission on Saffron" (a 373-crore project up to 2014) and a "Saffron Park" (an ₹22-crore project) as an integrated production facility in Pampore. Under Mission saffron, growers are given a specified amount to meet fertilisers and pesticides requirements, in addition to guidance and monitoring. In 2011, the Government has already dispensed ₹10 crore of the ₹17 crore of incentives covering more than 3,500 growers owning 350 hectares of saffron land.

The one-time incentive will be extended to all the 3,700 hectares in four years. To improve productivity the replanting of the existing saffron area is being done to get 3,715 ha. of land till 2014 with an average productivity level to 5 kg/ha. It is expected that production would, thereby, rise to 18.50 tonnes. A major part of Mission saffron is also the establishment of a saffron park to provide better marketing facilities to the growers. This park will have a world class quality control laboratory, an e-auction centre and provide global best practices of farm-to-fork" chain for saffron.

## Radiation technique helps improve 39 crop varieties

Radiation and chemical-induced mutation and subsequent use in recombination breeding at Bhabha Atomic Research Centre (BARC) has resulted in the release of 39 improved crop varieties in oilseeds and pulses in India, said Dr Ratan Kumar Sinha, Director, BARC, Mumbai. Delivering the 25th Annual Convocation address of the University of Agricultural Sciences, Dharwad, Karnataka, Dr Sinha said nuclear techniques in agriculture is particularly helpful in

creating new genetic variability in crop plants, to improve one or two traits in well-adapted variety, to improve vegetatively propagated crops. "I am happy to learn that our collaborative largeseed groundnut variety TDG 39 (TGLPS 3, Trombay Groundnut Large Pod Selection 3) has entered the seed chain due to large-scale breeder seed production by UAS, Dharwad," he added.

"This groundnut variety can be of immense benefit to the farming community. I must compliment UAS, Dharwad for large scale multiplication of our mutant varieties in order to reach farmers with quality seeds," he further added. Pulses are the major source of dietary proteins in India. This year (2011-12) pulse production is at 18 million tonnes (mt), a significant improvement from previous year's 15 mt. Dr Sinha said, "BARC's major contributions have been in blackgram, greengram and pigeonpea. Several of our pulse varieties have early maturity, resistance to diseases and suitability for residual moisture situations in rice fallows."

"These varieties are very popular in AP, Chhattisgarh, Karnataka, MP, Maharashtra, Orissa and Tamil Nadu. Majority of the mutant varieties have not only benefited the Indian farming community, but also are being used as genetic resource material in national/State breeding programmes," he added.

Radiation processing of various foods and food-products involves controlled application of the energy of radiation such as gamma rays, X-rays and accelerated electrons. Dr Sinha said, "This ensures killing of pathogens and storage pests. Radiation processing is used for sprout inhibition in bulbs and tubers, delayed ripening of fruits, shelf-life extension of sea-foods, meat and meat products, hygienisation of spices and for quarantine purpose".

## Aromatic crops provide good returns in hilly regions

Mrs. Puttiyamma, is a lady farmer of Bargur Hills in Erode District of Tamil Nadu. She owns about 4 acres of land and is presently growing Rosemary in about half an acre.

"MYRADA KVK (Mysore Resettlement and Development Agency Krishi Vigyan Kendra) which is encouraging farmers in our area to grow Rosemary (an aromatic herb) and are also helping them to market the same produce

by forming the rosemary group (Group of farmers with common interest being to market Rosemary. She joined the group and started cultivating the crop. Rosemary thrives well both in irrigated and dry land conditions and is not disturbed and grazed by any wild animal because of its aroma. As it is a perennial crop there is no need for investing money for seeds and land preparation every year and the crop provides a stable income.

Mrs. Puttiyamma harvested around 2 tonnes/year of fresh leaves and earned about ₹.20.00 per kg of fresh leaves in the past three years. "I have earned about ₹40,000 per year from 1/2 an acre of land under rainfed condition whereas the returns from rest 3.5 acres of Ragi crop and beans have been only half of this income.

As there has been an increase in the number of farmers who took to Rosemary cultivation the DRDA, Erode funded the establishment of an oil extraction unit nearby. The unit reduced the herbage loss during transport and has been able to increase the income to about ₹.3,600 per acre besides providing employment to the rural youth.

