Annual Report
2017-18

Strengthening Bhoochetana:

A Sustainable Agriculture Mission for Improved Livelihoods in Karnataka

Submitted to
Government of Karnataka

ICRISAT
INTERNATIONAL CROPS RESEARCH
INSTITUTE FOR THE SEMI-ARID TROPICS

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Executive Summary

The Bhoochetana Mission Program (BCMP) was launched by the Government of Karnataka in 2013. The goal of the Bhoochetana Mission Program is to operationalize an integrated and participatory knowledge-led integrated systems development approach. The objective is to increase agricultural productivity by 20 per cent in five years through convergence and better coordination among different agriculture, research-extension, and development sectors in the state to sustainably improve the livelihoods of farmers. Empowerment and capacity development is done with an approach that is knowledge-based, market-oriented and farmer-centric.

The specific objectives of the second phase of BCMP are to:

1. Strengthen the Bhoochetana consortium in order to increase crop (irrigated and rainfed) yields by 20 per cent over the first phase of Bhoochetana within five years in 30 districts of Karnataka through science-led development and new innovation systems.
2. Strengthen institutional mechanisms, such as seed villages, village seed banks, participatory research for development (PR4D), supply of inputs, agricultural machinery hiring centers, farm extension through farm facilitators (FFs), and communication systems for small and marginal farmers in the state via the Department of Agriculture (DoA) through capacity development, convergence, collective action and partnerships.
3. Assess the impact of climate change in different agro-eco regions of the state in terms of anticipated shifts in the crop-growing periods, water availability, and major crop yields; and evaluate adaptation strategies for developing climate resilient farming systems.
4. Document the process of consortium functioning, learning, and impact of BCMP in terms of increased crop yields, institutional development and capacity building of different stakeholders in the state.

During 2017-18, an ICRISAT-led consortium technically supported the Department of Agriculture of the Government of Karnataka to implement a number of improved technologies under Bhoochetana in all 30 districts. During this period, Karnataka State as a whole received about 774 mm of rainfall as against normal rainfall of 839 mm; the percentage departure from normal was -8% and was classified under ‘Normal’ category. A few districts experienced deficit rainfall during the same period.

During 2017-18, a strategy was devised to implement improved technologies in a 100-hectare (ha) cluster to demonstrate the impacts of new technologies in each district. Under this strategy, improved technologies, including improved crop cultivars, management practices, IPM, INM, etc., and Farmer Field Schools (FFS), were intensively organized to strengthen the capacity of farmers with practical experience of improved management practices that would enable them to identify pests and diseases, along with the corrective measures that need to be taken so as to increase crop yields and minimize the cost of cultivation. Altogether, 470

FFS were organized that saw the participation of more than 9545 farmers during *kharif* and *rabi* seasons.

For recording yield benefit of improved management practices, about 1638 crop cutting experiments have been completed and processed for estimation of yield and economic benefits of improved management practices. The crop cutting studies revealed that crop grain yield increased between 17 and 34% depending on the crop. The highest yield was recorded for black gram (34%), greengram (32%), and DSR paddy (29%); modest yield was recorded for cotton (17%), all as compared to farmers' practices. Similarly, fodder yield was higher, ranging between 17 and 33% as compared to farmers' practice. During 2017-18, major crops such as groundnut recorded additional profit ranging between Rs. 6230 ha^{-1} and Rs. 19135 ha^{-1}. Similar observations were recorded as well for other crops, such as paddy (Rs. 4800 ha^{-1} and Rs. 18,445 ha^{-1}), foxtail millet (Rs. 4200 ha^{-1} and 12,900 ha^{-1}), pigeonpea (Rs. 3815 ha^{-1} and Rs. 21,800 ha^{-1}), and ragi (Rs. 2470 ha^{-1} and Rs. 20,710 ha^{-1}) by adopting improved management practices. Apart from developing a cluster of 100 ha with improved technologies, other interventions such as Gliricidia planting on field bunds, aerobic composting, crop varietal demonstrations, paddy machine transplanting, direct seeded rice (DSR), nutri-kitchen gardens, etc., have been demonstrated, which strengthened the capacity of farmers in all 30 districts.

1. Background

Karnataka is primarily an agrarian state with more than 56% of the population depending on agriculture as its major livelihood source. As per the 2011 population census, agriculture supports 13.74 million workers, of which 23.61 per cent are cultivators and 25.67% agricultural workers. A total of 12.2 million ha of land is cultivated in Karnataka constituting 64.6% of the total geographical area of the state. The agricultural sector of Karnataka is characterized by vast steppes of drought-prone areas and sporadic patches of irrigated areas. Thus, a large portion of agricultural land in the state is exposed to the vagaries of the monsoon with severe agro-climatic and resource constraints. A large number of workers depends on agriculture relative to the output it generates, resulting in lower labour productivity as compared to non-agricultural sectors. Less than one-fifth of the state domestic product comes from more than 50% of the workforce in the state. This has serious implications for improving the welfare of rural population and poverty alleviation.

Karnataka is the second largest state in India in terms of rainfed area (nearly 70%), next only to Rajasthan. The rainfed areas in Karnataka are characterized by low water availability, degradation of the natural resource base, frequent climatic aberrations (drought and floods), which ultimately results in low productivity. This is coupled with lack of a formal seed system to supply quality seeds of high yielding varieties and hybrids, and a poor seed replacement rate in major crops. However, nearly 55 per cent of the total food grain production and 75% of oilseeds production come from rainfed agriculture in Karnataka. Therefore, rainfed agriculture plays an important role in the total food grain production of the state.

In order to enhance production and overcome the drudgery that results from the use of traditional farm practices and tools, farmers need to adopt new technologies. But in practice, farmers have limited access to information and knowledge about a wide range of

technological alternatives along with lack of education and credit facilities. Agricultural extension involves offering advice and sharing information. Farmers obtain information from several sources including mass media, other farmers, extension services, trainings, etc. Over the past few decades several efforts have been made in the public sector to initiate various reform measures and operational models to improve the organizational performance of the public sector extension system. Yet, the challenge of enhancing relevance, efficiency, and effectiveness of the agricultural extension system in meeting its organizational goals and objectives remains unresolved.

Therefore, there is an urgent need to develop sustainable agricultural practices given the vulnerability of the fragile rainfed agro-ecosystems while intensifying the systems. The intensification must be sustainable and should be able to build up the resilience of the systems and equip small and marginal farmers to cope with the impacts of climate change. The localized impacts of climate change need to be understood and assessed and then this knowledge needs to be shared with the farmers.

It is in this context that the Bhoochetana Mission Program (BCMP) was launched during 2009 and later implemented in all 30 districts of Karnataka State. Since its launch, the Bhoochetana program has reached millions of smallholder farmers with new technologies to unlock the potential of rainfed agriculture, and has become a huge success in the state. Based on the success of Bhoochetana Mission Program (BCMP), the Government of Karnataka (GoK) has decided to extend the science-led productivity enhancement initiative not only to rainfed crops in the 30 districts but also to irrigated crops in the state. This is the ideal time to harness the positive energy generated in the Department of Agriculture and to adopt and institutionalize the science-led development approach in the state by bringing together knowledge-generating academic institutions, like the four state agricultural universities (SAUs), the horticultural university, and knowledge transforming agencies such as the DoA, to operationalize the Research for Development (R4D) approach in the state – for the first time in the country. This report is the summary of activities undertaken during the 2017-18 crop season and impact of crop yield and income.

2. Vision of the Bhoochetana Mission Program (BCMP)

The vision of BCMP is to sustainably improve the productivity of small and marginal farmers in the state by developing farmer-centric, science-led, inclusive, market-oriented integrated systems through a participatory development approach.

3. Mission Goal of BCMP

The goal of BCMP is to operationalize an integrated and participatory knowledge-led integrated systems development approach to increase agricultural productivity by 20 per cent in five years, through convergence and better coordination among different agriculture, research-extension and development sectors in the state so as to sustainably improve the livelihoods of farmers through empowerment and capacity development with a knowledge-based, market–oriented, farmer-centric partnership approach.

4. Objectives

The specific objectives of the second phase of BCMP are to:

1. Strengthen the Bhoochetana consortium and thereby increase crop (irrigated and rainfed) yields by 20 per cent over the first phase of Bhoochetana within five years in 30 districts (Figure 1) of Karnataka through science-led development and new innovation systems.
2. Strengthen institutional mechanisms, such as seed villages, village seed banks, participatory research for development (PR4D), supply of inputs, agricultural machinery hiring centers, farm extension through farm facilitators (FFs) and communication systems for small and marginal farmers in the state via the Department of Agriculture (DoA) through capacity development, convergence, collective action and partnerships.
3. Assess the impact of climate change in different agro-eco regions of the state in terms of anticipated shifts in the crop growing periods, water availability, major crop yields, and evaluate adaptation strategies for developing climate-resilient farming systems.
4. Document the process of consortium functioning, learning and impact of BCMP in terms of increased crop yields, institutional development and capacity building of different stakeholders in the state.

5. Consortium Partners

The consortium encompasses the Karnataka State Department of Agriculture, with its Commissioner as the nodal officer for implementing the project. Other partners include:

- Watershed Development Department with its Commissioner as the focal person to co-ordinate activities;
- Four Universities of Agricultural Sciences (Bengaluru, Raichur, Dharwad and Shivamogga) in Karnataka State with their Vice-Chancellors as State Coordination Committee (SCC) members along with supporting technical help coming from university scientists;
- Karnataka State Natural Disaster Monitoring Center;
- Karnataka State Seed Corporation;
- Department of Economics & Statistics;
- Krishi Vigyan Kendras in the state;
- Community-based Organizations (CBOs);
- Watershed Committees, user groups and watershed associations;
- International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), for facilitation of improved technologies to all stakeholders and participating farmers; and
- Private companies.

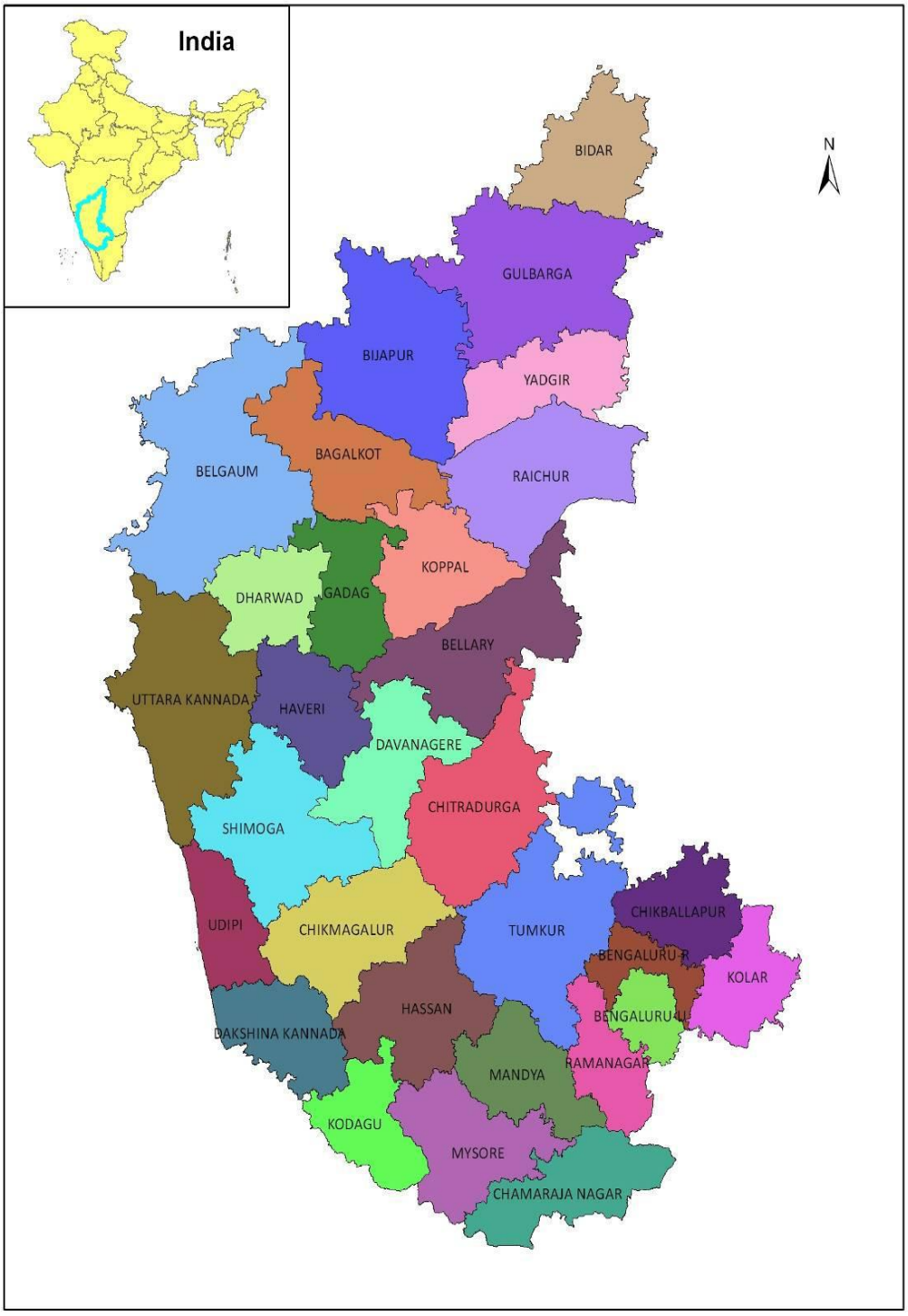

Figure 1: All thirty districts of Karnataka fall under Bhoochetana Phase Two.

6. Project Strategy

The most important strategy of the project is to expand and strengthen the consortium formed during the implementation of Bhoochetana Phase One and to translate the mission mode project into BCMP. The principle of convergence that was tried and found satisfactory during the first phase will be institutionalized for successful implementation of the second

phase, viz., Bhoochetana Mission Project (BCMP).

The salient strategies for the mission mode program are as follows:

The conversion of the mission project into a mission program will involve the institutionalization of the principle of *convergence* of the agriculture-related development programs of different line departments through Bhoochetana. This is a long process as achieving successful convergence in the true sense calls for changing the mind set of different actors for which external drivers and enabling factors will be required.

The mission program adopts the principle of 4 ICEs:
Is: Innovative, Inclusive, Integrated, Intensification;
Cs: Collective, Cooperation, Capacity-Building, Consortium;
Es: Efficiency, Equity, Environment protection, Economic gain.

The consortium is comprised of knowledge-transforming development agencies, such as line departments of the state government, viz., Department of Agriculture, Karnataka State Seeds Corporation (KSSC), Watershed Development Department (WDD), Department of Economics and Statistics (DES); along with knowledge-generating academic and research institutions, like State Agricultural Universities (SAUs), University of Horticultural Sciences (UoH) in the state, Karnataka State Disaster Management Center (KSDMC); and ICRISAT for improving the livelihoods of the rural poor in dryland areas.

ICRISAT leads the consortium and works with experts from the SAUs to address the issues of climate change. During the second phase of BCMP, the SAUs and UoH need to play a more active role in supporting and institutionalizing the concept of convergence and consortium for capacity development.

The emphasis is on strengthening through capacity development, which includes not only building the capacity of human resources through training but also building the capacity of institutions, networking, and building partnerships through an enabling environment.

By adopting the principle of 4 Cs, we address the mission goal through 4 Es, i.e., Efficiency, Economic gain, Equity and Environment protection, which are the important pillars of sustainable intensification and inclusive development in the state. The emphasis is on enhancing the efficiency of land and water resources along with the application of nitrogen fertilizer for sustainable intensification while maintaining the environment.

The approach of the mission is to strengthen backward linkages so as to meet the 4 Es through the 4 Cs – by establishing seed villages, village seed banks, custom hire centres for agricultural equipment, ensuring timely supply, availability and access to necessary vital inputs such as knowledge-based soil nutrient management options. This also includes acquiring micro nutrients, ensuring availability of good quality seed and necessary financial incentives to undertake best-bet options for increasing agricultural productivity through sustainable intensification. The institutionalization of CBOs and service providers is also envisaged for enhancing the impact of BCMP.

The new extension system piloted in the state during the first phase of Bhoochetana using FFs and LFs (Lead Farmers) for sharing knowledge with farmers is being strengthened through empowered watershed assistants in the state, and efforts will be made to enhance its effectiveness through capacity development and building partnerships for substantial scaling-up of the improved best-bet management practices (BBMPs).

The scientific approach of mapping soil nutrient deficiencies initiated during the first phase of Bhoochetana needs to be continued further by monitoring the changes in soil fertility status after adoption of best-bet management practices for five years. This approach will not only increase the productivity of the land, water and applied fertilizers through sustainable intensification but will also reduce the cost of cultivation by advising the farmers not to apply those fertilizers that are not required for their soils.

Along with improving nutrient management, other best-bet practices such as rainwater management, pest management options, and organic matter building practices will support long-term sustainability and enhance productivity. Convergence of the activities of WDD and DoH will ensure increased water availability, which is an important driver for sustainable intensification in the state.

