

National Agricultural Innovation Project

UAS, GKVK, Bangalore, Karnataka

Annual Progress Report 2009-10

(1st April 2009 to 31st March 2010)

1. Project profile :

a) Component : 2

b) Subproject title : "Value chain on Commercialisation of Maize Products"

- c) Objectives :**
- 1) Fine- tuning of the existing agricultural practices for sustainable increased productivity and dissemination among the farmers
 - 2) To formulate innovative balanced nutritive foods from maize, studying their shelf- life and fine tuning technologies for commercialization
 - 3) To evaluate the nutritionally cooked recipes from maize and to determine the beneficial effects for chronic disorders
 - 4) Evaluation of maize grain byproducts for balance feeds and popularization for enhanced live stock productivity
 - 5) Strengthening entrepreneurship skills of SHGs and NGOs for capacity building in up scaling of production for commercialisation and marketing of value added products.

d) Sanction date : December 3rd 2008

e) Completion date : June 2012

f) Sanction budget (Rs lakhs) : 451.22 lakhs

g) Partners:

1. National Institute of Nutrition, FDTRC, Hyderabad-500604
2. National Institute of Animal Nutrition and Physiology, Bangalore.
3. Karnataka State Agro Corn Products Ltd., Bangalore.
4. Karnataka Milk Federation, Bangalore
5. Project Directorate on Poultry, Hyderabad.
6. Association of Women Entrepreneurs of Karnataka, Bangalore.

h) Subproject website address (URL): www.uasbangalore.edu.in

2. Technical Progress

(i) Technical Progress : Lead centre

a) During the year (all quantified)

Output Deliverables*	Targets	Achievements (Achieved/ Partly achieved/ Not achieved)	Remarks (Reasons for part/ non-achievement)
Refinement of maize production technologies	27	27	Results are awaited
Organization stake holders groups (MGA & SHGs)	10	10	Maize groups growers in the project area were formed in 10 villages. Annexure-I & II
Maize growers groups	10	10	
SHG women EDP groups	10	10	
Procurement and distribution of critical inputs	2.0 qtls 450 Acre Maize hybrid (kharif) QPM -12 acres (Rabi) NAH – 2049 (Rabi-summer)	2.0 qtls, 450 acre Maize hybrid (kharif) QPM -12 acres (Rabi) NAH – 2049 (Rabi-summer)	Procured on 30-06-09 and distributed to the Cps for conducting research and to the farmers for production in the farmers area.
Procurement and distribution of critical inputs package			The recent recommended , best technologies were identified, farmers preference was sought through preliminary conducted)PRA tools) annexure-ii
Distribution of QPM seeds (Rabi)	10	10	
Distribution of NAH-2049	125	125 farmers	
Organizing technology transfer programmes	Exhibition -20 (dt.8-03-10 to 18-03-10) Seminars-1 Trainings -16 (Dt.3-2-10 to 9-3-10) Demonstrations -20 (Dt.8-12-09 to 18-12-09) Street plays -10 Field days -2 Stake holders -1 conventions	Exhibition -20 (dt.8-03-10 to 18-03-10) Seminars-1 Trainings -16 (Dt.3-2-10 to 9-3-10) Demonstrations -20 (Dt.8-12-09 to 18-12-09) Street plays-10. Field days -2, Stake holders – conventions-1	The programmes were organized in the selected project villages , more than 2500 framers participated in all the programmes & SHGs were participated.
Documentation of baseline information	Base line survey report -1	Base line survey report -1	Base line report was submitted to the national co-ordinator, NAIP ,New delhi on 1-02-10 and to the CPs
EDP women training	3	3	01-06-09 , the room was rented out in the project area and installing the equipments in the progress
Staff orientation of value	1	1	It was organized by the

addition of maize grains			CFTRI, Mysore, on 1-07-09, on value addition of maize processing technologies to the project staff to the officers of CPs .
Work review and appraisal	3	3	24-03-10, the KSCPL, KMF, NIANP, NIN, PDP, and AWAKE work was reviewed and cooperation extended
Office renovation	2 units	2 units	The AICRP maize office at Mandya and food science and Nutrition department , UAS, Bangalore were renovated
Protocol for maize value added products and shelf life studies for 8 products 1) Vermicelli 2) Laddu 3) Nippattu 4) Crunches 5) Roti 6) Noodles 7) Papad 8) Nutrimix TOT 9) Data card 10) Method demonstration 11) Field day 12) Base line survey- Interview schedule	12	12	Hand over to Vimta labs through NIN , Hydrerabad, partners for quality testing and for commercialisation .
Procurement of equipments	22	22	Annexure III

b)Cumulative (all quantified) : **As above**

Output Deliverables*	Targets	Achievements (Achieved/ Partly achieved/ Not achieved)	Remarks (Reasons for part/ non-achievement)