Myrada krishi vigyan Kendra encourages group approach to get fair price to the product. A clear understanding between marketing agencies and growers committee is ensured. The tribals are made to interact with officials Hope an organization in Nilgiris are pioneers in the cultivation and promotion of the crop. In order to get additional revenue in the rosemary field/garden, other long term crops such as Tea, Eucalyptus citridora can be encouraged as a border crop, says Mr.Pachiappan, of the Kendra. The Tamil Nadu Agricultural University conferred an award on the lady farmer.

To speak to the farmer, readers can contact Dr. P. Alagesan, Programme Co-ordinator, Myrada Krishi Vigyan Kendra, No.272, Perumal Nagar, Puduvalli-yampalayam Road, Kalingiyam Post, Gobichettipalayam 638453, Erode District, Tamil Nadu, e-mail: myradakvk@gmail.com,

## Multipurpose Agri. machine

Mr. Pandharinath Sarjerao More has developed a tractor drawn onion transplanter that performs three functions at a time transplanting, applying fertilizers, and digging irrigation channels. The machine also sows seeds of cereals and pulses. For more details contact Mr. Pandharinath Sarjerao More, At.&Po., Sangavi Bhusar,

Kopargaon Ahmednagar, Maharashtra 423602, phones: 02423-262070, 202070, mobiles: 9881269253 and 9420748253.

## Controlling jumping lice in curry leaf

Jumping plant lice is the most destructive sucking pest of curry leaf. This insect is active throughout the year and breeds from March to November. Adults are found under the leaf surface and hop out when slightly disturbed.

Type of injury : The damage is caused mostly by nymphs than the adults. Leaf curling, defoliation and death of shoots may result from the attack. The bugs also inject certain toxins along with saliva which cause drying and death of branches. Besides they excrete honey dews resulting in the superficial black coating on the leaves. The damage is so long lasting that the branches look sickly and the vitality of the plants deteriorates. The plant stops growing.

Pest biology : Adults are brownish bugs, measuring about 2 to 3 mm long. Eggs are laid in tender shoots and leaves. About 800 orange coloured eggs are laid in the folds of half opened leaves. They hatch into nymphs in three to five days and appear flat, circular and yellowish. Nymphal period ranges from 9 to12 days. Adults may live for about six months during winter. They are eight to nine overlapping generations in a year.

Control methods : Since fresh curry leaves are directly used as condiment, much care should be taken while treating with toxic pesticides. Further it is advisable to use less poisonous materials as far as possible.

- Prune and destroy bug infested twigs.
- Light and sticky traps may be fixed to capture the adults. Dusting of cow dung ash is an organic way.
- Several species of ladybird beetles predate upon the nymphs.
- Use of Beauveria bassiana formulation is a safe bio control method.
- Spraying of botanicals such as 5 % Neem seed kernel extract or 0.03% azadirachtin is an ecofriendly method.
- Application of fish oil rosin soap at one part in 25 parts of

water will be highly effective against this sucking pest.

- In case of severe infestation, insecticides such as malathion 0.05%, carbaryl 0.1%, acephate 75SP at1g/lit, triazophos 50EC at 2.5ml/lit should be sprayed.

## Fruit ripening

Ripening is a physiological process involving the induction of a variety of metabolic process, making the fruit sweeter and more palatable. Plants send unique ripening signals using hormones and most of the processes are enzymatically regulated and catalyzed. The process of fruit ripening is primarily regulated by a gaseous plant hormone called ethylene (C{-2}H{-2}). This ethylene is produced and released by rapidly-growing plant tissues.

It is released by the growing tips of roots, flowers, damaged tissue, and ripening fruit. Hence, the act of picking matured green fruit can cause a wound which activates ethylene production and induce the ripening process.

This phytohormone (ethylene) is said to regulate the expression of several genes involved in fruit ripening so as to modulate the activity of various enzymes involved in the process of ripening. New enzymes are made because of this ethylene signal and they catalyze reactions to alter the characteristics of the fruit. These include hydrolases to help break down chemicals inside the fruits, amylases to accelerate hydrolysis of starch into sugar, pectinases to catalyze degradation of pectin.

In simpler words, the action of these enzymes causes the ripening responses. Chlorophyll is broken down and sometimes new pigments are made so that the fruit skin changes colour from green to red, yellow, or blue. The degradation of starch by amylase produces simple sugar. The breakdown of pectin, thanks to pectinase, results in a softer fruit. Acids are broken down so that the fruit changes from sour to neutral. Besides, these enzymes break down large organic molecules into smaller ones that can be volatile (evaporate into the air) and we can detect as an aroma.

