Feeding growing cities

Towards enhancing the livelihood capacities of small and marginal peri-urban farmers, Magadi, Karnataka, India

Background and objectives: Magadi is a rapidly developing satellite town of Bangalore ear-marked for development (Figs 1, 2 3, 4 and 5). Current population is 32,000. Livelihood activities are center around agriculture, supported by other activities like silk reeling, floriculture and small business activities. The **objective** of the project was to strengthen farmer organizations; help innovate food production systems, and using ecological principals; enhance marketing capacities to benefit from on-going development activities as well as contribute to the "Ecocity" concept of the Magadi municipality. This poster describes some of the outcomes observed during the first year of activities.

Methods: An urban producers' association was formed comprising small and marginal farmers: the Magadi Vayalagam Vegetable Growers' Souharda Cooperative Society (MVVGSCS). RUAF team carried out activities to enhance capacities for production, marketing, organizational and technology strengthening and credit and financing.

context analysis * inventory of available resources * change analysis * selection of most promising options * identifying innovations * market analysis * seasonal calendars and value chain mapping * promotion of savings and internal lending schemes * demonstration of off season carrot production * urban producers' field schools * production and marketing of products * promotion of ecological farming principles * exposure visits * development of business and project plans * book keeping

The Association: The MVVGSCS comprises 6 neighbourhood groups (Fig 6). Of its 97 members, 30% are women. The executive committee, and three subcommittees (procurement and production, marketing and transportation, and finance) are the decision makers of the association.

Savings and internal lending schemes within groups: Small groups (n<=20) met at monthly intervals to save, lend and collect the repayments based on a fixed interest rate (2% per month). The funds collected (100/- per month) for the period are given in Table 1 and Figure 7.

Table 1: MVVGSCS Savings and Internal Lending Scheme as at 15 Oct 2010

Description	SCNVAS *	SMVAS *	SDDVAS *	SCMVAS *	Overall
Date of commencement	16-Apr-09	10-Apr-09	01-Apr-09	01-Apr-2009 (Reformation)	
Number of producers	17	18	20	19	74
Total savings - Group(₹)	13,147	23,000	34,250	4,7560	11,7957
Average savings per producer(₹)	773	1,278	1,713	2,503	1,594
Loan recipients	14	16	15	19	64
Interest earned for the group@ 2% per month(₹)	2,372	4,877	8,232	16,677	32,158
Loan in circulation (including interest) (₹)	15,519	27,877	42,482	64,237	150,115

* SCNVAS: Sri Cheluvanarayaswamy Vyavasaya Abhivruddi Sangha
SMVAS :Sri Maruthi Vyavasaya Abhivruddi Sangha
SDDVAS: Sri Durga Devi Vyavasaya Abhivruddi Sangha
SCMVAS: Sri Cheluvanaraya Mahila Vyavasaya Abhivruddi Sangha

Revolving fund: A revolving fund supported the farmers in need of funds for inputs. Group based disbursement was adopted. Interest earned is used for the Association's overheads.

Details of revolving fund distribution and earnings to the MVVGSCS as on 15 Oct 2010

Description	SCNVAS	SMVAS	SDDVAS	SCMVAS	Overall
Date of distribution	25-Jun-10	25-Jun-10	25-Jun-10	08-Sep-10	-
Number of producers	6	6	13	7	32
Total amount distributed(₹)	26,560	25,872	56,056	35,000	143,488
Equity monthly instalment(₹)	1,476	1,437	3,114	1,944	7,971
Loan repayment(₹)	3,264	4,322	9,834	2,200	19,620
Interest earned for the association@ 2% per month(₹)	1,257	1,548	3,061	700	6,566
Loan outstanding (₹)	23,296	21,550	46,222	32,800	123,868

Urban producers' field schools: Farmers exchanged innovation experiences in the field (Fig 8); package of best practices, integrated crop management, marketing and financial aspects, harvesting and post harvest technologies, feedback, record keeping and mixed cropping.