NIANP: Bangalore

Output Deliverables*	Targets	Achievements (Achieved/ Partly achieved/ Not achieved)	Remarks (Reasons for part/ non-achievement)
The status of farmers knowledge and use of maize ascertained	Baseline survey on use of maize grain and by products as animal feed	From the Base line survey in Mallavali Taluk of Mandya district identified that farmers are not feeding as per the requirements and feeding lacks in mineral/ salt-supplementations	Survey complete
Evaluated Nutritive value of commercial Nithyasree-2049(Hybrid) and Shakthiman-4 (QPM) varieties of maize grain	Evaluation of QPM and Nithyasree Hybrid against commercial maize in the ration of sheep	Growth performance, nutrient utilization and immune profile of sheep was similar in all the groups.	Study completed
Studied Method of control of fungal infestation and aflatoxins in maize grain	Studies on control of Aspergillus parasiticus and aflatoxin B1 production in Maize grain	Copper sulphate, Citic , Benzoic, sodium propionate and copper sulphate were evaluated for their effect on inhibition of growth of A. parasiticus and aflatoxin B1	Study completed

b)Cumulative (all quantified)

Output Deliverables*	Targets	Achievements (Achieved/ Partly achieved/ Not achieved)	Remarks (Reasons for part/ non-achievement)
Imparting knowledge about use of maize as animal feed, formulation of balanced ration and TMR	A workshop was conducted for farmers on using maize for making balanced concentrate feed and TMR	Successfully conducted workshop and imparted training to the farmers	

The status of farmers knowledge and use of maize ascertained	Baseline survey on use of maize grain and by products as animal feed	From the Base line survey in Mallavali Taluk of Mandya district identified that farmers are not feeding as per the requirements and feeding lacks in mineral/ salt-supplementations	Survey completed
Evaluated Nutritive value of commercial Nithyasree-2049(Hybrid) and Shakthiman-4 (QPM) varieties of maize grain	Evaluation of QPM and Nithyasree Hybrid against commercial maize in the ration of sheep	Growth performance, nutrient utilization and immune profile of sheep was similar in all the groups.	Study completed
Studied Method of control of fungal infestation and aflatoxins in maize grain	Studies on control of Aspergillus parasiticus and aflatoxin B1 production in Maize grain	Copper sulphate, Citic , Benzoic, sodium propionate and copper sulphate were evaluated for their effect on inhibition of growth of A. parasiticus and aflatoxin B1	Study completed

NIN: Hyderabad

Output Deliverables*	Targets	Achievements (Achieved/ Partly achieved/ Not achieved)	Remarks (Reasons for part/ non-achievement)
6 Products (Recipes) of Maize	10 (Recipes) of Maize and controls	Nutrients in the products determined
30 subjects for Diabetic mellitus study enrolled	150 subjects to be studied in all	Basal characteristics of 30 subjects determined	Study in progress.

b) Cumulative (all quantified)

Output Deliverables*	Targets	Achievements (Achieved/ Partly achieved/ Not achieved)	Remarks (Reasons for part/ non-achievement)
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30 subjects for Diabetic mellitus	150 subjects to be studied in all	Basal characteristics of 30 subjects	Study in progress.