However these phenomena will be observed only in climacteric fruits such as mango, apple, banana, guava, pineapple etc and these fruits are able to continue ripening after being picked, a process accelerated by ethylene

gas. Non-climacteric fruits such as watermelon, strawberries and oranges, do not ripen after harvest.

## Coming soon: Long-lasting litchi

Now, the Bhabha Atomic Research Centre (BARC) has developed a technology which considerably increases the shelf life of litchi, for upto a month or more. "Litchi is highly perishable and has a non-climacteric (ripens on the tree itself) nature. The colour of the fruit turns brown soon after harvest. Fruits also get spoiled soon after harvest due to physiological and microbiological changes. Though India is the second largest producer of litchi, a commercially viable technique was not available till now in India for its shelf life extension. Non-availability of a proper technique has been the biggest barrier for ambitious vendors involved in the trade of fruits. The irradiation technology developed by BARC offers a practical solution to the difficulties associated with litchi trade," says A K Sharma, head of the food technology division at BARC.

A "sequential surface chemical dip combination process" has been developed at BARC that will help retain the pinkish-red color of litchi fruit during prolonged storage (45 days) at low temperature (4°C). The post-harvest browning of the fruit also does not occur after the treatment. It helps in retaining major color pigments and also kills microbes (bacteria, yeast and mold) present on the fruit. "All these changes result in quality maintenance of litchi during prolonged storage without adversely affecting its nutritional and sensory properties as the fruits are dip-treated with GRAS or generally recognised as safe chemicals. There are no harmful residues," explains Sharma.

Such a technology has major advantages as processed fruits are of high quality and have a very good export potential through sea and air routes. According to officials, there is tremendous industrial potential as many secondary products like juice, fruit jam, squash, custards, blends with ice-creams and beverage like wine, can be prepared. "Longer shelf life can facilitate greater market coverage. The export will go up manifold as the litchi fruit will now be able to reach any part of the world. The entire procedure can also be scaled up as per the requirement, from small to industrial scale. Manpower requirement and energy

consumption is very less. As costly instruments or much technical expertise are not needed, it can be operated with minimum training.

The technology is currently available for transfer to the industry. Sharma says such technologies, alone or in combination with the technology of radiation processing, will not only help in international trade and take care of quarantine requirements of various countries, but will also help India address food security and food safety issues. "Several years back, BARC had developed a technology which addressed quarantine barriers and helped in export of mango to the USA. This technology developed for treating litchi and increasing its life is yet another milestone," he adds.

## $352-million World Bank credit for National Dairy Support Project

The World Bank has approved a $ 352-million credit for the National Dairy Support Project covering over 40,000 villages across 14 major dairying states in the country, benefitting an estimated 1.7 million rural households. The States included in the project, such as Bihar, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh, account for more than 90% of the national milk production, according to a World Bank report. The project will support the implementation of the first phase of the National Dairy Plan (NDP) of the National Dairy Development Board (NDDB), which aims at increasing the animal productivity, expanding infrastructure for milk procurement at the village level and enhancing milk processing capacity and marketing, among other things.

## Expert farming advice now at Maharashtra farmers' doorstep

Farmers in remote parts of Maharashtra will now get instant soil and crop analysis as well as recommendations for better farming practices at their doorstep, thanks to a mobile soil testing unit which is available on call. Maharashtra is the first and so far the only State to implement the scheme, sanctioned recently by the Centre, under which the district-level government farming centre here has been equipped with a mobile soil testing unit. Earlier, farmers had to take soil samples from their fields and travel to government farming centres, popularly called Krishi Vigyan

Kendra (KVK), for soil analysis. The Kendras have been established by the Indian Council of Agricultural Research for quick transfer of technology to the fields. The mobile soil testing unit introduced recently has helped farmers on issues such as soil infertility, harmful pests and water problems. KVK experts now come to their fields and provide the result and report on the same day.

The lab is equipped to test over 50 soil samples in a day for fertility, carbon content, pests and micro-nutrient content. Experts who reach the spot also teach the farmers how to take soil samples. KVK members then give recommendations about best farming practices, suitable crops and pesticides. The soil testing facility has also received a good response, with over 22,000 samples received last year. For ₹125, the soil is tested for nitrogen, phosphorus and potassium, while for ₹325, it is also tested for micro-nutrients. The cost for the analysis is the same at the mobile lab. The van, which is equipped with all the equipment available in the KVK lab, was bought at a cost of ₹55 lakh, Mr Bhoite said. The operational area of the KVK here comes under western Maharashtra's dry zone. Apart from soil analysis, KVK focuses on reaching out to farmers, disseminating scientific information about farming and weather prediction. A community radio station hosted at the KVK relays information about farming, as well as programmes on various Indian festivals.