The most important constraint in dryland areas is the establishment of a good crop stand and availability of good quality seeds of high yielding, improved cultivars. The mission will emphasize integration of KSSC's seed production program under BCMP so as to ensure production of improved quality of seeds with BBMPs. It will also ensure timely supply of good quality seeds to farmers through establishment of seed villages and village seed banks for self-pollinated crops, such as groundnut and chickpea, as well as cross pollinated crops such as sorghum and pigeonpea, by training farmers and providing producers opportunities for value addition in the villages.

Building soil organic matter is a great challenge in tropical countries. Innovative measures undertaken by BCMP will help integrate income-generating activities sponsored under the integrated watershed development program (IWDP). Women and landless members of the SHGs and AGs will produce vermicompost and *Gliricidia* seedlings to increase soil organic matter. This will also increase incomes of vulnerable groups in the villages.

The Mission Program will have planning and monitoring mechanisms at cluster, taluka, district and state levels. The Additional Chief Secretary & Development Commissioner (ACS&DC) is the chair of the State-level Coordination Committee (SCC) which includes decision makers from the different consortium partners, including line departments, to pass on suitable government orders to concerned mission staff. The SCC meets regularly for ensuring smooth convergence and capacity building through institutionalization of the process and to strengthen the consortium. Based on the learning from the first phase of Bhoochetana, regular meetings and guidance from the SCC contributed immensely to the success of the innovative approach adopted by the GoK to unlock the potential of rainfed agriculture in the state. The mission has a simple principle of accountability and delegation of authority at different levels to meet the mission goal collectively without diluting individual accountability.

7. Rainfall Situation in Karnataka

Rainfall situation during the Southwest Monsoon 2017

Karnataka is divided into four regions, viz., South Interior Karnataka (SIK), North Interior Karnataka (NIK), Malnad, and Coastal Karnataka region. The Southwest Monsoon advanced over Kerala on 30th May 2017. It further advanced into some more parts of the northeast Bay of Bengal, remaining parts of Arunachal Pradesh, Nagaland, Manipur, Mizoram and most parts of Tripura and Assam and Meghalaya on 2nd June. Subsequently there was a hiatus in the advancement due to the weakening of the monsoon flow over the Arabian Sea up to 5th June. Later on, the formation of a cyclonic circulation over Madhya Maharashtra and neighborhood and the formation of a low pressure area over west central Arabian Sea on 6th June revitalized the monsoon current. Southwest Monsoon commenced over Karnataka State on 7th June, 2017.

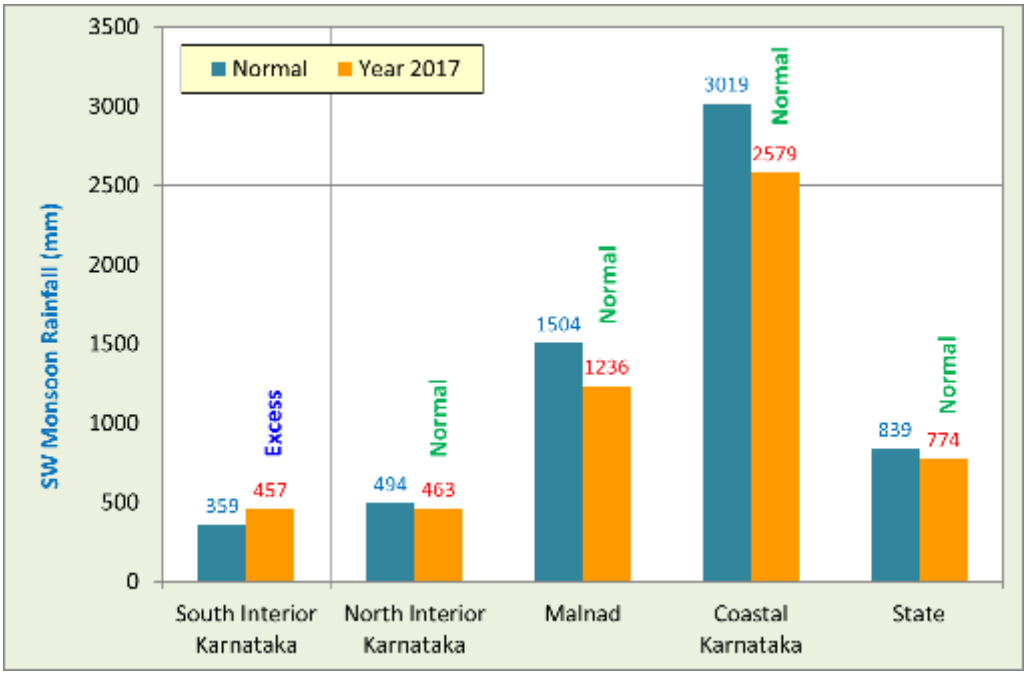

Figure 2: Region-wise rainfall in Karnataka during Southwest Monsoon 2017.

During the period from 01 June to 30 September 2017, Karnataka State as a whole received about 774 mm of rainfall as against normal rainfall of 839 mm; the percentage departure from normal was -8% and was classified under Normal category. Rainfall received in different regions indicates that all regions have received normal rainfall with South Interior Karnataka showing excess rainfall (Table 1a & b and Figure 2).

Table 1a. District-wise rainfall of Karnataka during Southwest Monsoon 2017									
District	Actual Rainfall (mm)				Southwest monsoon				Class
	Jun	Jul	Aug	Sep	Actual	Normal	Deviation		
					mm	mm	mm	%	
Bagalkote	83	30	45	166	324	350	-26	-7	Normal
Ballari	57	49	133	200	439	352	87	24	Excess
Belagavi	105	151	61	177	494	612	-118	-19	Normal
Bengaluru Rural	41	35	155	272	503	441	62	14	Normal
Bengaluru Urban	43	34	206	383	666	460	206	45	Excess
Bidar	204	77	204	106	591	684	-93	-14	Normal
Chamarajanagara	20	26	152	250	448	305	143	47	Excess
Chikkaballapura	52	33	100	217	402	399	3	1	Normal
Chikkamagaluru	260	317	344	206	1127	1349	-222	-16	Normal
Chitradurga	31	39	67	207	344	276	68	25	Excess
Dakshina Kannada	845	764	777	377	2763	3441	-678	-20	Deficit
Davanagere	58	77	94	219	448	373	75	20	Excess
Dharwad	58	87	54	182	381	498	-117	-23	Deficit
Gadag	49	39	88	166	342	382	-40	-10	Normal
Hassan	123	149	179	240	691	673	18	3	Normal
Haveri	50	99	71	165	385	485	-100	-21	Deficit
Kalaburagi	213	51	139	165	568	614	-46	-7	Normal
Kodagu	432	510	534	339	1815	2345	-530	-23	Deficit
Kolar	55	38	130	256	479	387	92	24	Excess
Koppal	95	46	126	222	489	376	113	30	Excess
Mandya	23	22	164	298	507	304	203	66	Excess
Mysuru	49	55	138	231	473	395	78	20	Excess
Raichur	121	25	152	221	519	450	69	16	Normal
Ramanagara	37	40	216	349	642	430	212	49	Excess
Shivamogga	406	500	373	204	1483	1889	-406	-21	Deficit
Tumakuru	44	31	95	251	421	361	60	16	Normal
Udupi	1159	993	901	383	3436	4071	-635	-16	Normal
Uttara Kannada	670	824	446	255	2195	2457	-262	-11	Normal
Vijayapura	118	25	108	161	412	428	-16	-4	Normal
Yadgir	141	43	135	152	471	592	-121	-21	Deficit
State	**185**	**173**	**195**	**220**	**774**	**839**	**-66**	**-8**	**Normal**

Source: KSNDMC, Karnataka

Table 1b. District-wise rainfall in Karnataka for the year 2018						
District	Actual Rainfall (mm)			Jan to Mar		
	Jan	Feb	Mar	Actual	Normal	Deviation (%)
Kolar	0	4	59	63	18	250
Kodagu	0	4	54	58	21	176
Dharwad	0	0	47	47	14	236
Ramanagara	0	10	37	47	17	176
Udupi	0	0	47	47	7	571
Bengaluru Urban	0	1	44	45	19	137
Chikkamagaluru	0	3	41	44	15	193
Hassan	0	2	41	43	16	169
Bengaluru Rural	0	6	35	41	16	156
Dakshina Kannada	0	0	41	41	12	242
Davanagere	0	0	37	37	8	363
Chikkaballapura	0	5	31	36	15	140
Mysuru	0	8	28	36	21	71
Tumakuru	0	3	33	36	14	157
Chitradurga	0	1	34	35	9	289
Gadag	0	4	24	28	6	367
Ballari	0	0	24	24	5	380
Mandya	0	3	19	22	17	29
Chamarajanagara	0	2	16	18	21	-14
Shivamogga	0	0	18	18	9	100
Koppal	0	0	17	17	5	240
Uttara Kannada	0	0	17	17	5	240
Belagavi	0	0	7	7	8	-13
Bagalkote	0	4	1	5	8	-38
Vijayapura	0	3	1	4	11	-64
Bidar	0	0	1	1	23	-96
Haveri	0	0	0	0	6	-100
Kalaburagi	0	0	0	0	14	-100
Raichur	0	0	0	0	8	-100
Yadgir	0	0	0	0	12	-100

Source: Directorate of Economics and Statistics, Bengaluru

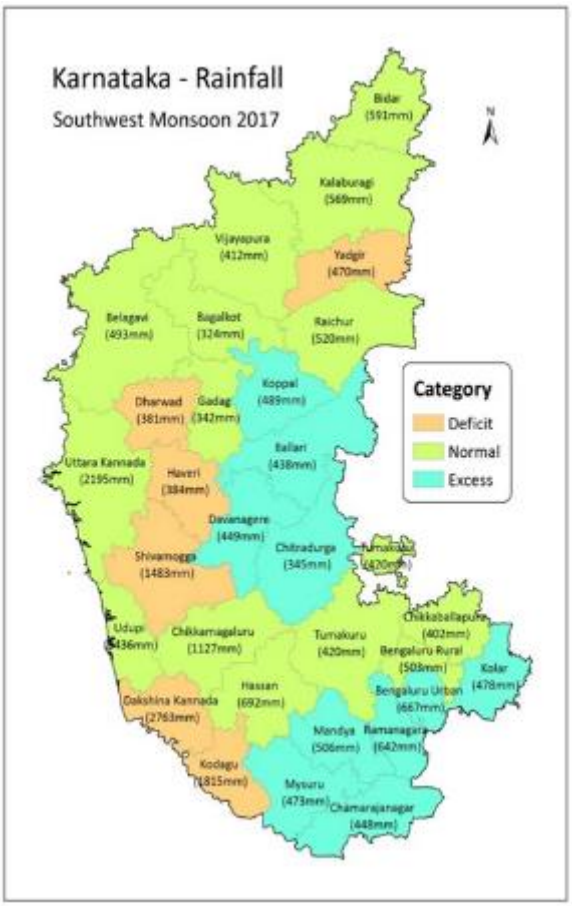

Figure 3: Status of Southwest Monsoon in Karnataka.

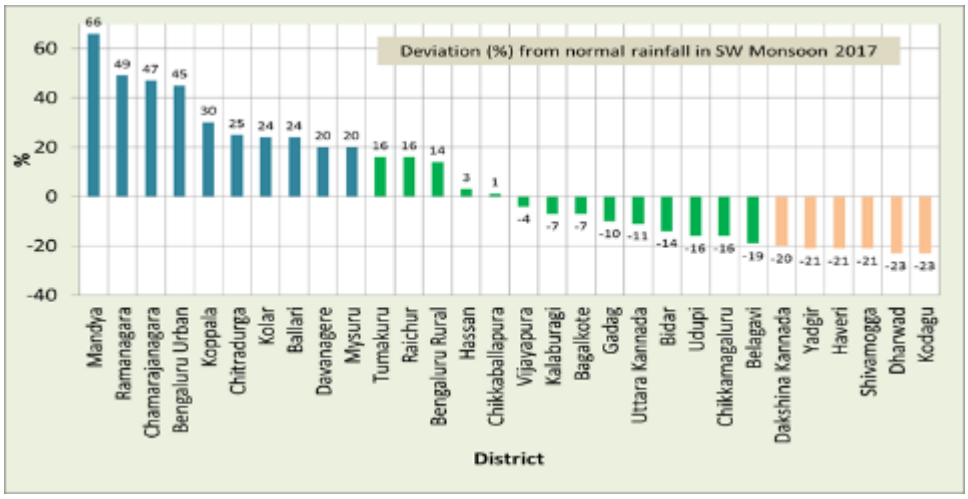

Figure 4: Rainfall deviation from normal rainfall in Southwest Monsoon 2017.

If the departure of actual rainfall from normal is more than 20%, then rainfall is classified as 'Excess'; if it is between –19% and +19% it is classified as 'Normal'; if it is between –20% and –59% it is classified as 'Deficit'; and if it is between –60% and –99% it is classified as 'Scanty'.

Out of the 30 districts, ten districts received 'Excess' rainfall and fourteen districts received 'Normal' rainfall. Six districts, viz., Dakshina Kannada, Yadgir, Haveri, Shivamogga, Dharwad, and Kodagu received 'Deficit' rainfall. Out of the 176 taluks, 51 taluks received 'Excess'

rainfall, 100 taluks 'Normal' rainfall, and the remaining 25 taluks received 'Deficit' rainfall during the Southwest Monsoon 2017.

Week-by-week distribution of rainfall during June to December has shown that deficit conditions were generally observed from July to mid-August. Excess rainfall conditions were observed from third week of August to the middle of October; from week ending on 28 October onwards, the state as a whole experienced deficit and scanty rainfall conditions.

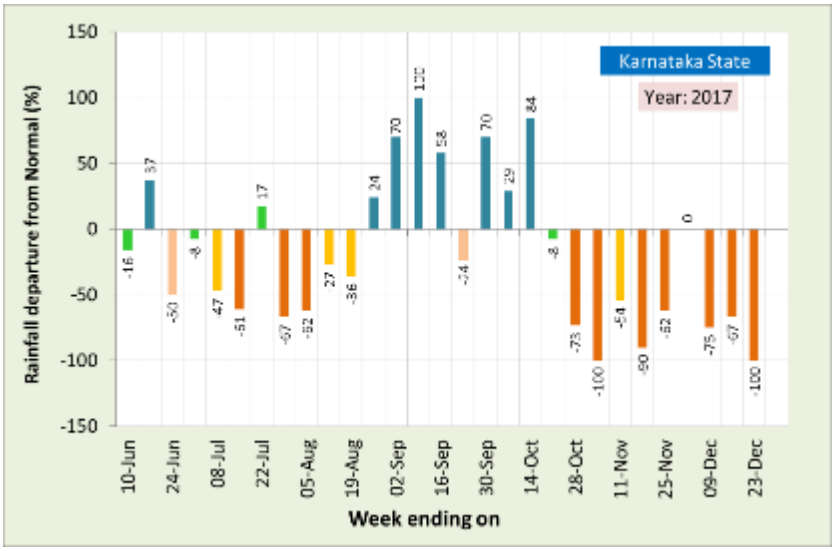

Figure 5: Week-wise rainfall departures during 2017.

8. Project Activities

8.1 Farmer participatory demonstrations during *kharif* 2017

A number of technologies were demonstrated during *kharif* 2017. In each district, a cluster of 100 ha area has been used to demonstrate new technologies. The demonstrated technologies include: climate smart cultivars, direct seeded rice, paddy machine transplanting, pigeonpea dibbling, transplanting, nipping in pigeonpea, conservation furrows, broad bed & furrow, integrated pest and disease management, intercropping, etc. (see Table 2 & Figure 6). In a few of the districts, the target could not be achieved due to poor rainfall which led to drought conditions.

Figure 6: Pigeonpea sole crop in Bengaluru district (L); and pigeonpea inter crop with groundnut in Chamarajanagar district (R) during kharif 2017.