Ecological farming practices: 25 beneficiaries were willing to contribute 25% of the total cost to establish vermi-composting units(Fig 9). Expected earnings are INR 6000 per cycle of three months per unit. 20% goes to the association cover costs. The first results are expected by the end of the month.

Exposure visits: Farmers participated in exposure visits (Fig 10 & 11) to enhance their skills related to production, marketing and finance. Several capacity building workshops and meetings have been conducted for organizational and technical strengthening.

Production and marketing: Carrots were selected as the most promising option (MoPO) based on a rank matrix. Production was aimed for high-end markets. Innovations were identified after discussion, and a value chain map was developed (Fig 12). Innovation was pitched at both technical and organizational levels. The timing of production was based on seasonal calendars.

Economics of carrot production

Staggered groups	Area (m^2)	Cost of cultivation (₹)	Quantity produced (kg)	Rate (₹/kg) Min	Rate (₹/kg) Max	Gross profit (₹)	Net profit (₹)	Net profit/ 1000 m^2 (₹)
1	3813	25,207	2611	12	17	36,874	11,667	3,060
2	3098	24,542	2783	12	18	34,564	10,022	3,235
3	2574	21,448	2336	13	19	33,044	11,596	4,506
4	4099	27,431	2266	17	22	41,243	13,812	3,370
5	4003	27,450	1365	20	26	30,030	2,580	644
6	4289	28,637	1212	24	28	30,785	2,148	501
7	3527	26,376	1979	24	26	49,475	23,099	6,550
Total	25402	181,091	14551	122	155	256,015	74,924	2,949

Urban producer family cleaning and grading carrots

Fig 1: Location map

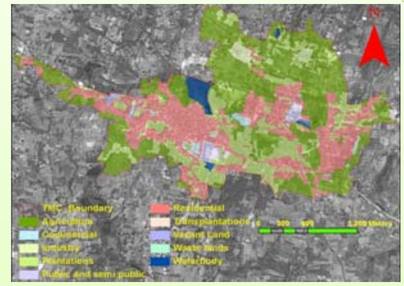

Fig 4: Land-use map of Magadi municipality

Fig 2: Irrigated crops

Fig 3: Rain-fed crops

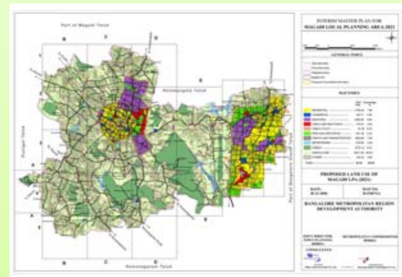

Fig 5: Proposed land-use map of Magadi (2021)

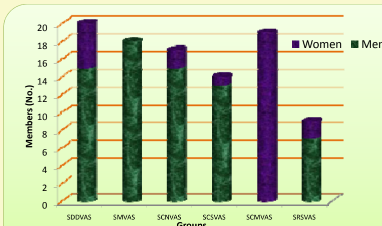

Fig 6: The MVVGSCS groups

Participatory situation analysis on urban agriculture

Fig 7: Group saving and internal lending

Fig 8: Urban producers field schools session

Fig 9: Vermi-composting unit

Fig 10: Participatory diagnosis and market analysis

Fig 11: Learning marketing strategies in Tamil Nadu

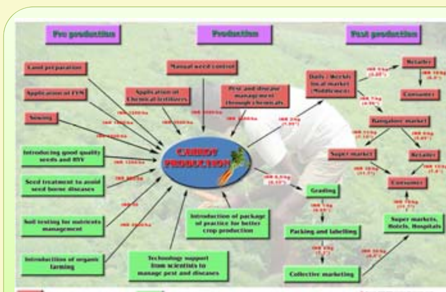

Fig 12: Value chain mapping

Fresh carrots for the supermarket

RUAF-From Seed to Table (FStT)

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