## Bihar Panchayat breaks China's record Paddy production

A gram panchayat in Nalanda district of Bihar has surpassed the Chinese record of paddy production, the Union Agriculture Minister Mr Sharad Pawar informed. “As per the reports received from the State Government, the yield of wet paddy has been recorded at 22.4 tonnes per ha. and that of dry paddy at 20.16 tonnes a ha. in the district of Nalanda, Bihar.” The record yield was achieved under demonstration on System of Rice Intensification (SRI) which was organised at farmer's field during kharif 2011. “It has surpassed the yield of 19 tonnes per ha which was recorded earlier in China. This rare feat has been achieved by Darbespura panchayat in Katri Sarai block of Nalanda, India is estimated to have produced a record 102.75 million tonnes of rice in the 2011-12 crop year (July-June).

## Mechanised cotton stripper makes work more easy

Discarding a routine work and trying to do something new is not everybody's forte. “A farmer, Mr. Mansukhbhai Pate, is credited for inventing an updated cotton stripper machine, that revolutionized cotton cultivation in Gujarat,” says Prof Anil Gupta, Vice Chairman, National Innovation Foundation, Ahmedabad.

Popular : Several cotton mills in the region use the machine now. The machine brought down the cost of cotton stripping from ₹1 per kg to ₹1 for 20 kg, thereby generating good income for farmers and also improving the milling quality. The idea of mechanized stripping of rainfed cotton (V:797 variety) from shells came to him during one of his frequent visits to his village. The variety does not require much water and grows well in harsh and dry climate. While most hybrid varieties bear ball cotton, which need to be manually picked from the plant, the indigenous variety bears pods that cannot be opened easily. The pods must be picked, and manually cracked open to extract the ball. Being a tedious and cumbersome procedure, mostly women and children engage in it. During the harvesting season, instead of attending schools several children pluck the balls from the field as day labourers.

Dedicated effort: It took two years of dedicated efforts to come out with the first model. Mr. Patel designed, fabricated and demonstrated his first full-fledged cotton-stripping machine in 1994. The demonstration in his village convinced everyone that mechanizing the tedious process is possible. At the end of a meeting organised after the demonstration of the machine, he found himself flooded with confirmed orders for as many as 50 machines.

More changes: Last year, he introduced dust collectors and fitted an automatic feeding system to the machine. He also provided wheel-brackets and castors to make the machine portable. Patents have been granted in India and U.S. for this machine.

Value addition : Mansukhbhai's stripping machine innovation was scouted by SRISTI. Grassroots Innovations Augmentation Network (GIAN - West) that took up the task of value addition. Mr. Mansukhbhai could secure a ` 5,80,000 under Technopreneur Promotion Program (TePP). Gian also arranged for technical assistance from National Institute

of Design (NID), Ahmedabad.

For more details contact Mr. Mansukhbhai Patel , Chetak Industries, 113, GIDC Industrial Estate, Hansalpur, Viramgam, Ahmedabad, Gujarat, Mobile: 9824089035, Ph: 02715-235108.

## Guar: From obscurity to limelight

*Cyamopsis tetragonoloba* is a leguminous crop that grows best in sandy soils and needs moderate, intermittent rainfall. A hardy, drought-resistant bush, it is planted after the first monsoon showers usually between mid-July and mid-August. The harvest time is late October going into November. As vegetable, the green pods of guar have been consumed in our country for ages. It is also fed to cattle or used in green manure. Grown in tropical and semi-tropical regions, major origins include India, Pakistan, Sudan, Australia, Africa and parts of the US.

India continues to be the world's largest producer of guar with the output of the crop expanding by leaps and bounds in recent years and currently stands at 14-15 lakh tonnes. Rajasthan is the dominant producer accounting for close to 80% with Gujarat, Haryana, Punjab, Madhya Pradesh and Uttar Pradesh pitching in from a virtual obscurity until about 5-6 years ago, guar seed, has short into limelight in recent times thanks to guar gum which is an extract of the guar bean. More recently, the product is being used in oil and gas drilling for an application calle hydraulic fracturing.