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PDP, Hyderabad

- The protein content was 15.44 and 9.73% higher in quality protein maize (QPM) and hybrid maize (Nityashree) (HMN), respectively compared to normal maize (NM).
- The essential amino acid contents such as lysine and tryptophan contents were higher in QPM compared to NM. Lysine and tryptophan contents were higher by 44 and 33% in QPM than NM, respectively. However, lysine contents of Nityashree hybrid were similar to that of NM but tryptophan content was higher by 17% in HMN than NM. Valine and leucine contents were 37.8% higher and 17.9% lower, respectively in QPM than NM. The ratio of leucine to isoleucine was lower in QPM than NM (2.90:1 vs 3.78:1). Further, the ratio of leucine plus isoleucine to valine was lower in QPM than NM (2.29:1 vs 3.62). Between NM and HMN, no difference could be noticed on the composition of amino acids with respect to isoleucine and valine, but leucine content was 13% lower in HMN than NM.
- The AME contents of various maize cultivars varied between 3320 to 3482 kcal/kg. The AME content of QPM was 3.87% and 4.65% higher compared to NM and HMN, respectively.
- Lysine and threonine digestibilities were significantly higher in QPM compared to either HMN or NM. No difference in the digestibilities of other amino acids could be noticed among the three different maize varieties.
- Dietary replacement of NM with QPM at 50% level significantly ($P < 0.05$) improved the body weight gain, feed conversion ratio, humoral immune response, relative bursa weight, and breast muscle yield and lowered the abdominal fat content. No further improvement in these parameters could be noticed by increasing the level of replacement of NM with QPM to either 75% or 100%. Further, the improvement noticed in the QPM 50% group was at par with the group fed NM diet with lysine supplementation and thus dietary replacement of NM with QPM at 50% did not need extra synthetic lysine supplementation.
- No effect on qualities with respect to appearance, flavour, juiciness, tenderness and overall acceptability were revealed when pressure cooked meat with 1.5 % salt was subjected to organoleptic evaluation. It is concluded that, dietary replacement of NM with QPM at 50% level resulted in optimum performance, higher breast muscle yield and higher immune response in broiler chickens.
- Dietary replacement of normal maize (NM) with Nityashree hybrid maize (HMN) resulted in similar performance in terms of body weight gain, feed conversion ratio, and nutrient utilization. The carcass yield and characteristics (Dressed yield, breast content, giblet) were comparable between the dietary groups. Thus it is concluded that apparent metabolizable energy and feeding value of for growing broilers were similar to normal maize.

AWAKE, Bangalore

Deliverables	Targets	Achievements	Remarks
1. supply chain linkage of grain corn, QPM and specialty corns from warehouse/ cold storage to the common facility centre and strengthening it	Sourcing of raw materials for training in value addition and production	Locally available raw materials were sourced for demonstration of various value added nutritional recipes	Actual value added products for commercialization will be made available only after completion of skill training of SHG's which is continuing now. This is targeted in the third year
2. Entrepreneurial training to women SHG's on preparation of selected health foods	No of women acquired skills , trained in product preparation and commercialization	<ol style="list-style-type: none"> 11 programs on project awareness conducted covering 1310 women , 390 men and 3 NGO's 270 women were selected from 55 SHG's for entrepreneurship training and conducted 10 entrepreneurship awareness programs including motivation for value added product preparation, entrepreneurial skill motivation and concept of economic empowerment. 10 batches of entrepreneurship training was conducted on business counseling , business idea generation, capacity building of SHG's , sourcing of raw materials for production, insight on marketing, brands and networking and 3 batches were provided with concept of business incubation, skill in food processing using common facility centre and exposure visits to food processing units 10 batches of demonstration of nutritional recipes, concepts of labeled products etc were taught. Capacity building Of SHG members done by frequent review meetings and to sustain their confidence in value added products 	Business planning, IG A and Skill training in usage of common facility equipments are continuing now ,demonstration of selected products for technology transfer done, common facility centre established , commercial production shall commence during the next year of project (2010-2011) . Legal registration of selected products for branding done , meetings conducted to source buyers for marketing of products in urban retail outlets.
3. Common facility Centre for women SHG's for commercialization of value addition , promotion and marketing	Centres established	<ol style="list-style-type: none"> Infrastructure and equipments for Common facility has been installed. CFC inaugurated on 14th Feb 2010. Legal registration of products selected for technology transfer have been done under the Brand Name " MAIZY " MAIZY brand name officially launched during Krishi mela 2009 at GKVK . Brand products shall be launched for commercialization during 2010-2011 Pilot market survey done to assess the pulse of existing product range of competitive brands available in the market. Linkages for local marketing of products from CFC explored . 	Backward and forward linkages being established to promote and market products which shall be released from the facility.