Table 2. Status of demonstrations and Farmer Field Schools under Bhoochetana during 2017 *Kharif.*							
S. No.	District	Demonstrations			Farmer Field Schools		
		Total Demonstrations Targets (ha)	Total Demonstrations completed (ha)	Crops/components covered	FFS Target (No)	FFS achieved (No)	Total participants
1	Bagalkot	8000	4756	Pigeonpea, minor millets	18	18	450
2	Belagavi	15000	10930	Paddy, minor millets, groundnut	35	13	390
3	Ballari	13500	12292	Paddy, groundnut intercropping Pigeonpea, minor millets; DSR; Mach paddy trans; pearl millet	27	26	750
4	Bidar	8200	3850	Pigeonpea, pearl millet	30	30	350
5	Vijayapura	100	88	Perl millet, pigeonpea	06	06	150
6	Chamarajanagar	100	48	Ragi, maize, groundnut, paddy	16	6	145
7	Chikkamagaluru	100	100	Paddy, ragi, groundnut, maize	07	07	245
8	Chitradurga	100	80	Groundnut, ragi, pigeonpea, millets	22	22	550
9	Davanagere	100	100	Paddy, ragi, minor millets, pigeonpea, groundnut	24	24	600
10	Dharwad	100	100	DSR Paddy	5	3	78
11	Gadag	100	46	IPM and IDM	5	0	0
12	Hassan	10667	9267	Ragi, DSR Paddy, drilled/transplanting, mechanical rice transplanting	38	38	874
13	Haveri	60	51	Minor millets, groundnut, DSR paddy	19	14	310
14	Kalaburagi	12000	7700	Pigeonpea, pearl millet	32	32	280
15	Koppal	100	24	Pigeonpea, maize, pearl millet	5	0	0
16	Raichur	100	146	Pigeonpea dibbling, transplanting, varietal evaluation, nipping, conservation furrows, DSR, BBF, IPM & IDM	5	5	125

Table 2. Status of demonstrations and Farmer Field Schools under Bhoochetana during 2017 *Kharif.*							
S. No.	District	Demonstrations			Farmer Field Schools		
17	Yadgir	5100	1813	Pigeonpea, paddy, groundnut, pearl millet	16	16	156
18	Bengaluru (R)	4400	4296	Ragi	17	17	255
19	Bengaluru (U)	2100	2045	Ragi	11	11	160
20	Chikkaballapur	100	100	Pigeonpea, groundnut, ragi	6	6	150
21	Dakshina Kannada	100	48	Paddy machine transplantation	05	04	95
22	Kodagu	32	30	Paddy, machine transplanting	16	15	328
23	Kolar	100	100	Minor millets	5	4	100
24	Mandya	100	25	Ragi, paddy, maize	7	5	82
25	Mysore	100	46	Ragi, maize, paddy	7	5	88
26	Ramanagar	100	85	Ragi, groundnut	18	12	216
27	Shivamogga	33	33	Paddy	39	39	975
28	Tumakuru	100	78	Groundnut, pigeonpea, millets	10	8	118
29	Udupi	2000	1447	Paddy	3	3	25
30	Uttara Kannada	4300	2959	Paddy	35	35	743
	Total	**78992***	**62683**		**489**	**424**	**8788**

*The area under demonstrations indicated mostly cluster level demonstrations, but a few districts also indicated demonstrations undertaken under other programs

8.2 Farmer Field Schools

During the 2017 *kharif* season, out of the 489 Farmer Field Schools targeted, 87 per cent (424 FFS) have been achieved and nearly 8,800 farmers participated in these FFS (Table 3). The targeted FFS were organized through the Department of Agriculture and were held in different sessions at various stages of crop growth (Figure 7).

Figure 7: Farmer Field School (FFS) in Chikkaballapur district during kharif 2017.

8.3 Farmer participatory demonstrations during *rabi* 2017-18

During the *rabi* season, a cluster of 100 ha each was used to demonstrate different technologies with improved crop cultivars and other management practices (Table 3). Out of 132 targeted FFs, only 46 have been completed so far and more than 750 farmers have participated and many of the FFS are still in progress.

Table 3. Status of demonstrations and Farmer Field Schools under Bhoochetana during 2017-18 *Rabi*

No.	District	Demonstrations			Farmer Field Schools		
		Total Demonstrations Targets (ha)	Total Demonstrations completed (ha)	Crops/components covered	FFS Target (No)	FFS achieved (No)	Total participants
1	Bagalkot	20000	11500	Chickpea, sorghum	3	2	55
2	Belagavi	23820	15630	Chickpea, sorghum	35	0	0
3	Ballari	19620	4600	Chickpea, sorghum, paddy-chickpea-greengram	5	0	0
4	Bidar	100	100	Chickpea, sorghum	30	15	220
5	Vijayapur	100	60	Chickpea	05	05	125
6	Chikkamagaluru	500	500	Chickpea	02	02	78
7	Davanagere	100	100	Chickpea	0	0	0
8	Dharwad	100	136	Chickpea; paddy-pulses; sugarcane trash cutter; relay planting	5	1	27
9	Gadag	80	60	INM, IDM & IPM	5	0	0
10	Haveri	112	64	*Rabi* sorghum; hand dibbling in chickpea; paddy- chickpea; cowpea, greengram, black gram	0	0	0
11	Kalaburagi	100	60	Chickpea, sorghum	32	16	127
12	Koppal	100	32	Chickpea	5	0	0
13	Raichur	100	33	Chickpea varietal trials, nipping, sowing across the slope, IPM and IDM	5	2	50
	Total				**132**	**46**	**757**

Table 4. Status of demonstrations and Farmer Field Schools under Bhoochetana during 2017-18 *Rabi*							
No.	District	Demonstrations			Farmer Field Schools		
		Total Demonstrations Targets (ha)	Total Demonstrations completed (ha)	Crops/components covered	FFS Target (No)	FFS achieved (No)	Total participants
1	Bagalkot	20000	11500	Chickpea, sorghum	3	2	55
2	Belagavi	23820	15630	Chickpea, sorghum	35	0	0
3	Ballari	19620	4600	Chickpea, sorghum, paddy-chickpea-greengram	5	0	0
4	Bidar	100	100	Chickpea, sorghum	30	15	220
5	Vijayapura	100	60	Chickpea	05	05	125
6	Chikkamagaluru	500	500	Chickpea	02	02	78
7	Davanagere	100	100	Chickpea	0	0	0
8	Dharwad	100	136	Chickpea; paddy-pulses; sugarcane trash cutter; relay planting	5	1	27
9	Gadag	80	60	INM, IDM & IPM	5	0	0
10	Haveri	112	64	*Rabi* sorghum; hand dibbling in chickpea; paddy-chickpea; cowpea, greengram, black gram	0	0	0
11	Kalaburagi	100	60	Chickpea, sorghum	32	16	127
12	Koppal	100	32	Chickpea	5	0	0
13	Raichur	100	33	Chickpea varietal trials, nipping, sowing across the slope, IPM and IDM	5	2	50
	Total				**132**	**46**	**757**

8.4 Other Activities

Gliricidia plantation

Under Bhoochetana, farmers were encouraged to plant Gliricidia seedlings or cuttings taken of tender branches of Gliricidia, at a spacing of 50 cm apart on field bunds (Figure 8). The Gliricidia plant produces green leaves and succulent green branches abundantly which are rich in nitrogen. Green leaves and loppings can be harvested, leaving one-year-old 1 m tall plants in place, and that can be applied to the topsoil for enriching organic carbon and nutrients in the soil. Gliricidia on bunds can be harvested thrice in a year and applied before sowing of crop during *kharif*, *rabi* and summer. During 2017, Gliricidia was grown on field bunds in nearly 1000 ha across major districts.

Figure 8: Gliricidia plantation at Bomberahalli Village, Kasaba Hobali Challakere taluk, Chitradurga district.

Aerobic compost

In order to increase availability of compost at field level, we have been promoting aerobic composting using bio culture to convert agricultural residues into compost. We have also provided microbial culture to farmers and conducted capacity building programs to educate them on the complete procedure for adopting this process. The farmers' response was very good and they are happy with the fast decomposition of crop residues with this initiative.

Method of aerobic composting

- Any organic waste of plant or animal origin (crop waste, cattle and domestic animal wastes, poultry waste, vegetable waste, kitchen waste, food and fruit processing plants' waste, sugar factory waste including press-mud, municipal organic waste and all sorts of wastes that are of organic nature).
- Composting microbial culture (Madhyam®, Bioculum® etc.), 1.0-1.5 kg is required for a ton of material.
- If animal waste is cattle dung, poultry waste etc., mix microbial culture directly and heap it to about 5 ft. height. One can apply microbial culture by heaping the material layer by layer. Every layer of about 1 ft. should be dusted with a culture powder or sprinkled with the cattle dung slurry (in water) added to the culture.
- Mix green/dry plant waste if available with animal waste and apply the culture. You may go for alternate layers of animal and plant wastes by topping each layer with the culture.
- Larger dry-plant wastes like cotton/pigeonpea stalks need to be shredded into small pieces and mixed with some animal waste (minimum 20%, more will speed up the process of composting, best results can be achieved when animal waste is about 50%).
- Ideally one should mix green and dry plant wastes with animal waste. Kitchen and other organic wastes can also be added.
- Add Urea @ 1.0-1.5 kg/ton to balance Carbon and Nitrogen in the total waste mix, if there is more of dry plant waste. The C:N ratio of 25-30:1 is ideal for proper

decomposition. The C:N ratio should not exceed 40:1, else the composting process will not start.

- Mix culture @1.0-1.5 kg/ton of the total waste depending upon the type of waste material.
- Mix all ingredients thoroughly, either manually or by machine (a compost turning machine is ideal for mixing), and heap the material to a height of around 5 ft. Long windrows of conical shape could be formed when large quantities are to be composted.
- After heaping, sprinkle water on the heap uniformly to have 50% moisture during the whole process.
- Leave the heap in the open for 7-10 days, while sprinkling some water on the heap every 1-2 days to maintain 50% moisture in the heap.
- In a day or two, one sees some smoke coming slowly out from the heap indicating increased microbial activity. The temperature inside the heap rises to 70º C in 2-3 days and then falls to normal by the 8th-10th day.
- After 10 days, break the heap to turn it upside down, and then re-heap it. Apply and continue to apply water as indicated earlier, on the heap to maintain 50% moisture.
- Turn heap again after 10 days, following the same process of turning and applying water.
- After 2-3 turnings the material will be seen to have fully composted. Turning at a lesser interval of a week hastens the process.
- 30-60 days are normally required for complete composting depending on the materials used. The more the animal wastes the less the period of composting. Animal waste alone requires 25-30 days.

Figure 9: Aerobic compost culture for easy compost preparation using crop residues.

Pest monitoring by using pheromone traps

Pheromones are specific to individual insects, saving time in the sorting and identification of the seizure. Pheromone traps cannot control crop pests but the data obtained from these traps helps predict infestations, and assists in the timely use of control measures. Farmers in the Bhoochetana project are using pheromone traps to monitor pest incidence as well as to take

suitable control measures at appropriate times. During the *kharif* 2017 season, more than 10,000 ha area was covered with pheromone traps in this project in Karnataka.

Nutri-kitchen gardens

During 2017, nutri-kitchen gardens were promoted by providing vegetable seeds to women farmers. The vegetables seeds supplied include: tomato, French bean, lady's finger, spinach, amaranthus, bottle gourd, bitter gourd, ridge gourd and brinjal. About 4500 kg of seeds have been distributed in eight districts, viz., Chikkaballapur, Udupi, Tumkur, Chikkamagaluru, Bengaluru, Shivamogga, Hassan and Kalaburagi.

Table 5. Nutri-kitchen kits distributed to women farmers in selected districts during *kharif* 2017

Crop	Cultivar	Quantity (Kg)
Tomato	Arka Vikas/Arka Meghali	850
French bean	Arka Komal	750
Lady's finger (bendi)	Arka Anamika	750
Spinach (palak)	Arka Anupama/All Green	950
Amaranthus	Arka Suguna/Special	850
Bottle gourd	Gutkha/Kashi Ganga	100
Bitter gourd	Green Long/CO1	100
Ridge gourd	Jaipur Long/CO1	100
Brinjal	Green Round/CO2	100
Total		4550

Figure 10: Meeting with women farmers on nutri-kitchen gardens in Bengaluru district during kharif 2017.

8.5 Crop cutting experiments

During 2017-18, nearly 1700 crop cutting experiments (CCEs) were completed (Table 6). Crops, such as paddy, maize, pigeonpea, finger millet, soybean, greengram, black gram, pearl millet,

groundnut, chickpea, sorghum, etc., have been identified and accordingly crop cutting experiments have been done using uniform sampling guidelines.

Table 6. Crop cutting experiments under Bhoochetana during 2017-18

S. No	District	Crop	Crop Cutting Exp. Numbers		Remarks
			Target	Achievement	
1	Hassan	Finger millet	25	36	Completed
		Paddy	25	10	Completed
2	Kolar	Finger millet	25	25	Completed
3	Chikkaballapur	Groundnut	20	20	Completed
		Finger millet	30	33	Completed
4	Uttar Kannada	Paddy	110	62	Completed
5	Raichur	Pearl millet	25	25	Completed
		Cotton	25	25	Completed
		Pigeonpea	25	25	Completed
		Paddy	25	20*	Completed
6	Kodagu	Paddy	30	21	Completed
7	Shivamogga	Paddy	40	40	Completed
8	Tumakuru	Groundnut	30	30	Completed
		Ragi	70	70	Completed
9	Chikkamagaluru	Paddy	10	10	Completed
		Ragi	10	10	Completed
10	Ramanagar	Ragi	20	39	Completed
11	Bengaluru (R)	Ragi	20	20	Completed
12	Bengaluru (U)	Ragi	10	10	Completed
13	Dakshina Kannada	Paddy	40	30	Completed
14	Belagavi	Paddy	12	12	Completed
		Groundnut	20	0	Crop failure
		R Sorghum	25	25	Completed
		Chickpea	5	5	Completed
15	Vijayapura	Pigeonpea	50	50	Completed
		Pearl millet	50	50	Completed
		Pigeonpea	11	11	Completed
		Pearl millet	17	17	Completed
		Foxtail millet	10	10	Completed
		Chickpea	50	50	Completed
16	Dharwad	Paddy	20	20	Completed
		Groundnut	5	5	Completed
		Minor millets	5	5	Completed
		Chickpea	10	14	Completed
		R. Sorghum	10	5	Completed
17	Udupi	Paddy	30	30	Completed
18	Davanagere	Minor millets	8	8	Completed
		DSR paddy	16	16	Completed
		Ragi	70	70	Completed
		Dibbling pigeonpea	10	10	Completed
		BBF groundnut	12	12	Completed

Table 6. Crop cutting experiments under Bhoochetana during 2017-18					
S. No	District	Crop	Crop Cutting Exp. Numbers		Remarks
			Target	Achievement	
19	Chitradurga	Groundnut	20	20	Completed
		Ragi	15	15	Completed
		Minor millet	15	17	Completed
		Pigeonpea	6	10	Completed
20	Chamarajanagara	Ragi	10	15	Completed
		Groundnut	2	1	Completed
		Maize	5	5	Completed
21	Mandya	Paddy	10	10	Completed
		Maize	2	0	Not done
		Ragi	10	10	Completed
		Pigeonpea	2	0	Not done
22	Mysuru	Paddy	10	10	Completed
		Maize	10	10	Completed
		Ragi	10	10	Completed
23	Bidar	Black gram	20	20	Completed
		Greengram	30	30	Completed
		Soybean	20	20	Completed
		Pigeonpea	30	35	Completed
		Chickpea	50	50	Completed
24	Kalaburagi	Pigeonpea	70	70	Completed
		Chickpea	35	35	Completed
25	Yadgir	Paddy	30	10	Completed
		Pigeonpea	30	30	Completed
26	Haveri	Groundnut	30	30	Completed
		Paddy	30	30	Completed
		Minor millets	30	30	Completed
27	Ballari	Minor millets	33	33	Completed
		Groundnut	24	24	Completed
		Paddy	25	25	Completed
28	Koppal	R Sorghum	10	10	Completed
		Chickpea	10	10	Completed
29	Gadag	Chickpea	10	10	Completed
		R Sorghum	10	10	Completed
30	Bagalkot	Pigeonpea	47	7	Completed
		Chickpea	20	20	Completed
	Total		**1782**	**1638**	

8.6 Crop yield analysis at the state level

The crop cutting studies revealed that crop grain yield increased between 17 and 34% depending on the crop. The highest yield was recorded for black gram (34%), greengram (32%), and DSR paddy (29%); modest yield was recorded for cotton (17%) as compared to farmers' practices. Similarly, fodder yield ranged between 17 and 33% higher as compared to farmers' practices (Table 7).

Table 7. Mean crop yield during 2017-18 crop season under Bhoochetana II in Karnataka.									
	Grain yield (kg/ha)		%	Fodder yield (kg/ha)		%	TDM yield (kg/ha)		%
Crop	Farmers' Practice	Improved Practice	increase over FP	Farmers' Practice	Improved Practice	increase over FP	Farmers' Practice	Improved Practice	increase over FP
Barnyard millet	840	1020	21	1690	1980	17	2130	2530	19
Black gram	640	860	34	1150	1430	24	1790	2290	28
DSR Paddy	860	1110	29	4070	4940	21	6270	7680	22
Foxtail millet	1080	1310	21	2130	2590	22	3240	3950	22
Greengram	500	660	32	990	1320	33	1490	1980	33
Groundnut*	1170	1460	25	1880	2280	21	3050	3740	23
Maize	2660	3210	21	2660	3330	25	6420	7770	21
Paddy	3140	3870	23	4680	5690	22	8220	10110	23
Pearl millet	1020	1260	24	1870	2450	31	3550	4660	31
Pigeonpea	490	620	27	840	1100	31	1610	2100	30
Ragi	1530	1910	25	2920	3490	20	5000	6240	25
Soybean	1370	1740	27	1540	1910	24	2920	3650	25
Cotton	1450	1690	17						

*groundnut pod yield

Paddy

Paddy is one of the staple crops in Karnataka – mainly grown in the southern parts of the state under both rainfed and irrigated conditions. During the 2017-18 crop season, nearly 300 crop cutting experiments were conducted to understand the impact of improved practices on yield and income. The CCE results showed that the crop yield had increased between 17 and 31% over farmers' practice (Figure 11). The highest yield was recorded in Raichur district (31%) followed by Dakshina Kannada (30%), Yadgir, Mysore, Dharwad (25%, respectively), Kodagu (24%), Udupi, Hassan (22%) and Ballari (20%) which translates to an average additional 716 kg ha^{-1} grain production (ranges between 310 kg ha^{-1} and 1190 kg ha^{-1}) and 1000 kg ha^{-1} fodder production (ranging between 350 kg ha^{-1} and 1000 kg ha^{-1}).

