SAMUHA Kanakanala Watershed Development Project, Tavergera

Taluk: Kushtagi **Dist.: Koppal**

Community Seed Bank Programme

Annual Report 2003-2004

Foreword

Samuha Kanakanala Watershed Development Project is operational in Tavaragera hobli of Kushtagi Taluk Koppal district. This project is a joint venture between the Government of India and the Swiss Government and involves 24 villages that come under the catchment area. The first phase of the project was initiated by the Govt. of Karnataka and implemented by the Dry-land Development Committee and is now complete. The second phase of this project began only in March 2002 although the initial plan was to commence work in April 2000. The govt. of Karnataka decided against participating in the second phase of the project. The Swiss Development Cooperation /Inter Cooperation however decided to continue with the secondphase of the project, in association with NGOs, whilst incorporating certain amendments. The project duration was extended up to 2005. It was decided that the Village Development Society would be the implementing agency at the village level.

New techniques and concepts have been introduced by SDC through a thrust on increased local participation, less capital-intensive conservation practices to enhance production and income generation while addressing issues of gender and equity.

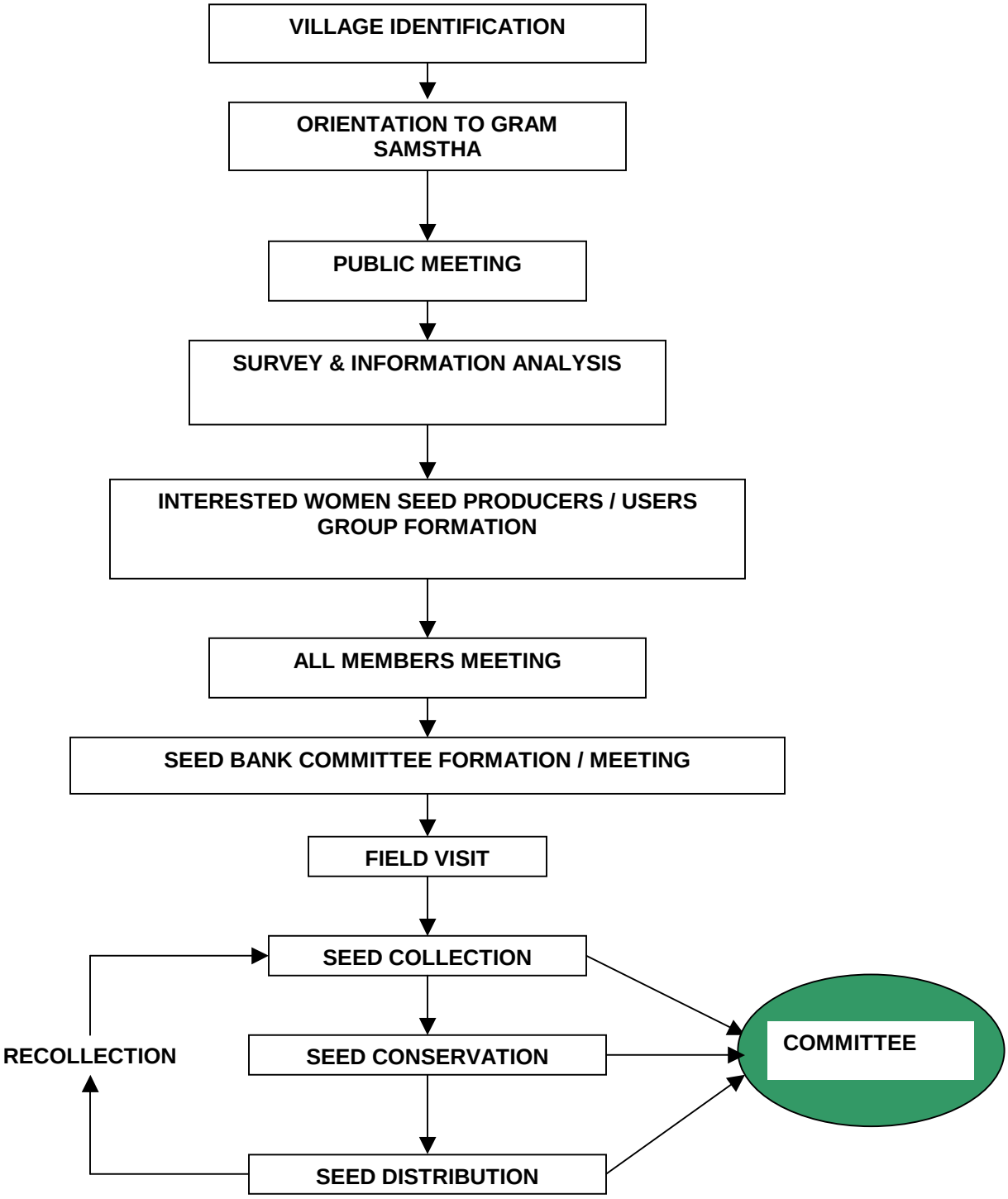
The uniqueness of this project is in its efforts to integrate the society in all dimensions.