b) Cumulative so far from the beginning of the sub-project-

Deliverables	Targets	Achievements	Remarks
1. Identification of SHG's in the project area . awareness and sensitization on value addition of maize	No SHG's identified and sensitized for enterprising on value addition in maize	<ol style="list-style-type: none"> 1. 11 programs on project awareness conducted covering 1310 women , 390 man and 3 NGO's 2. 270 women were selected from 55 SHG's for entrepreneurship training and conducted 10 entrepreneurship awareness programs including motivation for value added product preparation, entrepreneurial skill motivation and concept of economic empowerment 3. 10 batches of entrepreneurship training was 4. 10 batches of demonstration of nutritional recipes, concepts of labeled products etc were taught. 5. Capacity building Of SHG members done by frequent review meetings and to sustain their confidence in value added products 	<ol style="list-style-type: none"> 1. These programs involved counseling of families confidence building of women , instill in their minds the need for economic independence, required extra efforts to create enthusiasm in conservative villages and breakthrough their cultural stigmas in sending out women for training. 2. Extra efforts needed to sustain the enthusiasm of selected women during training and to maintain the peer group support. 3. Selected women attended all training program with interest and hope to become economically independent. 4. Some of the women came out with innovative home made recipes which can be promoted or researched for commercialization. 5.The enthusiasm in SHG groups if sustained can initiate group enterprises or MAIZE Cluster of industries which in turn shall pave way for accessory industries like packaging industries, printing and label designers, computer and communication networks, courier and marketing agencies, transport and travel agencies , other food products, etc.
2. facilitating access to credit from banks to SHG's	Bank pass books and transactions	Distributed seed money for the project to each group after having a brainstorming on the purpose of this disbursement and their commitment SHG's leaders meeting along with reviews were conducted as per requirement .	SHG members are ready to continue with training and have given their acceptance and commitment to participate in this project .
3. supply chain linkage of grain corn, QPM and specialty corns from warehouse/ cold storage to the common facility centre and strengthening it	Sourcing of raw materials for training in value addition and production	Locally available raw materials were sourced for demonstration of various value added nutritional recipes	Actual value added products for commercialization will be made available only after completion of skill training of SHG's which is continuing now. This is targeted in the third year
4. Entrepreneurial	No of women	1. 10 batches of entrepreneurship	Business planning, IG A and

<p>training to women SHG's on preparation of selected health foods</p>	<p>acquired skills , trained in product preparation and commercialization</p>	<p>training were conducted on business counseling , business idea generation, capacity building of SHG's , sourcing of raw materials for production, insight on marketing, brands and networking and 3 batches were provided with concept of business incubation, skill in food processing using common facility centre and exposure visits to food processing units 2.10 batches of demonstration of nutritional recipes, concepts of labeled products etc were taught. 3. 3 batches of skill training were conducted including exposure visits to food processing units and business incubation centre</p>	<p>Skill training in usage of common facility equipments are continuing now , actual production of labeled products shall commence towards 2010-2011</p>
<p>5. Common facility Centre for women SHg's for Commercialization of value addition , promotion and marketing</p>	<p>centres established</p>	<p>1. Infrastructure and equipments for Common facility has been installed. CFC inaugurated on 14th Feb 2010. 2. Legal registration of products selected for technology transfer have been done under the Brand Name " MAIZY " MAIZY brand name officially launched during Krishi mela 2009 at GKVK. Brand products shall be launched for commercialization during 2010-2011 3. Pilot market survey done to assess the pulse of existing product range of competitive brands available in the market . 4. linkages for local marketing of products from CFC explored .</p>	<p>Backward and forward linkages being established to promote and market products which shall be released from the facility. MAIZY Brand shall be commercially launched and supported with marketing network.</p>

ii) 5 major innovations/achievements during the year and as on date (Cumulative)

a) During the year (all quantified)

UAS, Bangalore

S. No.	Innovations/achievements
1	10 maize grower groups were formed with a membership strength of 450, in the project area
2	Protocol of 8 new maize value added foods and other pasta products have been standardized for commercialisation
3	10 Women SHG entrepreneur groups were formed for EDP training with a membership strength of 250
4	Critical inputs package was designed and distributed to the 450 Maize growers during kharif , 12 farmers in Rabi & 125 farmers during Rabi- summer in the project area.
5	Popularization of improved new maize production technologies and cattle feeds in the project area (exhibition, training, seminar, demonstrations, street plays etc). More than 2500 farmers and farm women participated.
6	Launching of CFC at Malavalli on 14-12-10

NIANP, Bangalore

S. No.	Innovations/achievements
1	QPM and Nithyasree Hybrid maize grain could be used as component of concentrate mixture for feeding livestock
2	A study was completed where chemicals such as copper sulphate (0.1%), Citic and Benzoic acids (0.25%), sodium propionate (0.5%) and copper sulphate (0.1%) were most effective in inhibition of growth of A. parasiticus and aflatoxin B1 biosynthesis.