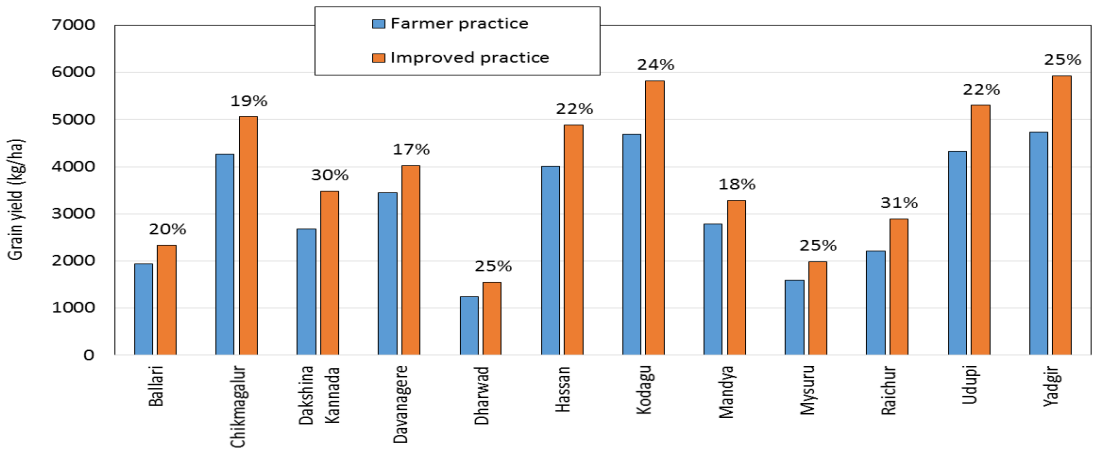

Figure 11: Mean crop yield of Paddy during 2017-18 crop season under Bhoochetana II in different districts of Karnataka.

DSR paddy

Direct Seeded Rice (DSR) is being popularized in most of the districts of Karnataka. During 2017-18 season, crop cutting experiments were conducted in Haveri and Shivamogga districts to understand the advantages of DSR technology on crop yield and income. The CCE results indicated that crop yield with DSR management was 29% higher in Haveri and 28% higher as compared with farmers' practice in Shivamogga district (Figure 12). The feedback from other districts also revealed that the DSR technology is more beneficial in terms of water, energy saving, and reduction in cost of cultivation as number of workers required for cultivation is less than for transplanted paddy.

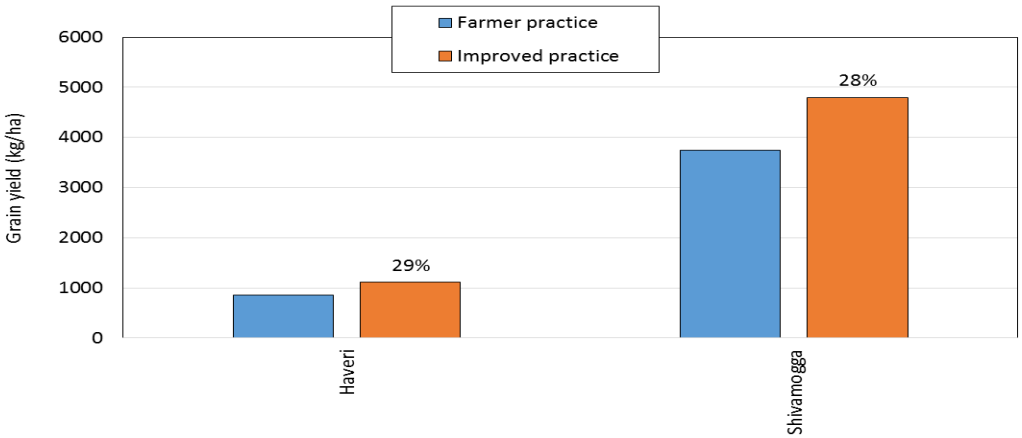

Figure 12: Mean crop yield of DSR Paddy during 2017-18 crop season under Bhoochetana II in different districts, Karnataka.

Pearl millet

Pearl millet is being cultivated majorly in the dry districts, Ballari, Chitradurga, Dharwad, Raichur and Vijayapura. Results from the crop cutting experiments showed that improved management practices have contributed to an increase in crop yield, ranging between 14% and 30% over farmers' practice, which translates to an additional 250 kg ha^{-1} in grain production and 620 kg ha^{-1} in fodder production (Figure 13).

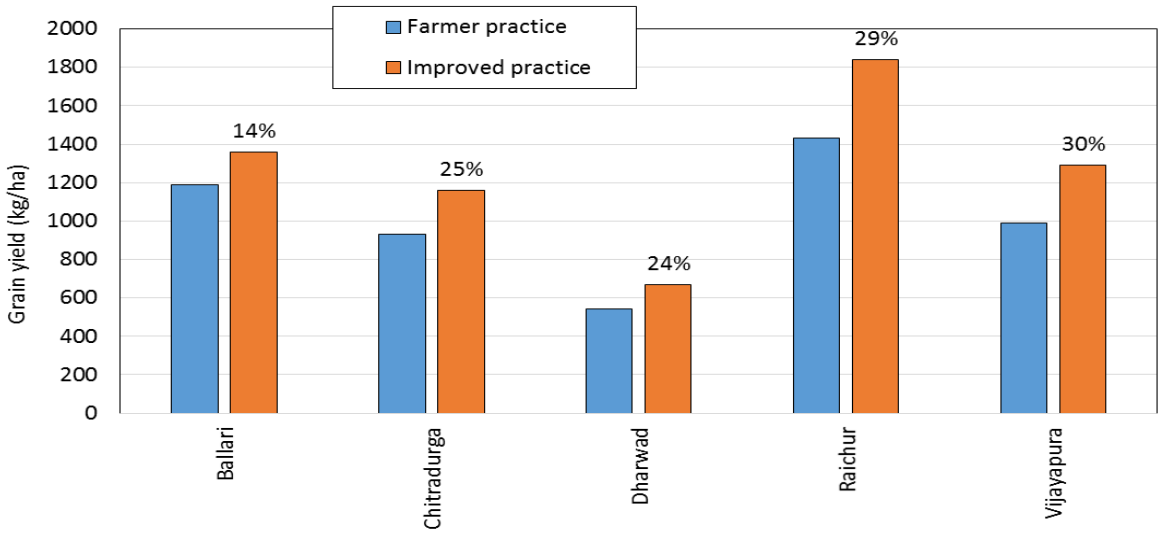

Figure 13: Mean crop yield of Pearl millet during 2017-18 crop season under Bhoochetana II in different districts, Karnataka.

Pigeonpea

During the *kharif* 2017 season, the CCE results indicated that there were huge benefits through adoption of improved management in enhancing pigeonpea grain production in the state. As compared with the farmers' management, grain productivity increased by 13 to 33% in different districts. The pigeonpea grain yield was highest at 1300 kg ha^{-1} in Bidar which translated to a 26% higher yield as compared to farmers' practice in the district. Similarly, pigeonpea grain productivity had increased by 33% in Kalaburagi and Bagalkot districts (Figure 14).

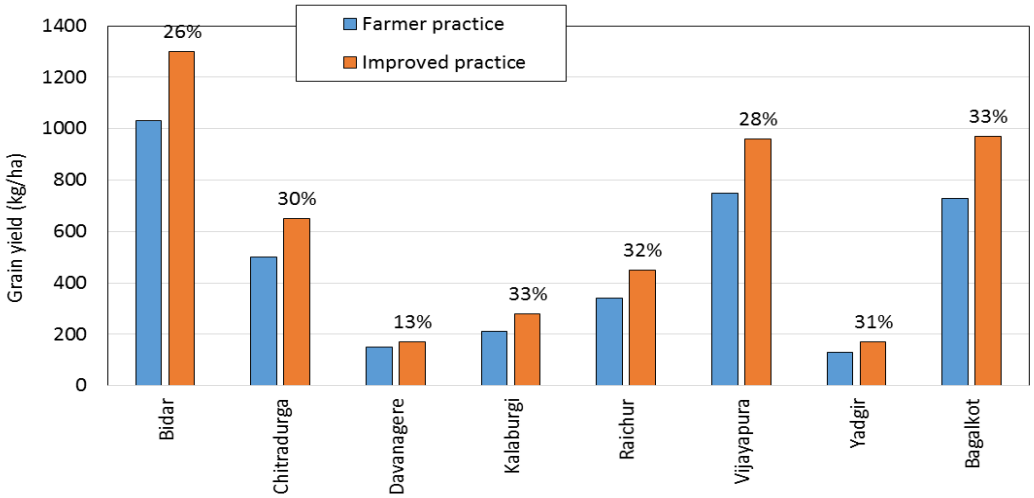

Figure 14: Mean crop yield of Pigeonpea during 2017-18 crop season under Bhoochetana II in different districts, Karnataka.

Finger millet (*Ragi*)

Finger millet (*Ragi*), which is one of the staple food crops in southern Karnataka, is grown extensively in Bengaluru, Kolar, Tumakuru and other districts. As compared with farmers' management, grain yield increased by 10 to 45% with improved management practices. The highest grain productivity was achieved in Bengaluru district with 3520 kg ha^{-1} as compared to 2430 kg ha^{-1} with farmers' practice. Chikkamagaluru and Mysore districts achieved 30% higher grain yield followed by Hassan (28%), Tumakuru (27%), Chikkaballapur (24%), and Kolar (23%), respectively (Figure 15).

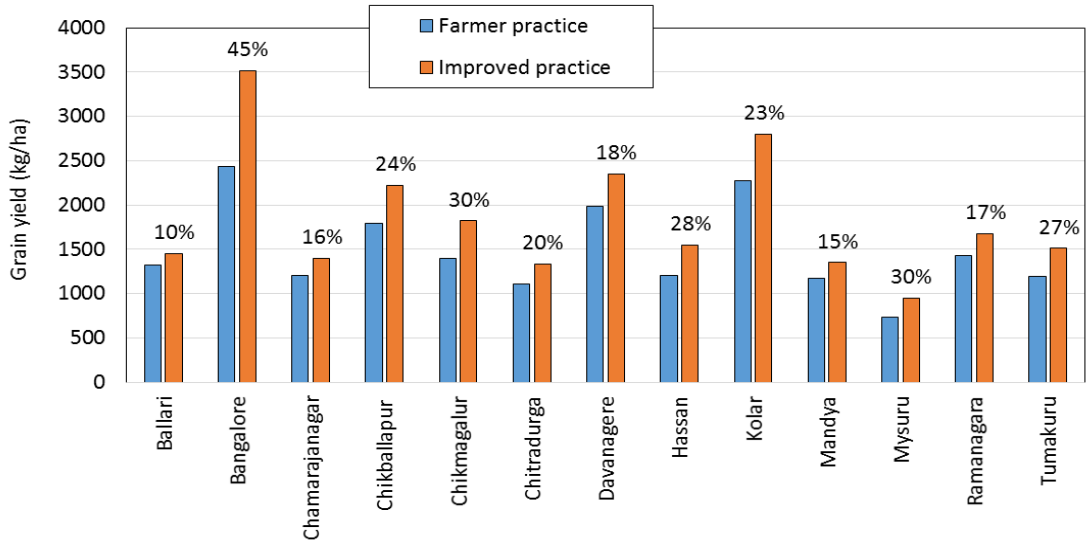

Figure 15: Mean crop yield of Finger millet (Ragi) during 2017-18 crop season under Bhoochetana II in different districts, Karnataka.

Foxtail millet

During 2017-18, CCE were conducted in Ballari, Chitradurga, Davanagere and Haveri districts. As compared with farmers' management, the grain yield increased by 18 to 52% with the improved management practices. The highest grain productivity was achieved in Davanagere district with 1930 kg ha^{-1} compared to 1630 kg ha^{-1} with farmers' practice. Haveri and Chitradurga districts achieved 33% and 19% grain yield, respectively, over farmers' practice (Figure 16).

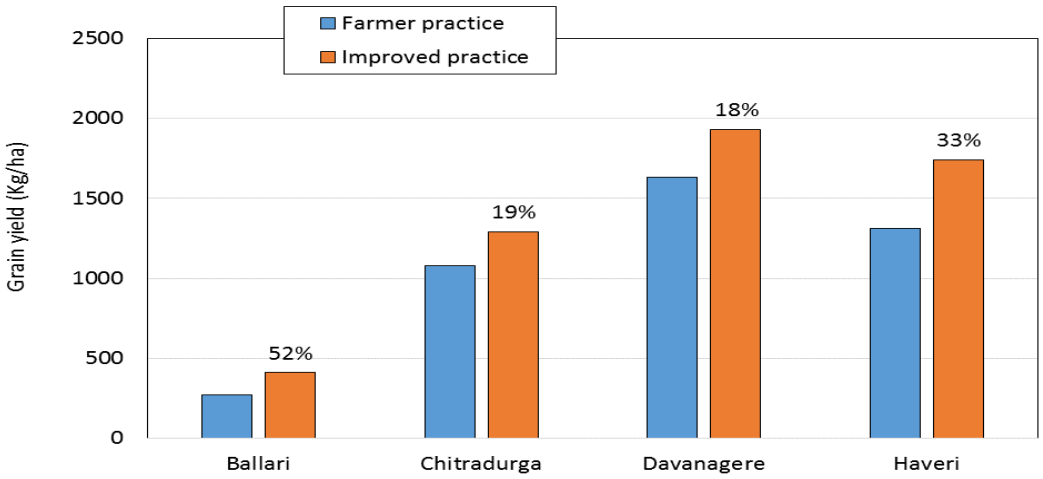

Figure 16: Mean crop yield of Foxtail millet during 2017-18 crop season under Bhoochetana II in different districts, Karnataka.

Groundnut

During the *Kharif* 2017 season, the CCE results indicated that there were huge benefits through adoption of improved management in enhancing groundnut pod production in the districts. As compared with the farmers' management, pod productivity increased by 14 to 41% in different districts. The groundnut pod yield was highest at 2,280 kg ha^{-1} in Haveri, which translated to a 19% higher yield as compared to farmers' practice in the district. Similarly, groundnut pod productivity had increased by 41% in Ballari district where the pod yield was 1,470 kg ha-1 with improved management practices compared to 1,040 kg ha-1 with farmers' practice. This shows huge potential in the state to adopt improved management practices so that farmers can realize higher benefits.

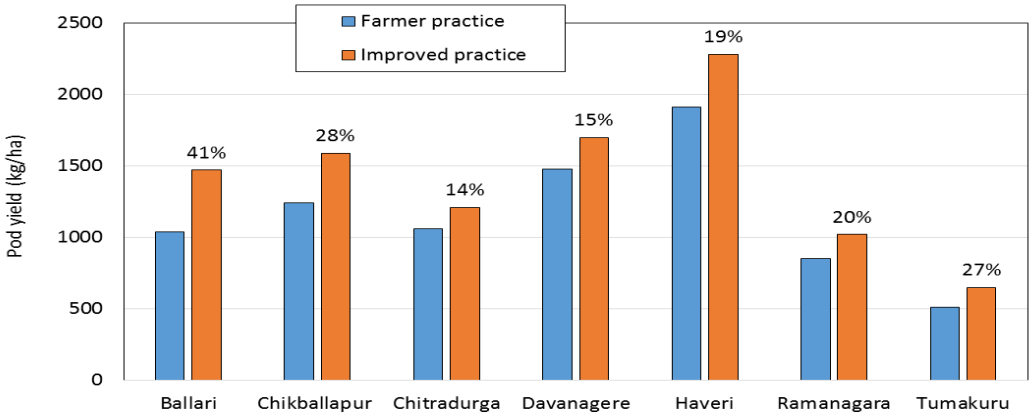

Figure 17: Mean crop yield of Groundnut during 2017-18 crop season under Bhoochetana II in different districts, Karnataka.

Maize

Maize, grown in most of the districts has shown huge benefits – maize grain yield increased through adoption of improved management practices across districts. During 2017-18, CCE has been conducted in Chamarajanagar, Davanagere and Mysuru districts. CCE results indicated that as compared with farmers' management, grain productivity increased by 17 to 27% (Figure 18). The highest grain yield was achieved in Davanagere with 5850 kg ha^{-1} compared to 5000 kg ha^{-1} with farmers' practice, followed by Chamarajanagar (4230 kg ha^{-1}) and Mysuru (1370 kg ha^{-1}).

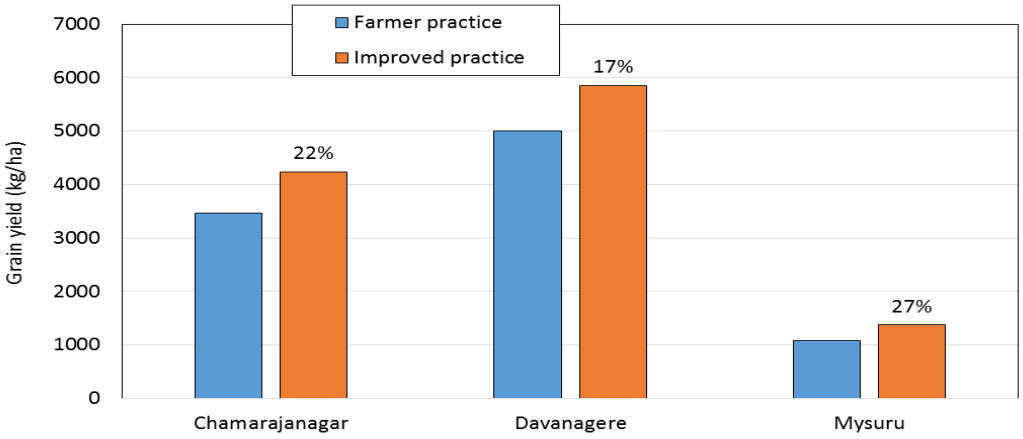

Figure 18: Mean crop yield of Maize during 2017-18 crop season under Bhoochetana II in different districts, Karnataka.