## Coconut water

Coconut water is the endosperm part of the coconut plant. It is the nutritive tissue for the development of embryos in angiosperms and develops as post-fertilization structure from the primary endosperm nucleus. Three types of endosperm have been recognized: nuclear, cellular, helobial. The coconut endosperm is a nuclear type. In very young coconut fruit, the endosperm is found as a clear fluid in which float numerous nuclei of various sizes. This fluid compactly fills the embryo sac in which the embryo is developing.

At a later stage, the suspension shows, in addition to free nuclei, several cells enclosing variable number of nuclei. Gradually these cells and free nuclei start settling at the periphery of the cavity and

layers of cellular endosperm start appearing. This forms the coconut meat. This meat is very tender enclosing the fluid content called coconut water. At this stage the nut is called tender coconut. The quantity of the cellular endosperm increases further by the divisions of the cells. In mature coconut the liquid endosperm becomes milky enclosed by the cellular part called kernel and it does not contain free nuclei or cells. The percentages of ariginine, alanine, cystine and serine in the protein are higher than those in cow's milk.

At the stage in which the coconut water is consumed as a beverage the concentration of sugar is at its maximum and total solids is less when compared with the water found in nut with kernel. The principal constituent is the Potash, the concentration of which is markedly influenced by potash manuring. The concentration of ascorbic acid ranges from 2.2 to 3.7 mg/100cc. The concentration is high in the water of green nut with soft pulp and gradually diminishes as the nut ripens.

## Cattle shed waste for composite fish culture

Composite fish culture has emerged as a vital activity in recent years owing to high net return realized from this enterprise. Intensive aquaculture is not feasible for the rural people as it is expensive and involves more risk. The low input mixed farming systems in which fish culture is a component, using and regenerating the physical and biological resources efficiently, are more suitable as they are less risky and at the same time give more fish production because of easy adaptability.

The current aquaculture production can be increased to a greater extent if it can be integrated with dairy. Fish cum dairy farming is considered as an excellent innovation for effective utilization of organic wastes. Composite fish culture comprising rohu, catla, mrigal and common carp can be fed with biogas slurry, cattle shed washings and other organic wastes for reducing the cost of feeding and to improve the growth and yield. Organic wastes on application help in the production of desired planktons, which is basic food for fish and these wastes serve as fertilizer nutrients and are also consumed directly as source of feed. It also help increase production.

Experiments conducted at Tamil

Nadu Agricultural University, Coimbatore revealed that application of biogas slurry from the biogas plant at 15,000 kg ha of fish pond and cattle shed washings at 260 litres day for 73 days as fish feed recorded 40.45 kg and 45.92 kg, respectively from 80m pond.

Improved nutrient Feeding the fish with improved nutrient status, especially organic carbon and plankton status of fish pond, resulted in highest productivity. Excess supply of cattle shed washings to fish pond resulted in mortality of fish due to high water temperature, carbon dioxide, alkalinity and low dissolved oxygen content of water in the fish pond.

## Livelihood security assured by enterprise, resource use

An Integrated farming system assures livelihood security to a small farmer by integrating enterprise and resource utilization. Mr. C.N. Narayana Hebbar an enterprising and dynamic farmer from Bela village, Badiadka Panchayath, Kasaragod, Kerala has around 2 ha. of land. He developed the farm on a sloppy undulating terrain by successfully adopting suitable soil and water conservation methods such as stone pitched bench terracing, and digging rain water storage pits.

Different crops

The farmer grew crops like coconut, arecanut, banana and pepper along with a well established dairy unit. He integrated high yielding, fodder grass varieties, vegetables, cocoa, bee keeping, vermicomposting, biogas plant etc. Mr. Hebbar succeeded in incorporating all these components to enhance the productivity as well as profitability of the system as compared to the farming system model practised earlier. The change towards organic farming became possible through effective recycling of crop wastes to highly valued vermicompost by adopting vermicomposting technology developed by the Central Plantation Crop Research Institute (CPCRI) for which, he got trained at KVK. The dairy unit comprises 11 cows out of which five are in milking. The farmer sells around 75 litres of milk per day.

Animal husbandry : Animal husbandry plays a crucial role in the overall sustainability of the system not only as the major source of income but also by improving the nutrient recycling and providing energy for household cooking

purpose through two biogas plants. The bio-gas plants of capacity of three cubic metre each, are built underground with the inlet pipe inside the cattle shed and the slurry is collected in a big tank outside. "Bio-gas slurry is directly pumped to coconut, arecanut, and fodder grass after ensuring proper dilution. In this recycling model, even crop residues such as arecanut leaf sheaths serve as valuable, low cost source of nutrients for livestock," explains Mr. Hebbar. A chaff cutter installed near the cattle shed simplifies the workload in terms of cutting bio-wastes for composting and cutting fodder for cattle. Through the establishment of 10 honey bee colonies he aims at better pollination and higher yields other than honey production.