PDP, Hyderabad

S. No.	Innovations/achievements
1	Lysine and tryptophan contents were higher by 44 and 33%, respectively, in QPM compared to NM.
2	The AME content of QPM was 3.87% and 4.65% higher compared to NM and HMN, respectively
3	Lysine and threonine digestibilities were significantly higher in QPM compared to either HMN or NM.
4	Dietary replacement of NM with QPM at 50% level resulted in optimum performance, higher breast muscle yield and higher immune response in broiler chickens.
5	Apparent metabolizable energy and feeding value of Nitishree hybrid maize for growing broilers were similar to normal maize.

a) Cumulative (all quantified)

S. No.	Innovations/achievements
1	Lysine and tryptophan contents were higher by 44 and 33%, respectively, in QPM compared to NM.
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4	Dietary replacement of NM with QPM at 50% level resulted in optimum performance, higher breast muscle yield and higher immune response in broiler chickens.
5	Apparent metabolizable energy and feeding value of Nitishree hybrid maize for growing broilers were similar to normal maize

AWAKE, Bangalore

S. No.	Innovations/achievements
1	REGISTRATION AND RELEASE OF "MAIZY" BRAND FOR COMMERCIALIZATION OF PRODUCTS
2	Common facility centre established

NIN, Hyderabad

S. No.	Innovations/achievements
1	Analysed 5 products of maize (flour, roti, crunches, laddu, & nippattu)
2	Enrolling subjects for glycemic index of health foods
3	Enrolling diabetic study subjects

KMF, Bangalore

S. No.	Innovations/achievements
1	Associated with lead institute and with NIANP, Bangalore in organizing extension programs like training, interaction for farmers
2	Attended CIC & CAC meetings and other review meetings organized by lead institute
3	Laboratory: to analyse the nutrition composition of the cattle feed was stabilized

KSACP Ltd, Bangalore

S. No.	Innovations/achievements
1	Sample corn flakes and curls were prepared for quality testing and commercialisation
2	Procurement of equipments in progress.

C. Component-2: Performance indicators for the period October 1st to march 31st 2010

Indicator	Baseline value	Performance
Total Number of NAIP production technologies released and adopted	Nil	4
Total Number of processing technologies released and adopted	Nil	8 (8 recipes have been standardised)
Total number of rural industries established in a) Project area b) Outside the project area	Nil	Nil
Total number of product groups for which national or regional quality grades have been agreed on through NAIP consortia	Nil	Nil
Total number of private sector organizations participating in the consortia	Nil	3
Total number of farmers involved in consortium activities	Nil	487
Total number of groups formed for marketing and processing	Nil	20
Publication		
Research papers		2
Popular articles		10
Success stories		2
Patent stories		-
Patent field		-
Technical bulletin		5

3. Financial Management

Statement of Budget released:

(Rs. lakhs)

Lead centre/ Co-partners	Total Sanctioned Budget	Fund Released up to March 2009	Sanctioned budget for the current year (2009-10)	Fund released for the current year (2009-10)
Lead centre UAS,GKVK,Bangalore	207.980	89.400	50.060	44.080
NIANP,Adugodi,Bangalore	38.430	11.994	15.090	11.548
NIN,Hyderabad	59.521	11.426	28.390	19.048
PDP,Hyderabad	50.890	Nil	23.800	20.820
Awake,Bangalore	32.280	1.838	10.200	5.058
KMF, Bangalore	13.970	0.053	3.550	3.550
KSACP ltd. ,Bangalore	48.150	30.368	15.740	15.120
Total				

Statement of expenditure:

(Rs. lakhs)

Lead centre/ Co-partners	Fund Utilized up to March 2009	Fund utilized up to March 2010	Dates of submission of latest SOEs	Dates of submission of AUCs
Lead centre UAS,GKVK,Bangalore	73.269	37.382	Dec-2009	June -2009
NIANP,Adugodi,Bangalore	0.660	8.103	31 st Dec 2009	12- Jan -2010
NIN, Hyderabad	10.916	9.225	12 Jan 2010	18 Aug 2009
PDP,Hyderabad	Nil	19.670	4 th Jan 2010	--
AWAKE,Bangalore	1.796	11.792	18 Jan 2010	26 May 2009
KMF, Bangalore	0.05734	5.718	1 st oct 2009	30.June 2009
KSACP ltd. ,Bangalore	NIL	45.488 (Procurement is under progress)	20 th jan 2010	May 2 nd 2009