Chickpea

Chickpea is one of the major pulse crops in Karnataka grown during *rabi* season. During the 2017-18 crop season, the CCE results showed that crop yield had increased between 19 and 43% over farmers' practice (Figure 19). The highest yield was recorded in Belagavi district (43%), followed by Ballari (34%), Bagalkot (34%), Koppal (29%) and Gadag (25%), which translates to an average of an additional 150 kg ha^{-1} grain production (ranging between 30 kg ha^{-1} and 280 kg ha^{-1}) and 120 kg ha^{-1} fodder production (ranging between 30 kg ha^{-1} and 270 kg ha^{-1}).

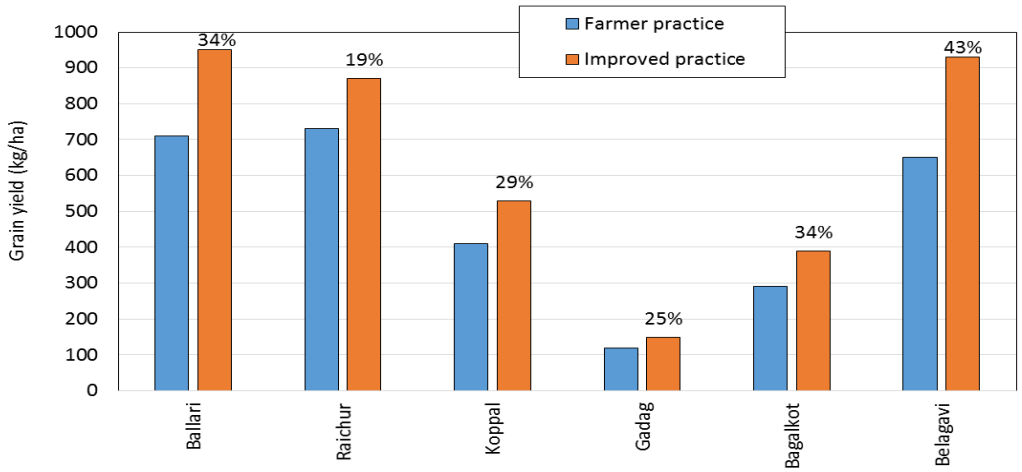

Figure 19: Mean crop yield of Chickpea during 2017-18 crop season under Bhoochetana II in different districts, Karnataka.

***Rabi* sorghum**

Grain sorghum which is grown majorly in Ballari, Haveri, Koppal, Gadag and Belagavi has shown huge benefits through adoption of improved management in enhancing sorghum grain across districts in the state. During 2017-18, CCE results indicated that as compared with farmers' management, grain productivity increased by 17 to 38% over farmers' practice (Figure 20). The highest grain yield was achieved in Haveri with 1690 kg ha^{-1} compared to 1440 kg ha^{-1} with farmers' practice, followed by Koppal (1680 kg ha^{-1}) and Ballari (1400 kg ha^{-1}).

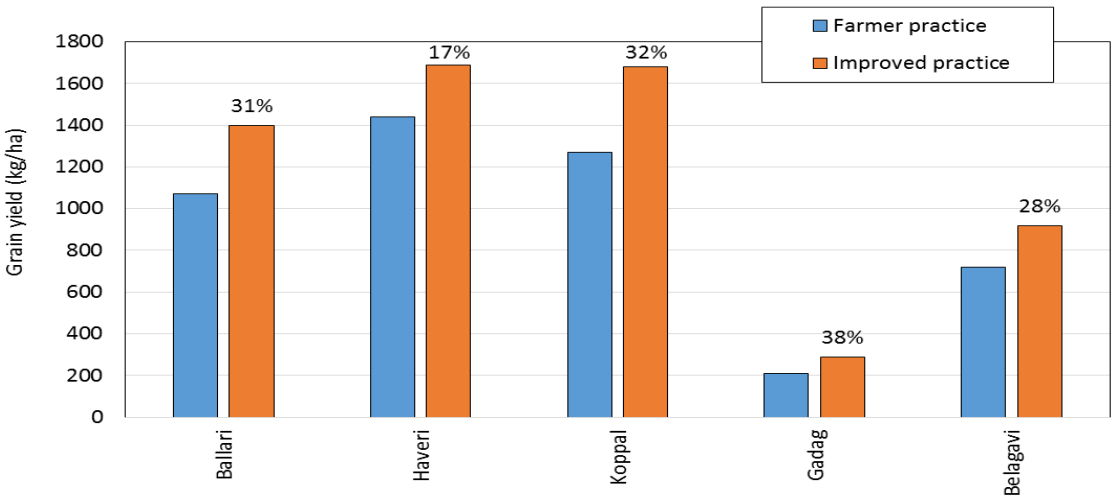

Figure 20: Mean crop yield of Rabi sorghum during 2017-18 crop season under Bhoochetana II in different districts, Karnataka.

9. District-wise Yield Analysis

Ballari

During 2017-18, major crops targeted for crop cutting studies in the district included foxtail millet, groundnut, paddy, pearl millet and ragi. The improved management practices were compared with farmers' practice to understand yield benefits of these crops in terms of yield, and biomass production. The CCE data revealed that crop yields had increased between 10% and 52%. Among the targeted crops, foxtail millet showed 52% higher yield as compared with farmers' practice. Similarly, groundnut pod yield had increased by 41%, paddy yield by 20%, pearl millet by 14%, and ragi yield by 10% over farmers' practice (Figure 21). The increased yield translated into an additional income of Rs. 19,135 ha^{-1} in groundnut, followed by paddy (Rs. 6045 ha^{-1}), foxtail millet (Rs. 4200 ha^{-1}), ragi (Rs. 2470 ha^{-1}), and pearl millet (Rs. 2400 ha^{-1}) (Table 8).

Table 8. Mean crop yield during 2017-18 crop season under Bhoochetana II in Ballari district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Foxtail Millet	270	410	4200	990	1260	1260	1660	52	27	32
Groundnut	1040	1470	19135	1490	1930	2530	3400	41	30	34
Paddy	1940	2330	6045	4340	5470	9170	11810	20	26	29
Pearl Millet	1190	1360	2423	3280	4420	5810	7750	14	35	33
Ragi	1320	1450	2470	3250	3960	6760	8290	10	22	23
Mean	*1152*	*1404*	*6855*	*2670*	*3408*	*5106*	*6582*	*22*	*28*	*29*

FP: Farmers' Practice; IP: Improved Practice

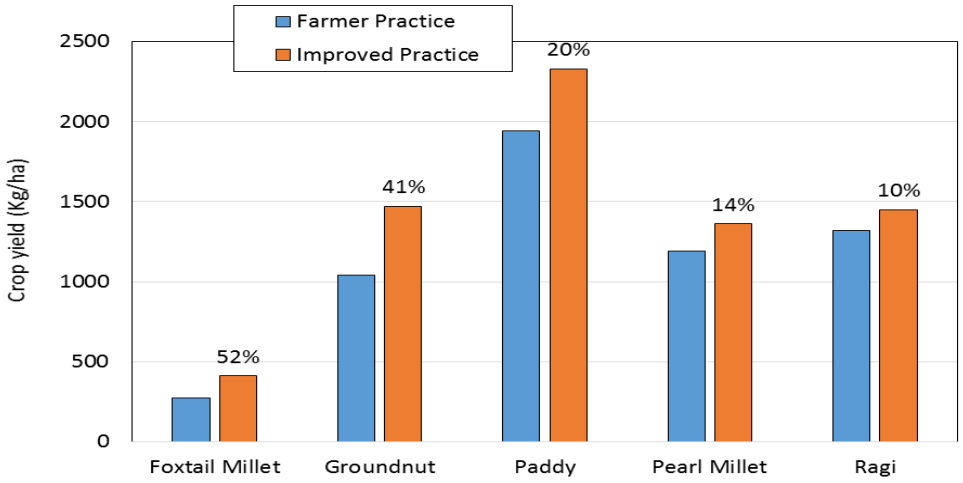

Figure 21: Mean crop yield during 2017-18 crop season under Bhoochetana II in Ballari district, Karnataka.

Bengaluru

Ragi is the predominant crop grown in Bengaluru district. During the 2017-18 season, crop cutting experiments were undertaken in ragi to analyse the impact of improved management practices on crop yield and income. On average, a 45% increase in grain yield and a 33% increase in fodder yield was observed with additional income of Rs. 20,700 ha^{-1}.

Table 9. Mean crop yield during 2017-18 crop season under Bhoochetana II in Bengaluru district, Karnataka.										
Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Ragi	2430	3520	20710	4310	5740	7580	10510	45	33	39
Mean	*2430*	*3520*	*20710*	*4310*	*5740*	*7580*	*10510*	*45*	*33*	*39*

FP: Farmers' Practice; IP: Improved Practice

Bidar

In Bidar district, major crops covered for crop cutting experiments were black gram, greengram, pigeonpea and soybean. Crop cutting results showed that on average there was a 29% increase in grain yield and a 27% increase in fodder yield over farmers' practice in the district. The increased yield translates into an additional 255 kg ha^{-1} of grain production and 400 kg ha^{-1} of fodder production. The additional income attributable to improved management practices in the district was Rs. 11,700 ha^{-1} (Table 10). Among the pulses, black gram yield was 34% higher over farmers' practice followed by greengram by 32%, and pigeonpea by 26%. Similarly, soybean yield had increased by 27% over farmers' practice (Figure 22).

Table 10. Mean crop yield during 2017-18 crop season under Bhoochetana II in Bidar district, Karnataka.										
Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Black gram	640	860	11880	1150	1430	1790	2290	34	24	28
Greengram	500	660	8920	990	1320	1490	1980	32	33	33
Pigeonpea	1030	1300	14715	2220	2830	4660	5900	26	27	27
Soybean	1370	1740	11285	1540	1910	2920	3650	27	24	25
Mean	*885*	*1140*	*11700*	*1475*	*1873*	*2715*	*3455*	*29*	*27*	*27*

FP: Farmers' Practice; IP: Improved Practice

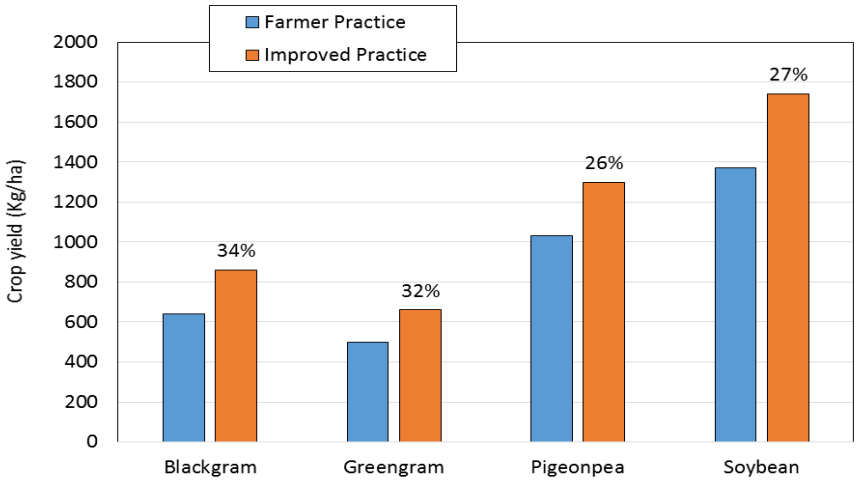

Figure 22: Mean crop yield during 2017-18 crop season under Bhoochetana II in Bidar district, Karnataka.

Chamarajanagar

During the 2017-18 crop season, crop cutting was undertaken for maize and ragi crops. The yield analysis showed that maize yield had increased by 22% and ragi yield by 16% over farmers' practice (Figure 23). On an average, there was a 21% increase in yield and a 24% increase in fodder production in the district, which translates into an additional 480 kg ha^{-1} of grain yield and 1390 kg ha^{-1} of fodder production. Increased yield resulted in additional income of Rs. 7300 ha^{-1} in the district (Table 11).

Table 11. Mean crop yield during 2017-18 crop season under Bhoochetana II in Chamarajanagar district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Maize	3460	4230	10973	6560	8390	12090	15060	22	28	25
Ragi	1210	1400	3610	5030	5980	7190	8660	16	19	20
Mean	*2335*	*2815*	*7291*	*5795*	*7185*	*9640*	*11860*	*21*	*24*	*23*

FP: Farmers' Practice; IP: Improved Practice.

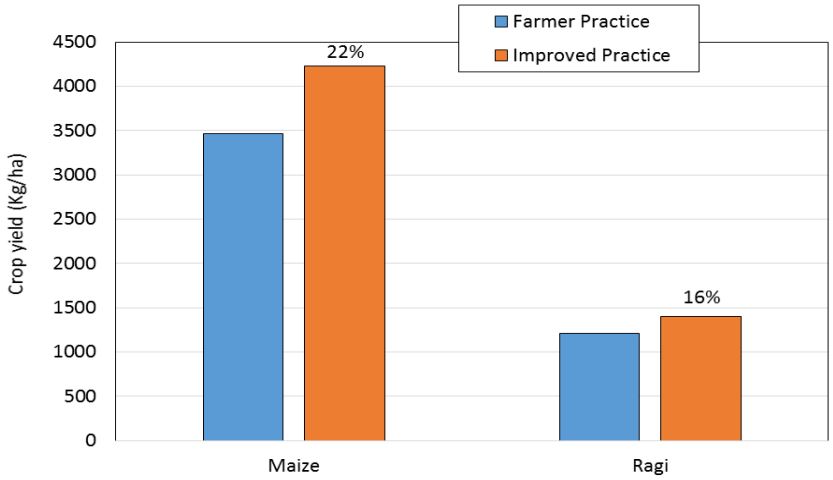

Figure 23: Mean crop yield during 2017-18 crop season under Bhoochetana II in Chamarajanagar district, Karnataka.

Chikkaballapur

In Chikkaballapur, groundnut and ragi were selected for crop cutting experiments during 2017-18. The CCE data revealed that crop yields had increased by 24% to 28%. Among the targeted crops, groundnut recorded 28% higher yield compared with farmers' practice. Similarly, ragi yield had increased by 24% over farmers' practice (Figure 24). On an average, there was a 26% increase in crop production and 18% increase in fodder production in the district. The increased yield translated into additional income of Rs. 15,575 ha^{-1} in groundnut and Rs. 8170 ha^{-1} in ragi (Table 12).

Table 12. Mean crop yield during 2017-18 crop season under Bhoochetana II in Chikkaballapur district, Karnataka										
Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Groundnut *	1240	1590	15575	1760	2060	3000	3650	28	17	22
Ragi	1790	2220	8170	2790	3290	5490	6610	24	18	20
Mean	*1515*	*1905*	*11873*	*2275*	*2675*	*4245*	*5130*	*26*	*18*	*21*

FP: Farmers' Practice; IP: Improved Practice; *groundnut pod yield

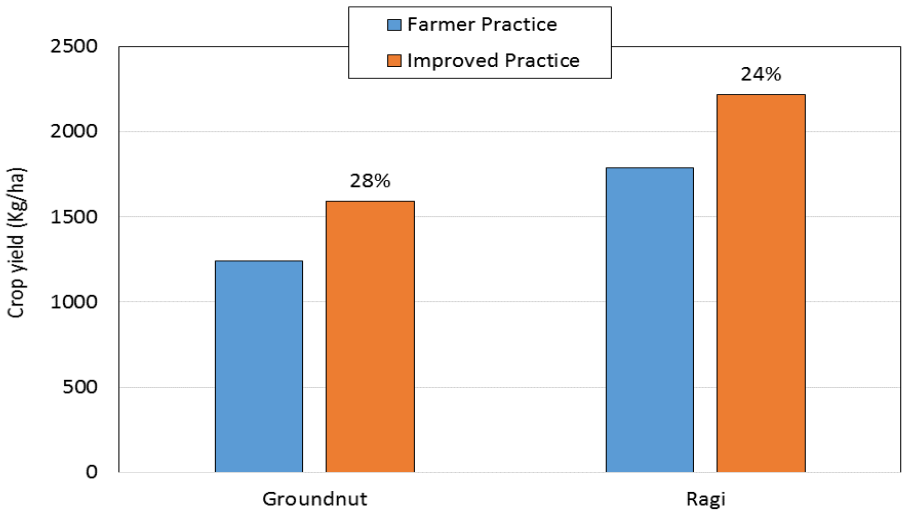

Figure 24: Mean crop yield during 2017-18 crop season under Bhoochetana II in Chikkaballapur district, Karnataka.