For community monitoring to take place efficiently and in a sustainable manner, the standard of living of the people play an important role. With this in mind, along with watershed development, livelihood programmes and programmes to increase crop yield have been reckoned with.

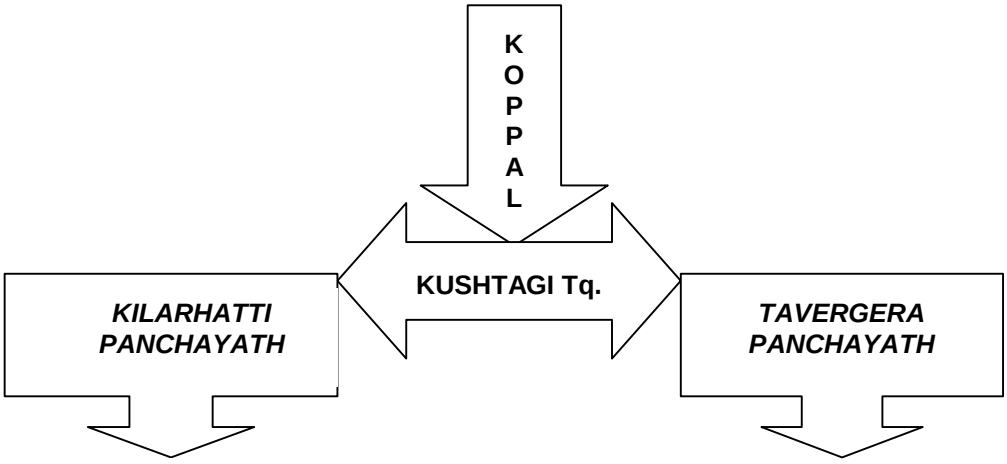
Sustainable Agriculture is an important area of intervention under agricultural production. The thrust is to create awareness amongst people taking into consideration their economic, social and environmental conditions and introducing techniques that are locally applicable.

SEED BANK

COMMUNITY BASED WOMEN SEED BANK CONCEPT



Details of villages covered under Community Seed Bank



1. **JUELKUNTI**
2. Garjinal
3. Myadardokki Thanda
4. Adavibhavi
5. Amarapura
6. Kilarahatti Thanda
7. Kalmalli Thanda

1. **VITLAPUR**
2. Nandapur
3. Idlapur
4. Narinhal
5. Navalahalli
6. Sasvihal

SAMUHA-NABARD Chattar

Raichur

Lingsugur

Nagalapur Panchayat

Chattar

Chattar Thanda

Heggapur

Heggapur thanda

Village Development Society Juelkunti

Village Details

1.	Total Number of families in the village	136
2.	Total Population of the village	912
3.	Total wonis in the village	10
4.	Population of livestock in the village	2014
5.	Families possessing livestock	121
6.	Number of Munjavu groups in the village	5
7.	Number of Ryota Sahakara groups	1
8.	Total geographical area	853 Ha.
9.	Total cultivated area	601 Ha.
10.	Non cultivated area	51 Ha.
11.	Government land	25 Ha.
12.	Private land	576 Ha.
13.	Total irrigated land in the village	102 Ha.
14.	Land under Government holding	4 Ha.
15.	Number of small ruminants	356
16.	Number of large ruminants	1568

Village Development Committee (Vittalapur)

1	Total Number of families in the village	137
2	Total Population of the village	852
3	Total wonis in the village	11
4	Families with livestock	90
5	Number of Munjavu groups in the village	9
6	Number of Ryota Sahakar groups	1
7	Total geographical area	391 Ha.
8	Total cultivated area	385 Ha.
9	Non cultivated area	25 Ha.
10	Government land	0 Ha.
11	Total irrigated land in the village	25 Ha.