4. Procurement

a) During the period

Major items (Above Rs. 5.0 Lakhs)	Budget	Utilization (%)	Remarks
Lead centre	Nil	Nil	All the equipments procured & installed at CFC Malavalli (Annexure-I)
NIANP, Bangalore	Nil	Nil	Nil
NIN, Hyderabad	7.0	61.0	Price of the equipment is slashed by 40%
PDP, Hyderabad	14.75	90.0	Satisfactory
Awake, Bangalore	-	-	-
KMF, Bangalore	-	-	-
KSACP Ltd. , Bangalore	40.00	91%	Procurement is under progress

a) Cumulative

Major items (Above Rs. 5.0 Lakhs)	Budget	Utilization (%)	Remarks
Lead centre	Nil	Nil	All the equipments procured & installed at CFC Malavalli (Annexure-I)
NIANP, Bangalore	Nil	Nil	Nil
NIN, Hyderabad	7.0	61.0	Price of the equipment is slashed by 40%
PDP, Hyderabad	14.75	90.0	Satisfactory
Awake, Bangalore	-	-	-
KMF, Bangalore	-	-	-
KSACP Ltd. , Bangalore	40.00	91%	Procurement is under progress

- i) Project website created Yes
- ii) Project website/webpage updated Yes
- iii) Media products developed/disseminated/ Trainings organized

Products/ Trainings organized (CDs, Paper clippings etc.)	Copies Supplied/ No. of participants
CDs,	4
Manuals	2
Bulletins,	3
Paper clippings	10
Products	8
Trainng programmes organised	16
Demonstrations	20
Street plays	10
Convention	1
Doordarshan	1

iv) Implementation problems/issues and suggestions

Problems	Suggestions
Co-ordination with the Consortium partners regarding performance appraisal and budget utilisation	Separate monitoring team may be created from NAIP
Procurement of equipments involved very complex procedure	It is better to follow the existing University guidelines for the procurement.

5. Salient features of innovations/ achievements including techno-economic viability, marketability and its impact on income and employment generation along with one good photograph/ bar chart/ table with caption of most significant contribution.

- 10 maize grower groups were formed with a membership strength of 450, in the project area
- Protocol of 8 new maize value added foods and other pasta products have been standardized for commercialization and standardized procedure for data card, method demonstration, field days & base line survey.
- 10 Women SHG entrepreneur groups were formed for EDP training with a membership strength of 250
- Critical inputs package was designed and distributed to the 450 Maize growers in the project area during kharif, QPM seeds for 12 farmers during Rabi & distributed NAH-2049 Maize hybrids for 125 farmers during Rabi- summer and also initial deposit money by women SHG group and maize intermediatery products were distributed during method demonstration organized.
- Total area covered under new high yielding hybrids of maize is 587.
- Popularization of improved new maize production technologies and cattle feeds in the project area (exhibition, training, seminar, demonstrations street plays, convention, Doordarshan, etc). More than 2500 farmers and farm women participated
- Quality protein maize has better nutritive value for broiler chicken compared to normal maize available in the market. Nityashree hybrid maize however has similar nutritive value as normal maize for broiler. The protein content was 15.44 and 9.73% higher in QPM and hybrid maize (Nithyashree) compared to normal maize (NM) respectively
- Corn flake Sample and Curls were prepared for quality testing and commercialization by KSACP Ltd, B'lore.
- Common facility centre was established in Malavalli for EDP training on value added maize healthy foods for women SHGs
- More than 15 demonstrations on value added maize healthy foods (roti and upma) wee organized in all the 10 villages of the project.
- **MAIZY** brand registered for commercialization of maize products-**MAIZY** brand of vermicelli , noodles, crispies- brand released during **KRISHIMELA NOVEMBER 19th 2009**.



Launching of NAIP project at ZARS, V.C, Farm, Mandya.



Distribution of critical inputs by the Deputy Commissioner of Mandya



CIC meeting chaired by the chairman & Hon'ble Vice-chancellor and consortium partners

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Conducting of field day at project village, Malavalli



Demonstration of maize sheller to the farmers



Demonstration on Value addition of maize



SHG women of Malavalli selling the maize products