Chikkamagaluru

In Chikkamagalur district, the major crops covered for crop cutting experiments were paddy and ragi. Crop cutting results showed that on average there was a 21% increase in grain yield and 24% increase in fodder yield over farmers' practice in the district. The increased yield translates into an additional 600 kg ha^{-1} of grain production and 1415 kg ha^{-1} of fodder production. The increased yield resulted in additional income of Rs. 10,100 ha^{-1} (Table 13). Improved management practices enhanced crop yield of paddy, which was higher by 19% over farmers' practice, followed by ragi with 30% (Figure 25).

Table 13. Mean crop yield during 2017-18 crop season under Bhoochetana II in Chikkamagaluru district, Karnataka.										
Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Paddy	4270	5060	12245	8890	10900	13160	15960	19	23	21
Ragi	1400	1820	7980	2850	3670	4800	6170	30	29	29
Mean	*2835*	*3440*	*10113*	*5870*	*7285*	*8980*	*11065*	*21*	*24*	*23*

FP: Farmers' Practice; IP: Improved Practice

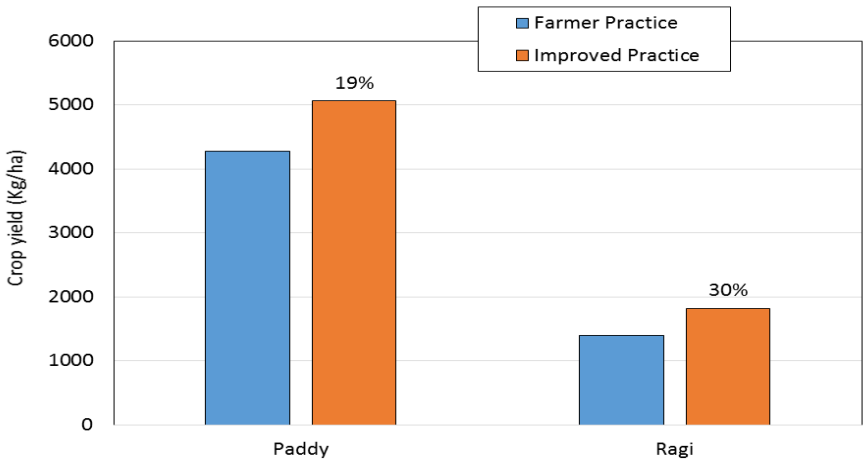

Figure 25: Mean crop yield during 2017-18 crop season under Bhoochetana II in Chikkamagaluru district, Karnataka.

Chitradurga

During the 2017-18 season, major crops such as foxtail millet, groundnut, pearl millet, pigeonpea and ragi were selected for crop cutting experiments in the district. Crop cutting results showed huge benefits through adoption of improved management indicating enhanced grain yield and fodder production across all crops in the district. As compared with the farmers' management, grain productivity increased by 14 to 30% and fodder productivity by 19 to 45% with improved management practices. On average, there was a 21% increase in grain yield and a 26% increase in fodder yield in the district which translates to an additional 190 kg ha^{-1} in grain production and 500 kg ha^{-1} in fodder production. The additional income realized due to improved management practices ranged between Rs. 3270 ha^{-1} in pearl millet and Rs. 8175 ha^{-1} in pigeonpea with an average of Rs. 5700 ha^{-1} (Table 14).

Table 14. Mean crop yield during 2017-18 crop season under Bhoochetana II in Chitradurga district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Foxtail Millet	1080	1290	6300	2230	2720	3640	4500	19	22	24
Groundnut*	1060	1210	6675	1500	1780	2560	2980	14	19	16
Pearl Millet	930	1160	3278	2280	2910	3810	4790	25	28	26
Pigeonpea	500	650	8175	1370	1980	2230	3110	30	45	39
Ragi	1110	1330	4180	2580	3110	4140	5110	20	21	23
Mean	*936*	*1128*	*5722*	*1992*	*2500*	*3276*	*4098*	*21*	*26*	*25*

FP: Farmers' Practice; IP: Improved Practice; *groundnut pod yield

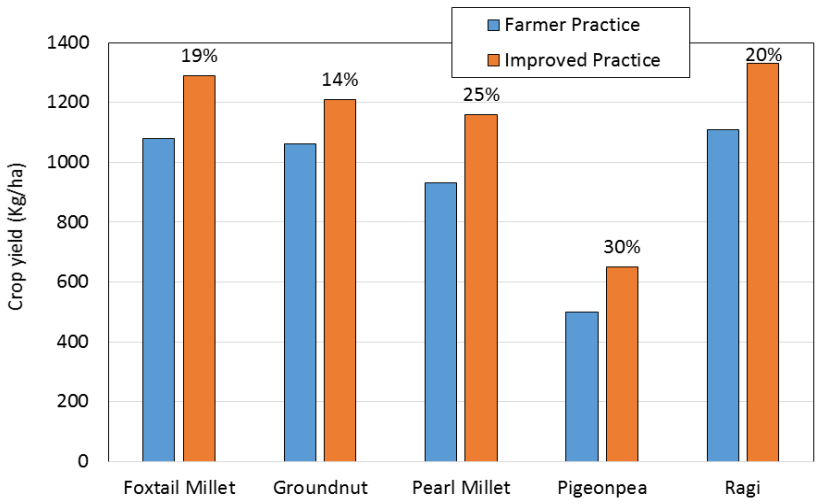

Figure 26: Mean crop yield during 2017-18 crop season under Bhoochetana II in Chitradurga district, Karnataka

Dakshina Kannada

Paddy is the major crop in Dakshina Kannada. During 2017-18, crop cutting results showed an average 30% increase in grain yield and 33% increase in fodder yield over farmers' practice in the district. The increased yield translates to an additional 800 kg ha^{-1} of grain production and 1280 kg ha^{-1} of fodder production. The increased yield resulted in additional income of Rs. 12,400 ha^{-1} (Table 15).

Table 15. Mean crop yield during 2017-18 crop season under Bhoochetana II in Dakshina Kannada district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Paddy	2680	3480	12400	3850	5130	6520	8610	30	33	32
Mean	*2680*	*3480*	*12400*	*3850*	*5130*	*6520*	*8610*	*30*	*33*	*32*

FP: Farmers' Practice; IP: Improved Practice

Davanagere

During 2017-18, crop cutting was conducted in different crops: foxtail millet, groundnut, maize, paddy, pigeonpea and ragi. The crop yield for the various crops with improved practice has shown an increase – ranging from 13% in pigeonpea to 18% in foxtail millet – over farmers' practice (Figure 27). On average, there was a 17% increase in grain yield and a 21% increase in fodder yield in the district which translates to an additional 417 kg ha^{-1} in grain production and 627 kg ha^{-1} in fodder production. The additional income realized due to improved management practices ranged between Rs. 6840 ha^{-1} in ragi and Rs. 12,113 ha^{-1} in maize with an average of Rs. 9580 ha^{-1} (Table 16).

Table 16. Mean crop yield during 2017-18 crop season under Bhoochetana II in Davanagere district, Karnataka.										
Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Foxtail Millet	1630	1930	9000	2950	3800	4570	5730	18	29	25
Groundnut	1480	1700	9790	3510	4230	4980	5930	15	21	19
Maize	5000	5850	12113	2400	2720	9290	10430	17	13	12
Paddy	3450	4020	8835	3990	4980	7430	9000	17	25	21
Pigeonpea	1500	1700	10900	320	380	560	660	13	19	18
Ragi	1990	2350	6840	4380	5200	7430	8790	18	19	18
Mean	*2508*	*2925*	*9580*	*2925*	*3552*	*5710*	*6757*	*17*	*21*	*18*

FP: Farmers' Practice; IP: Improved Practice

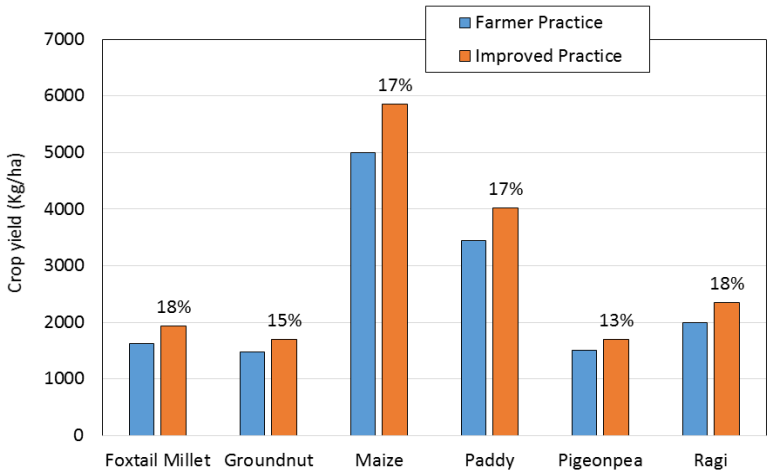

Figure 27: Mean crop yield during 2017-18 crop season under Bhoochetana II in Davanagere district, Karnataka.

Dharwad

During the 2017-18 crop season, crop cutting was undertaken for paddy and pearl millet. CCE results showed that paddy yield had increased by 25% and pearl millet yield increased by 24% over farmers' practice (Figure 28). On average, there was a 25% increase in yield and 18% increase in fodder production in the district which translates into an additional 220 kg ha^{-1} of grain yield and 285 kg ha^{-1} of fodder. Increased yield resulted on average in an additional income of Rs. 3329 ha^{-1} in the district (Table 17).

Table 17. Mean crop yield during 2017-18 crop season under Bhoochetana II in Dharwad district, Karnataka.										
Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Paddy	1240	1550	4805	2140	2490	3380	4040	25	16	20
Pearl Millet	540	670	1853	1020	1240	1560	1910	24	22	22
Mean	*890*	*1110*	*3329*	*1580*	*1865*	*2470*	*2975*	*25*	*18*	*20*

FP: Farmers' Practice; IP: Improved Practice.

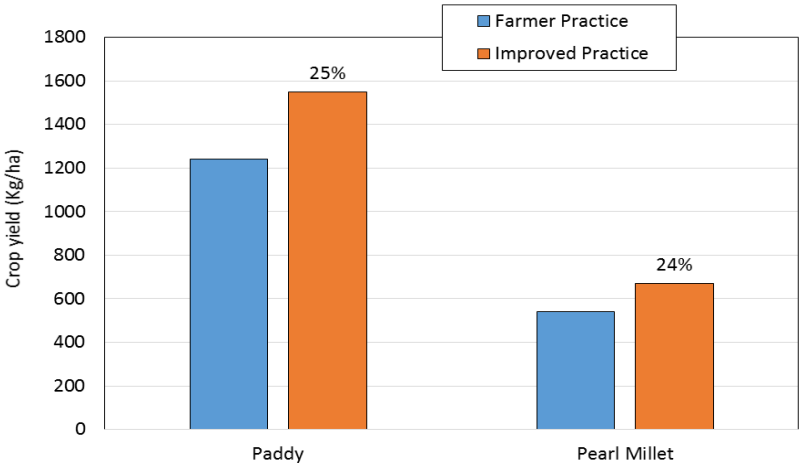

Figure 28: Mean crop yield during 2017-18 crop season under Bhoochetana II in Dharwad district, Karnataka.

Hassan

Crop cutting was undertaken for paddy and ragi in Hassan district. CCE results showed that paddy yield had increased by 22% and ragi yield by 28% over farmers' practice (Figure 29). On average, there was a 23% increase in yield and 12% increase in fodder production in the district, which translates into an additional 605 kg ha^{-1} of grain yield and 320 kg ha^{-1} of fodder production. Increased yield resulted in average additional income of Rs. 9973 ha^{-1} in the district (Table 18).

Table 18. Mean crop yield during 2017-18 crop season under Bhoochetana II in Hassan district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Paddy	4010	4880	13485	3860	4440	7870	9320	22	15	18
Ragi	1210	1550	6460	1660	1720	2260	3220	28	4	42
Mean	*2610*	*3215*	*9973*	*2760*	*3080*	*5065*	*6270*	*23*	*12*	*24*

FP: Farmers' Practice; IP: Improved Practice

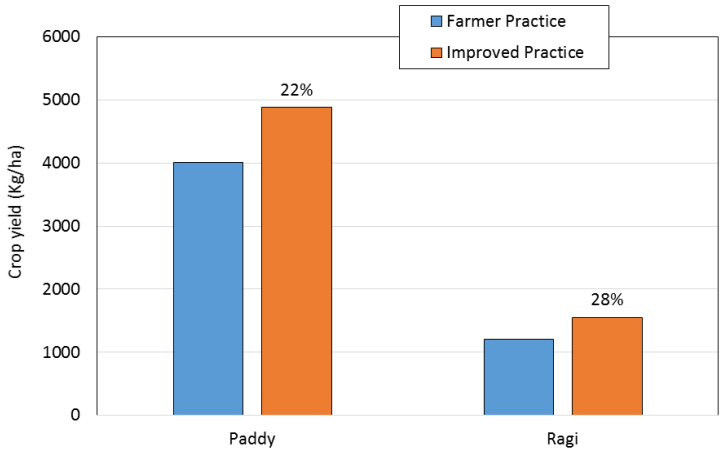

Figure 29: Mean crop yield during 2017-18 crop season under Bhoochetana II in Hassan district, Karnataka.

Haveri

During 2017-18, crop cutting was conducted for major crops such as barnyard millet, DSR paddy, foxtail millet and groundnut. The improved management practices were compared with farmers' practice to understand the yield benefits of these crops in terms of yield, and biomass production. The CCE data revealed that crop yields had increased between 19% and 33%. Among the targeted crops, foxtail millet showed 33% higher yield compared with farmers' practice (Figure 30). Similarly, groundnut pod yield had increased by 19%, DSR paddy yield by 29%, and barnyard millet by 21% over farmers' practice. The increased yield translated to additional income of Rs. 16,465 ha^{-1} in groundnut followed by foxtail millet (Rs. 12900 ha^{-1}), DSR paddy (Rs. 3875 ha^{-1}), and barnyard millet (Rs. 3600 ha^{-1}) (Table 19).

Table 19. Mean crop yield during 2017-18 crop season under Bhoochetana II in Haveri district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Barnyard millet	840	1020	3600	1690	1980	2130	2530	21	17	19
DSR Paddy	860	1110	3875	4070	4940	6270	7680	29	21	22
Foxtail millet	1310	1740	12900	2110	2610	2720	3410	33	24	25
Groundnut	1910	2280	16465	3250	4000	5160	6270	19	23	22
Mean	*1230*	*1538*	*9210*	*2780*	*3383*	*4070*	*4973*	*25*	*22*	*22*

FP: Farmers' Practice; IP: Improved Practice

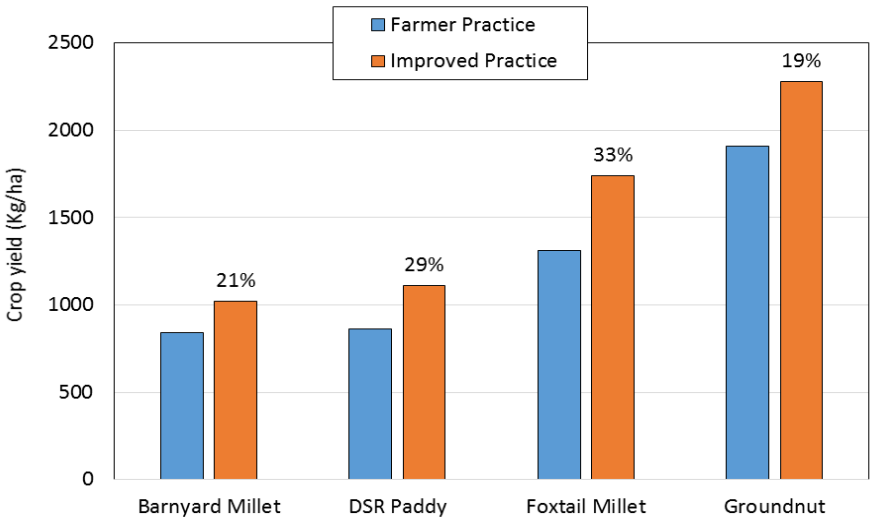

Figure 30: Mean crop yield during 2017-18 crop season under Bhoochetana II in Haveri district, Karnataka.

Kalaburagi

During 2017-18, crop cutting was undertaken for pigeonpea in the district. CCE results showed that pigeonpea yield had increased by 33% over farmers' practice. On an average, there was a 33% increase in yield and 30% increase in fodder production in the district which translated into an additional 70 kg ha^{-1} of grain yield and 140 kg ha^{-1} of fodder production. Increased yield led to average additional income of Rs. 3815 ha^{-1} in the district (Table 20).

Table 20. Mean crop yield during 2017-18 crop season under Bhoochetana II in Kalaburagi district, Karnataka.										
Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Pigeonpea	210	280	3815	470	610	810	1050	33	30	30
Mean	*210*	*280*	*3815*	*470*	*610*	*810*	*1050*	*33*	*30*	*30*

FP: Farmers' Practice; IP: Improved Practice

Kodagu

Paddy is the major crop in Kodagu district. Crop cutting results showed an average 24% increase in grain yield and 18% increase in fodder yield over farmers' practice in the district. The increased yield translated to an additional 1130 kg ha^{-1} of grain production and 1470 kg ha^{-1} of fodder production. The increased yield resulted in additional income of Rs. 17,515 ha^{-1} (Table 21).