Training

Annapoorneshwari Seed Bank, Juelkunti

On October 11, 2002, farmers from Juelkunti and members of Annapoorneshwari Seed Bank underwent a training on the treatment of Jowar using Asafoetida and Copper sulphate

1. Seed Treatment with Asafoetida:

Add about 10gm (two pinches) of Asafoetida to a litre of water and mix well. Immerse jowar seeds just enough to be covered by 1 litre of water. Ten minutes later remove the jowar seeds from the mixtur, wash and dry on a clean cloth. The seeds will be ready for sowing after one hour. Alternatively, the seeds can be treated at night and sown in the morning.

Benefits of Asafoetida treatment:

1. **Jowar becomes immune to drought conditions.**
2. **Increase in resistance to diseases.**
3. **Increase in crop yield.**

2. Seed treatment with Copper Sulphate (Mylu Thutha):

Soak about 1 litre of jowar for half an hour in a clean premises. Add about 10gm or two pinches of copper sulphate to the seeds. The seeds will be ready for sowing after one hour.

Benefits of Copper sulphate treatment:

1. **Increases immunity in drought conditions.**
2. **Protects crop against diseases.**

3. Salt treatment for Paddy and Jowar:

On October 20, 2003, the members of Annapoorneshwari Seed Bank underwent a training on salt treatment of paddy and jowar.

Paddy/Jowar seeds should be soaked with salt for half an hour and later kept tied in a bag or cloth. Later these seeds can be used for sowing. This training was facilitated by Mr. Raghavendra of Green Foundation.

Benefits of this treatment:

1. **This treatment hastens the rate of sprouting.**
2. **This ensures uniform growth rate of plants.**

Seed conservators meet

North Karnataka is renowned for? Its species diversity. In spite of pertinent drought conditions, there is a treasure of Jowar varieties in this area. In an effort to sensitise farmers about the disappearing indigenous strains and also unite seed conservators, SAMUHA and GREEN Foundation Bangalore organised a meet on October 11, 03. Around 50 seed conservators participated in this meet.

This meet was inaugurated by the women members of the Juelkunti and Vittalapura seed banks. Ms. Roopashree, Head- Sustainable Agriculture SAMUHA facilitated the meeting. The present state of dwindling native strains was highlighted and the need for identifying and collecting such strains at the state level for distribution among farmers was suggested.

The farmers formed small groups and shared about the native methods of seed collection of certain plant diversities like jowar, vegetables and pulses.

The next day of the seed conservators meet began with a seed tour and then a seed fair at Vittalapur. . Members of the seed bank went around the village collecting and distributing seeds amongst the farmers.

Group discussion

Later the farmers were divided into five groups and facilitated to discuss and share their experiences on the special qualities and the ways of conservation of native varieties .

The meeting concluded with a vote of thanks.

Seed tour

. The seed tour at Vittalapur commenced at 10:30 a.m. on November 12, 02. The group comprised of farmers, village youth, women members of Basaveshwara Seed Bank, staff of Green Foundation and farmers from surrounding villages. They travelled by bullock carts decorated with native vegetables and plants accompanied by music distributing seeds along the way. . The procession passed through Narinhal village and ended at Juelkunti.

Details of Kitchen Garden
Sri Basaveshwara Seed Bank, Vittalapur

1. **Shyamanna Talvara – This farmer has cultivated vegetables like radish, tomato and cow peas in the front yard of his house. He sold the surplus after household consumption and earned Rs. 150**
2. **Muttamma Shivanagowda – This farmer has cultivated vegetables like radish, tomato, carrot, cow peas and greens. She sold the surplus after household consumption and earned Rs. 200.**
3. **Hanumappa Kajji – This farmer has cultivated vegetables like radish, tomato, carrot, cow peas and greens. He sold the surplus after household consumption and earned Rs. 100**

4. **Mallamma Hanumappa - This farmer has cultivated vegetables like radish, tomato, carrot, cow peas and greens. She sold the surplus after household consumption and earned Rs. 110.**

Methods of seed conservation

Simple ways of protecting grains and pulses like Cow peas, Tuar, Halasandhi, Green gram etc. from pests.