Production ; The average production from this system is 90 coconuts per tree in a year, 1.7 kg of dried arecanut per year, 1 kg dried pepper per vine, 10 kg banana per plant, 1.5 tonnes of vermicompost, 75 kg of honey, 110 tonnes of cowdung, 170 tonnes of fodder grass besides household consumption of bio-gas. According to him, the net returns from his farm of around two hectare area comes to about ₹3.5 lakh per year.

Self sustaining : "This is a self sustained integrated farming system model wherein 90% of nutrient requirement is met through farm level processing of waste bio-mass produced in the farm itself, which is one of the basic principles of organic farming practices. "Adequate irrigation facilities are provided through two farm ponds and one bore well whereas round the year household requirement is met through a suranga the unique water harvesting structure of Kasaragod district," says Dr.George V.Thomas, Director of the Institute.

To talk to him readers can contact Mr. C.N.Narayana Hebbar, Chowkar house, P O Bela , Via Kumbla, Kasaragod, Kerala, Phone: 09446222192 , 04998247234.

## One village, two farming world records

After setting a world record for paddy production by following SRI, or system of rice intensification, Darveshpura village of Nalanda has now set a world record for potato production, too. The farmer this time, namesake of Chief Minister Nitish Kumar, harvested 72.9 tonnes of potato per hectare, dwarfing the previous record of 45 t/ha held by farmers in the Netherlands. CM Nitish, his eyes

set on a 10-year agriculture target of ₹1.5 lakh crore, called it an extraordinary feat coming from the same village within four months. He has also got farmers of the village to grow wheat through SRI. The other Nitish Kumar used organic farming on his way to his potato record. The Assembly and the Legislative Council have congratulated him, while the CM was so jubilant that he carried a basket of potatoes to the Assembly.

## Changes in ARDBs

i) Shri Padam Singh Chauhan (IAS), has assumed charge as Managing Director of the Himachal pradesh State Cooperative Agri. & Rural Dev. Bank Ltd., w.e.f. 1st February 2012.

ii) Shri M. Mohan has assumed charge as additional registrar/Special Officer of the Tamil Nadu Cooperative State Agri. & Rural Dev. Bank Ltd., w.e.f 28th March 2012

STATEMENT OF OWNDERSHIP AND OTHER PARTICULARS ABOUT LAND BANK JOURNAL AS REQUIRED UNDER RULE 8 OF THE REGISTRATION OF NEWSPAPERS (CENTRAL) RULES 1956

# FORM IV

| | | |
|---|---|---|
| **Place of Publication** | : | Navi Mumbai |
| **Periodicity** | : | Quarterly |
| **Printer's Name** | : | K. K. Ravindran |
| **Nationality** | : | Indian |
| **Address** | : | Managing Director<br>National Co-operative Agriculture and Rural Development Banks' Federation Limited<br>701, 7th Floor, A-Wing,<br>BSEL Tech Park,<br>Opp. Vashi Railway Station,<br>Vashi, Navi Mumbai 400 703. |
| **Publisher's Name** | : | K.K. Ravindran |
| **Nationality** | : | Indian |
| **Address** | : | Managing Director<br>National Co-operative Agriculture and Rural Development Banks' Federation Limited<br>701, 7th Floor, A-Wing,<br>BSEL Tech Park,<br>Opp. Vashi Railway Station,<br>Vashi, Navi Mumbai 400 703. |
| **Editor's Name** | : | K.K. Ravindran |
| **Nationality** | : | Indian |
| **Address** | : | Managing Director<br>National Co-operative Agriculture and Rural Development Banks' Federation Limited<br>701, 7th Floor, A-Wing,<br>BSEL Tech Park,<br>Opp. Vashi Railway Station,<br>Vashi, Navi Mumbai 400 703. |
| **Names and Addresses of Individuals who own the Newspaper and are partners or shareholders holding more than one per cent of the total capital** | : | National Co-operative Agriculture and Rural Development Banks' Federation Limited<br>701, 7th Floor, A-Wing, BSEL Tech Park<br>Opp. Vashi Railway Station, Vashi,<br>Navi Mumbai 400 703 |