Table 21. Mean crop yield during 2017-18 crop season under Bhoochetana II in Kodagu district, Karnataka.										
Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Paddy	4690	5820	17515	8300	9770	12990	15600	24	18	20
Mean	*4690*	*5820*	*17515*	*8300*	*9770*	*12990*	*15600*	*24*	*18*	*20*

FP: Farmers' Practice; IP: Improved Practice

Kolar

Ragi is the major crop in Kolar district. During 2017-18, crop cutting results showed an average 23% increase in both grain and fodder yield over farmers' practice in the district. The increased yield translates to an additional 530 kg ha^{-1} of grain production and 1020 kg ha^{-1} of fodder production. The increased yield resulted in additional income of Rs. 10,000 ha^{-1} (Table 22).

Table 22. Mean crop yield during 2017-18 crop season under Bhoochetana II in Kolar district, Karnataka.										
Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Ragi	2270	2800	10070	4520	5540	7560	9520	23	23	26
Mean	*2270*	*2800*	*10070*	*4520*	*5540*	*7560*	*9520*	*23*	*23*	*26*

FP: Farmers' Practice; IP: Improved Practice

Mandya

During 2017-18, crop cutting was undertaken for paddy and ragi in Mandya district. CCE results showed that paddy yield had increased by 18% and ragi yield increased by 15% over farmers' practice (Figure 31). On average, there was a 17% increase in grain yield and 12% increase in fodder production in the district, which translates to an additional 340 kg ha^{-1} of grain yield and 1000 kg ha^{-1} of fodder production. Increased yield resulted in average additional income of Rs. 5585 ha^{-1} in the district (Table 23).

Table 23. Mean crop yield during 2017-18 crop season under Bhoochetana II in Mandya district, Karnataka.										
Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Paddy	2780	3280	7750	7380	8910	10150	12180	18	21	20
Ragi	1170	1350	3420	3510	3980	5850	6750	15	13	15
Mean	*1975*	*2315*	*5585*	*5445*	*6445*	*8000*	*9465*	*17*	*18*	*18*

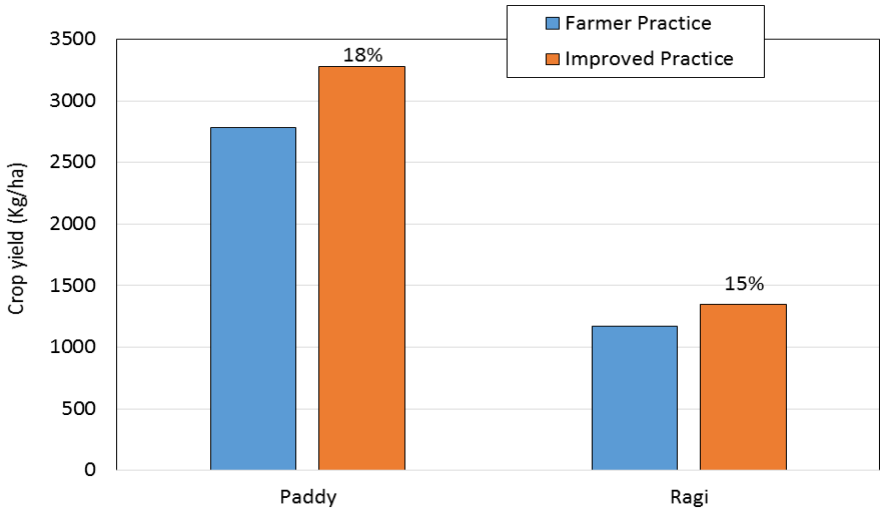

Figure 31: Mean crop yield during 2017-18 crop season under Bhoochetana II in Mandya district, Karnataka.

Mysore

In Mysore district, crop cutting was undertaken for maize, paddy and *ragi* during 2017-18. CCE results showed that ragi yield had increased by 30%, maize yield by 27% and paddy yield by 25% over farmers' practice (Figure 32). On average, there was a 27% increase in grain yield and 28% increase in fodder production in the district which translates to an additional 304 kg ha^{-1} of grain yield and 314 kg ha^{-1} of fodder. Increased yield resulted in average additional income of Rs. 4838 ha^{-1} in the district (Table 24).

Table 24. Mean crop yield during 2017-18 crop season under Bhoochetana II in Mysore district, Karnataka.										
Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Maize	1080	1370	4133	850	1100	2160	2800	27	29	30
Paddy	1590	1990	6200	1810	2230	3400	4220	25	23	24
Ragi	730	950	4180	710	980	1830	2320	30	38	27
Mean	*1133*	*1437*	*4838*	*1123*	*1437*	*2463*	*3113*	*27*	*28*	*26*

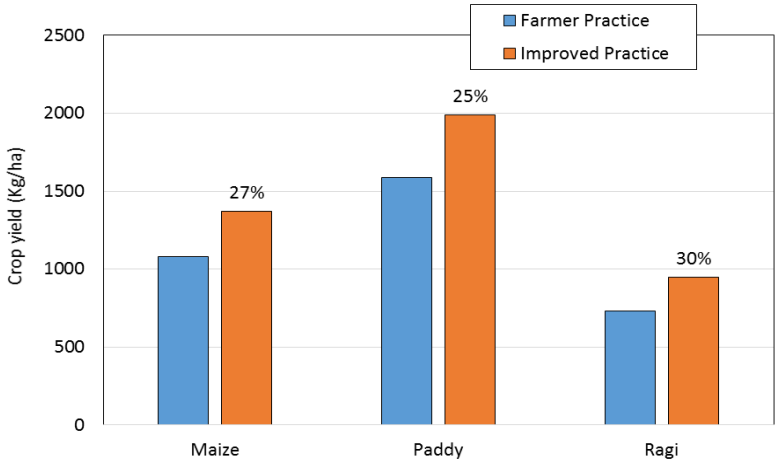

Figure 32: Mean crop yield during 2017-18 crop season under Bhoochetana II in Mysore district, Karnataka.

Raichur

During the 2017-18 crop season, crop cutting was undertaken for cotton and paddy. CCE results showed that paddy yield had increased by 31% and cotton yield by 17% over farmers' practice (Figure 33). On average, there was a 25% increase in yield and a 26% increase in fodder production in the district which translates into an additional yield of 460 kg ha^{-1} and 285 kg ha^{-1} of fodder production. Increased yield resulted in average additional income of Rs. 10,100 ha^{-1} in the district (Table 25).

Table 25. Mean crop yield during 2017-18 crop season under Bhoochetana II in Raichur district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Cotton	1450	1690	9648					17		
Paddy	2210	2890	10540	2880	3640	5090	6530	31	26	28
Mean	*1830*	*2290*	*10094*	*2880*	*3640*	*5090*	*6530*	*25*	*26*	*28*

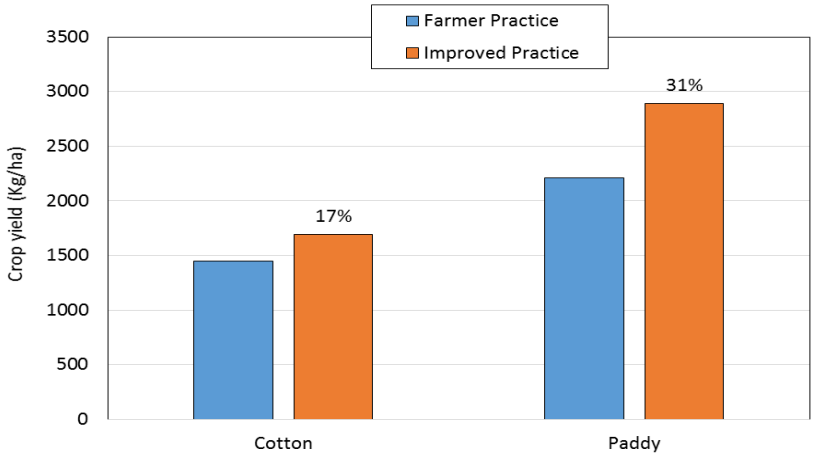

Figure 33: Mean crop yield during 2017-18 crop season under Bhoochetana II in Raichur district, Karnataka.

Ramanagar

In Ramanagar, during 2017-18 season, crop cutting was undertaken for groundnut and ragi. CCE results showed that groundnut yield had increased by 20% and ragi yield increased by 17% over farmers' practice (Figure 34). On average, there was an 18% increase in yield and fodder production in the district which translated into an additional 210 kg ha^{-1} of grain yield and 1070 kg ha^{-1} of fodder production. Increased yield led to average additional income of Rs. 6158 ha^{-1} in the district (Table 26).

Table 26. Mean crop yield during 2017-18 crop season under Bhoochetana II in Ramanagar district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Groundnut	850	1020	7565	780	870	1630	1890	20	12	16
Ragi	1430	1680	4750	2720	3250	4630	5520	17	19	19
Mean	*1140*	*1350*	*6158*	*1750*	*2060*	*3130*	*3705*	*18*	*18*	*18*

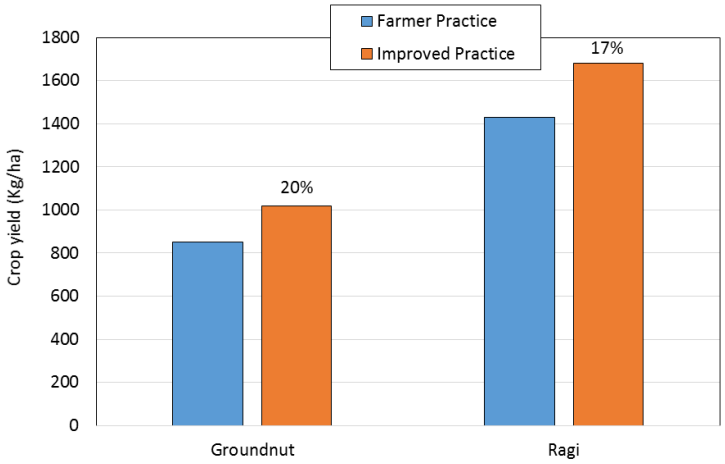

Figure 34: Mean crop yield during 2017-18 crop season under Bhoochetana II in Ramanagar district, Karnataka.

Tumakuru

During the 2017-18 season, crop cutting took place for groundnut and ragi in Tumakuru district. CCE analysis showed that groundnut and ragi yield had increased by 27% over farmers' practice (Figure 35). The increased yield translated to an additional 230 kg ha^{-1} of grain yield and 285 kg ha^{-1} of fodder production. Increased yield resulted in average additional income of Rs. 6155 ha^{-1} in the district (Table 27).

Table 27. Mean crop yield during 2017-18 crop season under Bhoochetana II in Tumakuru district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Groundnut	510	650	6230	810	950	1320	1600	27	17	21
Ragi	1190	1510	6080	1710	2140	3480	4350	27	25	25
Mean	*850*	*1080*	*6155*	*1260*	*1545*	*2400*	*2975*	*27*	*23*	*24*

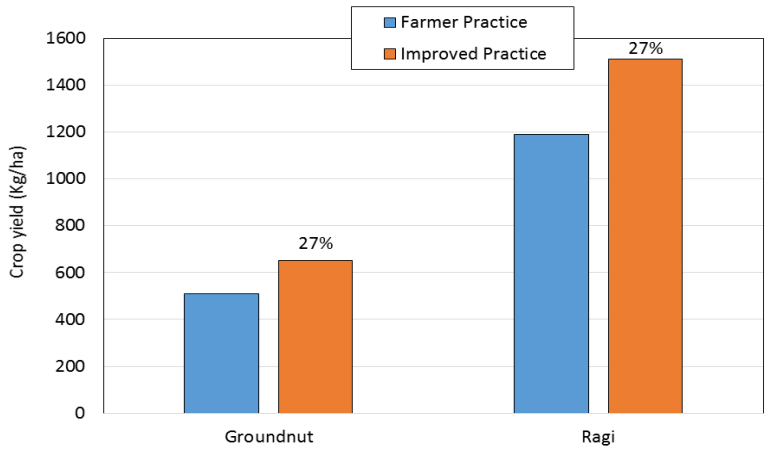

Figure 35: Mean crop yield during 2017-18 crop season under Bhoochetana II in Tumakuru district, Karnataka.

Udupi

Paddy is the major crop in Udupi district. The 2017-18 crop cutting analysis showed that on average there was a 22% increase in grain yield and a 20% increase in fodder yield over farmers' practice in the district. The increased yield translated to an additional 970 kg ha^{-1} of grain production and 1160 kg ha^{-1} of fodder production. The increased yield resulted in additional income of Rs. 15,035 ha^{-1} (Table 28).

Table 28. Mean crop yield during 2017-18 crop season under Bhoochetana II in Udupi district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Paddy	4330	5300	15035	5730	6890	10060	12190	22	20	21
Mean	*4330*	*5300*	*15035*	*5730*	*6890*	*10060*	*12190*	*22*	*20*	*21*

Vijayapura

During the 2017-18 season, crop cutting was undertaken for pearl millet and pigeonpea in Vijayapura district. CCE analysis showed that pearl millet yield had increased by 30% and pigeonpea yield had increased by 28% over farmers' practice (Figure 36). The increased yield translates to an additional 255 kg ha^{-1} of grain yield and 280 kg ha^{-1} of fodder production. Increased yield resulted in average additional income of Rs. 7860 ha^{-1} in the district (Table 29).

Table 29. Mean crop yield during 2017-18 crop season under Bhoochetana II in Vijayapura district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Pearl Millet	990	1290	4275	1200	1540	2610	3390	30	28	30
Pigeonpea	750	960	11445	690	910	1110	1520	28	32	37
Mean	*870*	*1125*	*7860*	*945*	*1225*	*1860*	*2455*	*29*	*30*	*32*

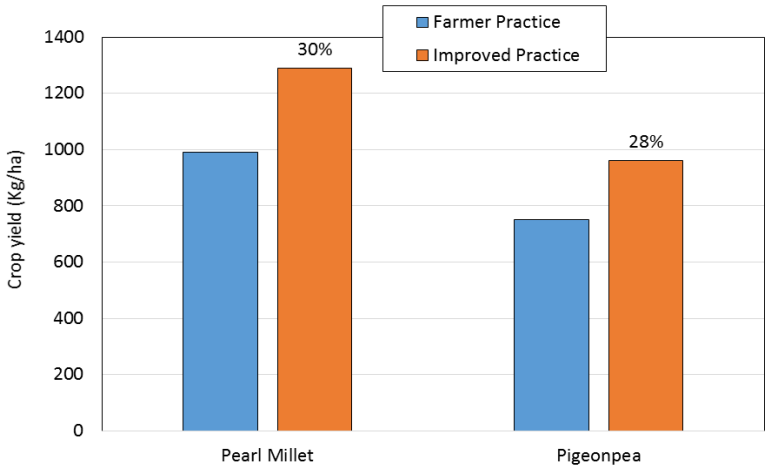

Figure 36: Mean crop yield during 2017-18 crop season under Bhoochetana II in Vijayapura district, Karnataka.

Yadgir

In Yadgir district, crop cutting was undertaken for paddy and pigeonpea during 2017-18. CCE results showed that paddy yield had increased by 25% and pigeonpea yield by 31% over farmers' practice (Figure 37). The increased yield translates to an additional 795 kg ha^{-1} of grain yield and 230 kg ha^{-1} of fodder production. Increased yield resulted in average additional income of Rs. 20,123 ha^{-1} in the district (Table 30).

Table 30. Mean crop yield during 2017-18 crop season under Bhoochetana II in Yadgir district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Paddy	4740	5930	18445	2790	3210	7540	9140	25	15	21
Pigeonpea	1300	1700	21800	150	190	340	440	31	27	29
Mean	*3020*	*3815*	*20123*	*1470*	*1700*	*3940*	*4790*	*26*	*16*	*22*

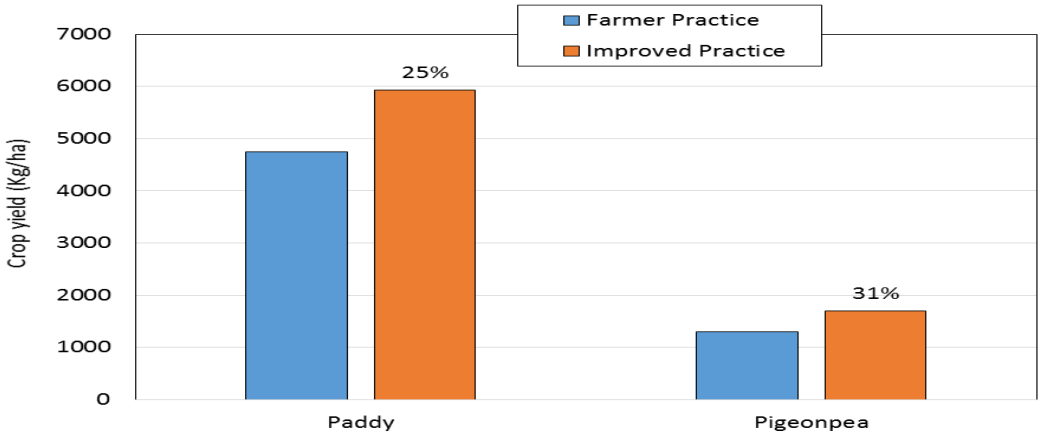

Figure 37: Mean crop yield during 2017-18 crop season under Bhoochetana II in Yadgir district, Karnataka.