- **Coating the seeds with soot obtained while boiling castor oil. The grains are smeared with the soot and sun dried. .**
- **Washing the seeds in cow's urine and drying in shade.**
- **Mixing pulses with arakachulu (a type of sand)**
- **Preserving the seeds like those of jowar and tuar after roasting and powdering them.**
- **Mixing ash with the seeds.**
- **Covering the pot filled with seeds with leaves of ekka (Datura) plant.**
- **Not separating a few infected ones from the rest of the seeds. .**
- **Exposing Tuar to fog and then storing it in a pot with sand layers at the bottom.**

Details of the seed survey conducted on 26 Mar 2003 at Julakunti village.

Sl, No.	Growth/Year	Jowar	Sajje (A variety of Jowar)	Navani (A variety of Jowar)
1	40 years ago	2222222	22	222
2	30 years ago	222222	22 111	222
3	20 years ago	222222 11	222 11111	2222
4	10 years ago	222 11	222 111111	22222
5	Current year	2222 11	22 111111	2222

1 **Hybrid** 2 **Jawar (indigenous)**

Traditional ways of seed conservation

Research reveals that in the past farmers had their own way of preserving grains. Grains/cereal/pulses were stored either to be used at a future date or for the purpose of sowing. The following ways were used:

1. A dark corner of a house was chosen and smeared with cow dung. After some time hay or bamboo sticks were spread in this corner. Baskets woven with sticks, covered with a bamboo mat and smeared with cow dung were made. The base of the baskets were lined with ash, castor seed or neem leaves. Then the seeds of jowar/pulses were mixed with neem leaves and stored in this basket. This was finally covered with another neat bamboo mat that would vacuum seal the basket. The grains stored in this way would thus remain fresh for a long time.

2. In a pot smeared with lime, some ash was added at the bottom followed by a mixture of castor seed and neem leaves. The seeds to be stored were added in a layer on top of this mixture. The top portion of the pot was covered with hay or grass. The grains stored in this way were stored for about 1 ½ years without being prone to pest attack.

3. Another method was by preserving them underground. The grains of jowar, navani (a variety of jowar) were placed on a bed of leaves knitted into a sheet, fully enclosed by stalks of jowar and navani. The top portion was covered by another sheet of leaves and a small stone boulder placed atop. It has been noticed that this is a very efficient method of storing seeds.

Details of native plants of North Karnataka

1 Jola (Jowar)	**Maladhandi**
	Bogapura
	Vyakarnal
	Bijapura
	Ballari
	Bili Jola
	Kempu Jola
	Gidda Jola
	Halla Jola
	Kanakada Jola
2. Sajje (Type of Jowar)	**Jawari**
	Haala sajje
	Mara Sajje
	Dodda Sajje
	Gulbarga Sajje

3.Navani (Type of Jowar)	**Kempu navani**
	Haala navani
	Maraa Navani
	Kari navani
	Bili Navani
4. Huruli (Beans)	**Kari Huruli**
	Bili Huruli
5. Yellu (Sesame)	**Kari Yellu**
	Bili Yellu
6. Madike	**Javari Madike**
7. Audala (Castor)	**Javari audala**
	Parangi audala
8. Kadale (Bengal gram)	**Huli Kadale**
	Anigeri Kadale
9. Hesaru (Green gram)	**Hasiru Hesaru**
	Kari (Javari) hesaru
	Chitrradurga Hesaru
10. Godhi (Wheat)	**Jave Godhi**
	Bili Godhi
	Kempu Godhi
11.Halasandhi	**Javari Halasandhi**
	Kempu Halasandhi
12. Kumbala (Pumpkin)	**Hasiru Kumbala**
	Bili umbala
	Kari Kumbala
	Haala Kumbala
	Tamboori Kumbala
	Eesaa Kumbala
	Sothe Kumbala
13. Badhane (Brinjal)	**Mullu Badhane**

	Mara Badhane
	Dodda Badhane
	Gidda Badhane
	Chappara Badhane
14. Avare (Cow peas)	**Challa avara**
	Chapparada Avare
15. Gurellu (Sesame)	**Kari Gurellu**
	Bili Gurellu
16. Togari (Tuar)	**Kempu togari**
	Bili togari
	Thotada togari

Preservation of Native seeds
Sanna Hanumamma, a role model for women farmers

As a step towards conservation of disappearing native seeds, SAMUHA in association with Green Foundation Bangalore has established a seed bank. In association with Green Foundation, Bangalore SAMUHA has established seed banks to enable farmers to conserve fast disappearing native strains. Members are encouraged to re-distribute these seeds amongst themselves. The seed bank at Juelkunti village is called the Annapoorneshwari seed bank.

Sanna Hanumamma, wife of Somanna Gowda is a farmer and a resident of Juelkunti village. She has been very successful in mobilizing farmers from surrounding villages as part of the seed bank programme.

This model woman of Juelkunti village shared the importance of conserving native seeds to the members of the voluntary organisation from Bijapur during their exposure visit to her village. She has been selected as the member of the Executive Committee of Village Development Society, Kanakanala. She has also created awareness about the thrift programme Munjavu amongst other members.

She has also actively participated in the seed fair and seed tour at Juelkunti. She also accompanied the members of seed bank on their visit to the Green Foundation Nursery in Bangalore.

In the field of conserving and cultivating native seeds, Sanna Hanumamma is a role model to other farmers.

Annadata Seed Bank, Chattar
Geographical details of Chattar Village

No. of Houses in the village	**178**
Total Population	**2000**
Large Farmer families	**50**
Medium farmer families	**60**
Very small farmer families	**60**
SC families	**8**
ST families	**130**
OBC families	**40**

Villages under Chattar Seed Bank

1. **Chattar**
2. **Chattara Thanda**
3. **Heggapura**
4. **Heggapura Thanda**
5. **Vyakarnal**

, Seeds of Jola, Sajje, Yellu, Togari, Hesaru, Halasandhi, Madike, Kasube, Huruli, Pundi, Audala, Gurellu and other seeds have been deposited in this seed bank. These were distributed amongst 45 members of the seed bank.

List of members of Annadata Seed Bank

1. **Kambemma**
2. **Mallamma**
3. **Mallamma**
4. **Ambamma**
5. **Hampamma**
6. **Mallamma**
7. **Sheshamma**
8. **Duragamma**
9. **Gangamma**

Preface

Dr. Biradara, a scientist of the Bijapur Agricultural University offered 23 different varieties of almost extinct native Javari Jowar plants for a live experiment aimed at reviving them at Vyakarnala village of Chattar through the Annadata Seed Bank.Chattar is one of the watershed projects under the SAMUHA- NABARD Watershed Development Project..

These native Jowar seeds were planted in SAMUHA model farm at Tavargera, TRDC - Haveri and Prawardha - Basavakalyan. . The trial was conducted with the help of farmers and members of community seed bank. The Green Foundation thanks one and all for this effort.

Details of seeds given by Dr. Biradara:

Mahaguli Sthaliya
Bidar Sthaliya
BRJ.363
Kavaragi Sthaliya
Choda Mogara
Kempa Jola
Yamanigbar
Haranidhagadi
Neelagal
Kannathi Huligapa
Javaragi Sthaliya
BRJ.364
HIR
RCR
Gidmadnadi
MH
Jole Jevara
Mabavi Sthaliya
Musabinaala
Hagari
Bidari Kundhi Chandika
Hannabagi
Chitthapura Sthaliya

We thank Dr. Biradara for giving us these plants.

Aims

To identify and revive the growth of disappearing and non-regenerating varieties of Jowar.

The green revolution has drawn farmers into growing fast and high yielding crops. This has led to a few monopolistic seed companies making a lot of profit. These companies advise farmers to use hybrid seeds and pesticides. Unfortunately, pesticides have a very bad effect on human health. Further, the hybrid seeds, not being immune to drought, often land the farmer in trouble.

Our native seeds are more immune to drought and disease. To provide people with protein rich, safe food from our native seeds is another aim of the programme.

Besides, we aim to prove to the world that we have many varieties of native seeds and hence prevent foreign companies from patenting them. We also aim to sensitise farmers to oppose these foreign companies.

Land details of farmers land

Name of the farmer	**Devendrappa Gowda**
Name of place	**Vyakarnal**
Taluk	**Lingsugur**
District	**Raichur**
Survey No.	**138**
Irrigation	**Borewell**
Date of sowing	**28/10/2003**
Distance between rows	**1 ½' (1.1 x 2 ft)**
Distance between plants	**9"**

Each variety has been sown in two rows.

Grains obtained from Sri Basaveshwara and Annapoorneshwari Seed Bank

Jola	Bili thogare
Kari yellu	Gurellu
Bili Yellu	Kadale
Madike	Anageri kadale
Huruli	Godhi
Maranavani	Sajje
Haala navani	Mara sajje
Kupari beeja	Chavali kayi beeja
Kempu jola	Kumbala beeja
Kanakada jola	Hiri beeja
Yeppathina jola	Bende beeja
Maladandi jola	Ullagadde beeja
Kari hesaru	Kusube
Menasina beeja	
Araka	
Kempu thogare	

List of people who have received seeds from Sri Basaveshwara Seed Bank

Sl.	Name of Farmer	Plant	Variety	Quantity (measures)
1	Kasturevva Bylabasappa	Huruli	Javari	2
2	Hanumappa Yenkappa	Huruli	Javari	1
3	Yenkappa Mallappa Kajji	Huruli	Javari	10
4	Siddappa Yenkappa Kajji	Huruli	Javari	2
5	Gangappa Mahanthappa	Huruli	Javari	5
6	Kambeppa Mallappa	Huruli	Javari	5
7	Pakeereppa	Huruli	Javari	18
8	Kasturamma Bylabasappa	Navani	Javari	2.5
9	Basappa Yenkappa Vaddar	Navani	Javari	2
10	Mallappa Sharanappa	Navani	Javari	2
11	Siddappa Yenkappa Kajji	Navani	Javari	1.5
12	Amareshappa Sanganala	Jola	4-11	2.5
13	Yenkappa Mallappa	Jola	4-11	2
14	Gyanappa Yenkappa Unne	Jola	Maladandi	3
15	Hanuma Gowda	Jola	Maladandi	4

16	Muthamma Shvanagowda	Gurellu	Javari	1 pav
17	Parvathemma Mallikarjuna Gowda	Gurellu	Javari	1 pav
18	Ksaturamma Bylabasappa	Gurellu	Javari	1 pav
19	Neelamma Sharangowda	Gurellu	Javari	1 pav
20	Basamma	Owdala	Javari	2
21	Basamma Mahanthamma	Owdala	Javari	2
22	Gangamma Gyanappa	Owdala	Javari	1 pav
23	Mallamma Sharanappa	Owdala	Javari	1.5 pav
24	Eeramma Chellabasappa	Hesaru	Kari	1 pav
25	Basamma Mahanthamma	Hesaru	Kari	1
26	Somappa Amarappa	Hesaru	Kari	2
27	Yenkappa Mallapa Kajji	Hesaru	Kari	2
38	Doddappa Duragappa	Hesaru	Kari	1
29	Basappa Yenkappa Reddeir	Hesaru	Kari	3
30	Mallappa Shankarappa	Hesaru	Kari	2.5
31	Basamma Mahanthamma	Madike	Javari	2
32	Somappa Muddalagundi	Madike	Javari	1
33	Yenkappa Mallappa Kajji	Madike	Javari	1
34	Hanumappa Muragadagi	Yellu	Javari	1
35	Basamma Mallappa Gurikaara	Yellu	Javari	1
36	Malamma Shankarappa Vaddar	Yellu	Javari	1
37	Somappa Amarappa	Togari	Kempu	4
38	Kenkappa Mallappa Kajji	Togari	Kempu	2
39	Mallamma Shankarappa	Togari	Kempu	9
40	Somappa Amarappa	Halasandhi	Javari	2 pav

List of Kharif seed distribution
Annapoorneshwari Seed Bank, Juelkunti

Sl.	Farmer	Plant	Variety	Quantity (Kg)
Juelkunti				
1	Duragamma Amaregowda	Togari	Kempu	2
		Hesaru	Kari	¼
		Jola	Bogapura	¼
2	Anamma Nagappa	Navani	Kempu	1
3	Neelamma Duragappa	Sajje	Gulabarga	2
		Sajje	Mara	2
		Godhi	Javari	1
		Togari	Kempu	2

		Jola	Gidda	1
		Jola	Alla	1
		Jola	Kempu	¼
		Ragi	Kari	¼
		Hesaru	Kari	½
		Madike	Javar	½
		Navani	Maranavani	1
4	Hussainamma Yamanappa	Sajje	Gulbarga	2
		Sajje	Mara	¼
		Togari	Kempu	1
		Jola	Gidda	¼
		Jola	Alla	¼
		Jola	Vyakarnala	¼
		Hesaru	Kari	¼
		Madike	Javari	¼
5	Duragamma Hanumagowda	Togari	Kempu	2
		Jola	Gidda	¼
		Jola	Alla	¼
		Jola	Kanuka	¼
		Hesaru	Kari	¼
		Madike	Javari	¼
6	Chathramma Ramanagowda	Sajje	Gulbarga	3
7	Gangamma Chathragowda	Sajje	Gulbarga	2
		Togari	Kempu	1 ½
		Hesaru	Kari	¼
8	Hanumamma Hanumagowda	Togari	Kempu	2
		Jola	Alla	½
9	Lakshmamma Durganagowda	Togari	Kempu	2
		Hesaru	Kari	½
10	Ambaramma Adanagowda	Togari	Kempu	2
		Hesaru	Kari	¼
11	Duggamma Lachamagowda	Togari	Kempu	2
12	Hanumamma Somanagowda	Togari	Kempu	2
		Hesaru	Kari	¼
		Huruli	Javari	2
		Jola	Alla	1
13	Heere Malkasaab	Jola	Bogapura	1
14	Hanumamma Konnapura	Navani	Kempu	½
		Jola	Bogapura	½

		Sajje	Mara	1
		Madike	Javari	1 ½
		Navani	Mara	2
15	Hanumamma Hanumagowda	Navani	Haala	7 ½
16	Nagappa Aluru	Jola	Maladande	5
17	Shivgyanappa Konnapura	Jola	Maladande	3
Garajinhal				
18	Hanumantha Yeradala	Sajj	Gulabarga	2
		Navani	Kempu	1 ½
19	Balappa Kanasavi	Sajje	Gulabarga	2
		Jola	Gidda	½
		Hesaru	Hasaru	¼
		Jola	Maladandi	½
		Hesaru	Kari	¼
		Ragi	Kari	¼
		Shyavi	Bili	½
		Jola	Bogapura	2 pav*
20	Thimanna Hinduvara	Sajje	Gulbarga	2
		Jola	Gidda	½
		Jola	Bogapura	2 pav
21	Amarappa	Togari	Kempu	3
		Kusube	Javari	1
		Hesaru	Kari	½
		Jola	Alla	1
		Sajje	Mara	1
22	Ramanna Hosagowdara Umali Rampura	Togari	Kempu	2 ½
		Navani	Kempu	7 ½
23	Manappayya	Hesaru	Hacha	3
		Togari	Kempu	4
		Sajje	Gulabarga	2

*** pav- a measure**

List of members of Annapoorneshwari Seed Bank, Juelkunti

1. **Sannahanumavva w/o Somanagowda**
2. **Saraswathi w/o Kanteppa Kannapeti**
3. **Heerehanumavva w/o Hanamagowda**
4. **Gangamma w/o Chatragowda**
5. **Chatramma w/o Ramanagowda**
6. **Neelamma w/o Duraganagowda**
7. **Lakshmamma w/o Duraganagowda**
8. **Bharamamma w/o Kalakappa**
9. **Hussainabegum w/o Dawalsaab**
10. **Duragamma w/o Hanumanna**
11. **Duragamma w/o Amaregowda**
12. **Aadamma w/o Balappa**
13. **Gaddemma w/o Hanamappa**
14. **Chatramma w/o Yamanappa**
15. **Eeramma w/o Yamanappa**
16. **Amaramma w/o Balappa**
17. **Ambamma w/o Balappa**
18. **Duragamma w/o Bheemappa**
19. **Duggamma w/o Lachamanagowda**
20. **Kenchamma w/o Gyanappa**
21. **Hussainbi w/o Yamanappa Pinjara**
22. **Mallamma Konapura**

List of members of Sri Basaveshwara Seed Bank, Vittalapur

1. **Parvathamma w/o Mallikrjunagowda**
2. **Mallamma w/o Shankarappa Reddera**
3. **Girijamma w/o Amareshappa Reddera**
4. **Muthamma w/o Shivanagowda**
5. **Sharanamma Bannatti**
6. **Mallamma w/o Hanumappa Gurikara**
7. **Muthamma w/o Hanumagowda Malipatil**
8. **Ambramma w/o Basapp Reddera**
9. **Mallamma w/o Sharanappa Reddera**
10. **Basamma w/o Sugappa Reddera**
11. **Kasturamma w/o Basappa Ronada**
12. **Parvathamma w/o Hanumappa Maragadigi**

ANNUAL ACTIVITY PLANNER