Belagavi

Crop cutting was done for chickpea and *rabi* sorghum during 2017-18. CCE results showed that chickpea yield had increased by 43% and *rabi* sorghum yield had increased by 28% over farmers' practice (Figure 38). The increased yield translates to an additional 795 kg ha^{-1} of grain yield and 230 kg ha^{-1} of fodder production. Increased yield resulted in average additional income of Rs. 20,123 ha^{-1} in the district (Table 31).

Table 31. Mean crop yield during 2017-18 crop season under Bhoochetana II in Belagavi district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
Rabi Chickpea	650	930	11200	450	610	1100	1540	43	36	40
Rabi Sorghum	720	920	3400	1670	2070	2590	3240	28	24	25
Mean	*685*	*925*	*7300*	*1060*	*1340*	*1845*	*2390*	*35*	*26*	*30*

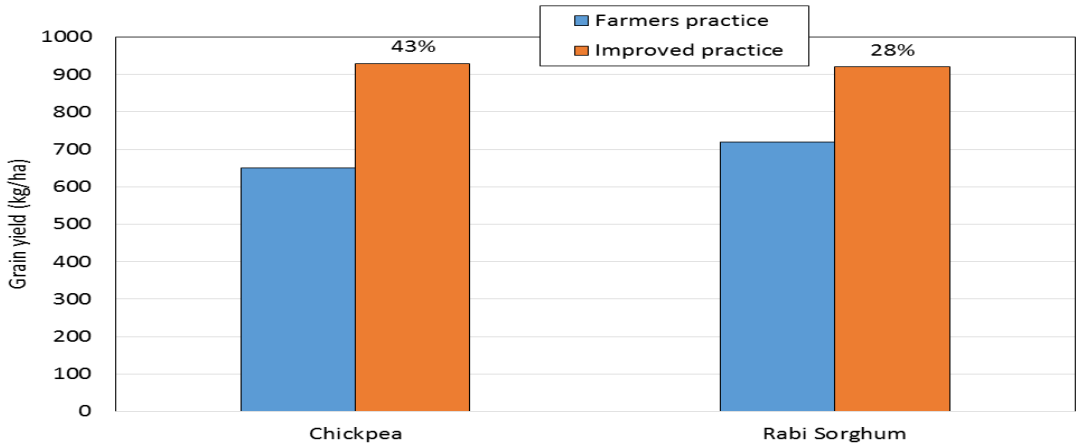

Figure 38: Mean crop yield during 2017-18 crop season under Bhoochetana II in Belagavi district, Karnataka.

Shivamogga

Crop cutting was undertaken for DSR paddy in Shivamogga district during 2017-18. CCE results showed that DSR paddy yield had increased by 28% over farmers' practice. The increased yield translates to an additional 1050 kg ha^{-1} of grain yield and 1300 kg ha^{-1} of fodder production. Increased yield resulted in average additional income of Rs. 16,275 ha^{-1} in the district (Table 32).

Table 32. Mean crop yield during 2017-18 crop season under Bhoochetana II in Tumkur district, Karnataka.

Crop	Grain yield (kg/ha)		Additional income (Rs/ha)	Fodder		TDM		% increase over FP		
	FP	IP		FP	IP	FP	IP	Grain	Fodder	TDM
DSR paddy	3750	4800	16275	5820	7120	9570	11920	28	22	25
Mean	*3750*	*4800*	*16275*	*5820*	*7120*	*9570*	*11920*	*28*	*22*	*25*

10. Economic Benefits of the Bhoochetana Program

Crop-wise additional benefits gained during 2017-18 due to improved management practices is presented in Table 33. During 2017-18, major crops such as groundnut recorded additional benefit ranging between Rs. 6230 ha^{-1} and Rs. 19,135 ha^{-1}. Similar observations were recorded in other crops as well, such as paddy (Rs. 4800 ha^{-1} to Rs. 18,445 ha^{-1}), foxtail millet (Rs. 4200 ha^{-1} and 12,900 ha^{-1}), pigeonpea (Rs. 3815 ha^{-1} to Rs. 21,800 ha^{-1}) and ragi (Rs. 2470 ha^{-1} and Rs. 20,710 ha^{-1}) by adopting improved management practices (Table 33).

Table 33. Additional income from improved management practices under Bhoochetana program in Karnataka – 2017-18.

District	Crops	Crop yield (Kg/ha)		Income (Rs/ha)		Additional income (Rs/ha)
		Farmer Practice	Improved Practice	Farmer Practice	Improved Practice	
Ballari	Foxtail millet	270	410	8100	12300	4200
	Groundnut	1040	1470	46280	65415	19135
	Paddy	1940	2330	30070	36115	6045
	Pearl millet	1190	1360	16958	19380	2423
	Ragi	1320	1450	25080	27550	2470
Bengaluru	Ragi	2430	3520	46170	66880	20710
Bidar	Black gram	640	860	34560	46440	11880
	Greengram	500	660	27875	36795	8920
	Pigeonpea	1030	1300	56135	70850	14715
	Soybean	1370	1740	41785	53070	11285
Chamarajanagar	Maize	3460	4230	49305	60278	10973
	Ragi	1210	1400	22990	26600	3610
Chikkaballapur	Groundnut	1240	1590	55180	70755	15575
	Ragi	1790	2220	34010	42180	8170
Chikkamagaluru	Paddy	4270	5060	66185	78430	12245
	Ragi	1400	1820	26600	34580	7980
Chitradurga	Foxtail millet	1080	1290	32400	38700	6300
	Groundnut	1060	1210	47170	53845	6675
	Pearl millet	930	1160	13253	16530	3278
	Pigeonpea	500	650	27250	35425	8175
	Ragi	1110	1330	21090	25270	4180
Dakshina Kannada	Paddy	2680	3480	41540	53940	12400
Davanagere	Foxtail millet	1630	1930	48900	57900	9000
	Groundnut	1480	1700	65860	75650	9790
	Maize	5000	5850	71250	83363	12113
	Paddy	3450	4020	53475	62310	8835
	Pigeonpea	1500	1700	81750	92650	10900

Table 33. Additional income from improved management practices under Bhoochetana program in Karnataka – 2017-18.

District	Crops	Crop yield (Kg/ha)		Income (Rs/ha)		Additional income (Rs/ha)
		Farmer Practice	Improved Practice	Farmer Practice	Improved Practice	
	Ragi	1990	2350	37810	44650	6840
Dharwad	Paddy	1240	1550	19220	24025	4805
	Pearl Millet	540	670	7695	9548	1853
Hassan	Paddy	4010	4880	62155	75640	13485
	Ragi	1210	1550	22990	29450	6460
Haveri	Barnyard millet	840	1020	16800	20400	3600
	DSR Paddy	860	1110	13330	17205	3875
	Foxtail millet	1310	1740	39300	52200	12900
	Groundnut	1910	2280	84995	101460	16465
Kalaburagi	Pigeonpea	210	280	11445	15260	3815
Kodagu	Paddy	4690	5820	72695	90210	17515
Kolar	Ragi	2270	2800	43130	53200	10070
Mandya	Paddy	2780	3280	43090	50840	7750
	Ragi	1170	1350	22230	25650	3420
Mysuru	Maize	1080	1370	15390	19523	4133
	Paddy	1590	1990	24645	30845	6200
	Ragi	730	950	13870	18050	4180
Raichur	Cotton	1450	1690	58290	67938	9648
	Paddy	2210	2890	34255	44795	10540
Ramanagara	Groundnut	850	1020	37825	45390	7565
	Ragi	1430	1680	27170	31920	4750
Tumakuru	Groundnut	510	650	22695	28925	6230
	Ragi	1190	1510	22610	28690	6080
Udupi	Paddy	4330	5300	67115	82150	15035
Vijayapura	Pearl millet	990	1290	14108	18383	4275
	Pigeonpea	750	960	40875	52320	11445
Yadgir	Paddy	4740	5930	73470	91915	18445
	Pigeonpea	1300	1700	70850	92650	21800

Source: Bhoochetana CCE data, 2017-18

Annexure I

Taluk-wise mean crop yield data (kg ha^{-1}) under Bhoochetana II for *Kharif* 2017 in Karnataka

District	Taluk	Crop	Grain yield (kg/ha)		Fodder yield (kg/ha)		TDM yield (Kg/ha)		% Increase over FP	
			Farmers practice	Improved practice	Farmers practice	Improved practice	Farmers practice	Improved practice	Grain	Fodder
Ballari	Ballari	*Kharif* Paddy	2420	2910	4320	5250	8750	11230	20	22
Ballari	HB Halli	*Kharif* Foxtail millet (Korralu)	190	330	480	740	670	1080	74	54
Ballari	HB Halli	*Kharif* Groundnut	1320	1890	750	1100	2070	2990	43	47
Ballari	HB Halli	*Kharif* Pearl millet	1740	2000	4300	4810	6510	7450	15	12
Ballari	HB Halli	*Kharif* Ragi	1480	1640	3030	3630	7020	8750	11	20
Ballari	Hoovina Hadagalli	*Kharif* Groundnut	1300	1790	2270	2760	3570	4550	38	22
Ballari	Hoovina Hadagalli	*Kharif* Pearl millet	1540	1780	2650	3960	4560	6410	16	49
Ballari	Hosapete	*Kharif* Foxtail millet (Korralu)	500	700	2520	3310	3020	4010	40	31
Ballari	Hosapete	*Kharif* Paddy	1870	2190	5890	7700	11350	14650	17	31
Ballari	Hosapete	*Kharif* Pearl millet	1140	1270	3170	4510	6040	8060	11	42
Ballari	Kudligi	*Kharif* Groundnut	620	940	870	1290	1490	2230	52	48
Ballari	Kudligi	*Kharif* Pearl millet	940	1070	2380	3200	4970	6840	14	34
Ballari	Kudligi	*Kharif* Ragi	1150	1260	3470	4280	6490	7820	10	23
Ballari	Sanduru	*Kharif* Groundnut	1150	1530	2280	2770	3420	4290	33	21
Ballari	Sanduru	*Kharif* Pearl millet	1030	1160	4870	6390	7790	10260	13	31
Ballari	Siruguppa	*Kharif* Paddy	1490	1830	3580	4570	8490	10970	23	28
Bengaluru	Anekal	*Kharif* Ragi	2290	3250	4370	5260	7370	9390	42	20
Bengaluru	Bengaluru North	*Kharif* Ragi	3050	4480	5120	6830	9640	13180	47	33
Bengaluru	Devanahalli	*Kharif* Ragi	2150	2880	4250	5990	7110	9800	34	41
Bengaluru	Hoskote	*Kharif* Ragi	2430	3190	3910	4640	7220	8980	31	19
Bengaluru	Nelmangala	*Kharif* Ragi	2440	3770	4700	5750	7910	10960	55	22
Bengaluru	Doddaballapura	*Kharif* Ragi	2550	4320	3990	6760	7320	12630	69	69

Taluk-wise mean crop yield data (kg ha^{-1}) under Bhoochetana II for *Kharif* 2017 in Karnataka

District	Taluk	Crop	Grain yield (kg/ha)		Fodder yield (kg/ha)		TDM yield (Kg/ha)		% Increase over FP	
			Farmers practice	Improved practice	Farmers practice	Improved practice	Farmers practice	Improved practice	Grain	Fodder
Bidar	Aurad	*Kharif* Black gram	620	830	1060	1290	1680	2120	34	22
Bidar	Aurad	*Kharif* Pigeonpea	1140	1440	2020	2500	4570	5610	26	24
Bidar	Basavakalyan	*Kharif* Black gram	660	880	1240	1580	1900	2460	33	27
Bidar	Basavakalyan	*Kharif* Pigeonpea	1040	1340	2290	3050	4740	6240	29	33
Bidar	Basavakalyan	*Kharif* Soybean	1340	1680	1540	1840	2880	3520	25	19
Bidar	Bhalki	*Kharif* Greengram	510	680	960	1270	1470	1950	33	32
Bidar	Bhalki	*Kharif* Pigeonpea	1020	1270	2180	2780	4690	6010	25	28
Bidar	Bidar	*Kharif* Greengram	490	630	950	1320	1440	1950	29	39
Bidar	Bidar	*Kharif* Pigeonpea	1010	1250	2420	3040	4850	5960	24	26
Bidar	Homnabad	*Kharif* Greengram	500	670	1060	1360	1560	2030	34	28
Bidar	Homnabad	*Kharif* Pigeonpea	900	1170	2240	2970	4440	5850	30	33
Bidar	Homnabad	*Kharif* Soybean	1410	1790	1550	1980	2950	3770	27	28
Chamarajanagar	Chamarajnagar	*Kharif* Maize	3300	4080	6870	7980	11840	14830	24	16
Chamarajanagar	Kollegal	*Kharif* Ragi	830	1000	4180	5030	5770	7170	20	20
Chamarajanagar	Yalandoor	*Kharif* Maize	3100	3570	7090	9080	12940	15330	15	28
Chamarajanagar	Yalandoor	*Kharif* Ragi	1490	1700	4700	6620	7260	9980	14	41
Chamarajanagar	Chamarajanagar	*Kharif* Maize	3920	4980	5870	7900	11380	14920	27	35
Chamarajanagar	Chamarajanagar	*Kharif* Ragi	1390	1580	5640	6410	8050	9260	14	14
Chikkaballapur	Bagepalli	*Kharif* Groundnut	1000	1280	2530	2790	3530	4070	28	10
Chikkaballapur	Bagepalli	*Kharif* Ragi	1790	2160	5990	7010	8550	10050	21	17
Chikkaballapur	Chikballapur	*Kharif* Ragi	1560	1980	1870	2270	4110	5100	27	21
Chikkaballapur	Chintamani	*Kharif* Groundnut	1580	1950	1950	2130	3520	4080	23	9
Chikkaballapur	Chintamani	*Kharif* Ragi	1930	2350	3180	3610	6040	6970	22	14
Chikkaballapur	Gauribidanur	*Kharif* Groundnut	1260	1680	1420	1680	2680	3370	33	18

Taluk-wise mean crop yield data (kg ha^{-1}) under Bhoochetana II for *Kharif* 2017 in Karnataka

District	Taluk	Crop	Grain yield (kg/ha)		Fodder yield (kg/ha)		TDM yield (Kg/ha)		% Increase over FP	
			Farmers practice	Improved practice	Farmers practice	Improved practice	Farmers practice	Improved practice	Grain	Fodder
Chikkaballapur	Gauribidanur	*Kharif* Ragi	1610	2180	1200	1470	3720	4920	35	23
Chikkaballapur	Gudibanda	*Kharif* Groundnut	1310	1740	1470	1930	2790	3670	33	31
Chikkaballapur	Gudibanda	*Kharif* Ragi	2180	2610	3570	4180	7360	8730	20	17
Chikkaballapur	Sidlaghatta	*Kharif* Groundnut	1050	1300	1440	1760	2490	3060	24	22
Chikkaballapur	Sidlaghatta	*Kharif* Ragi	1930	2320	1870	2210	4570	5430	20	18
Chikkamagalur	Chikkamagaluru	*Kharif* Ragi	1440	1840	2790	3580	4780	6080	28	28
Chikkamagalur	Kadur	*Kharif* Ragi	1280	1730	2820	3730	4660	6240	35	32
Chikkamagalur	Koppa	*Kharif* Paddy	3840	4700	8090	10690	11930	15390	22	32
Chikkamagalur	Mudigere	*Kharif* Paddy	4400	5670	7670	9730	12070	15390	29	27
Chikkamagalur	Narasimharajapura	*Kharif* Paddy	4480	4990	9220	10620	13700	15600	11	15
Chikkamagalur	Sringeri	*Kharif* Paddy	4480	5080	10830	12830	15310	17900	13	18
Chikkamagalur	Tarikere	*Kharif* Ragi	1450	1890	2960	3740	4970	6210	30	26
Chitradurga	Challakere	*Kharif* Foxtail millet (Korralu)	1460	1720	2810	3400	4590	5580	18	21
Chitradurga	Challakere	*Kharif* Groundnut	1070	1230	1650	1960	2720	3190	15	19
Chitradurga	Challakere	*Kharif* Pearl millet	870	1090	2430	3140	3880	4840	25	29
Chitradurga	Challakere	*Kharif* Pigeonpea	530	640	1540	2010	2480	3190	21	31
Chitradurga	Chitradurga	*Kharif* Pigeonpea	520	720	1320	2120	2130	3270	38	61
Chitradurga	Chitradurga	*Kharif* Ragi	1150	1480	2220	2860	3880	5090	29	29
Chitradurga	Hiriyur	*Kharif* Groundnut	940	1070	1170	1360	2110	2430	14	16
Chitradurga	Hiriyur	*Kharif* Pearl millet	910	1100	2690	3410	4260	5330	21	27
Chitradurga	Hiriyur	*Kharif* Pigeonpea	450	540	1320	1740	2160	2790	20	32
Chitradurga	Holalkere	*Kharif* Foxtail millet (Korralu)	1120	1390	1850	2280	3490	4520	24	23
Chitradurga	Holalkere	*Kharif* Ragi	1020	1230	2470	2940	3850	4770	21	19
Chitradurga	Hosadurga	*Kharif* Foxtail millet (Korralu)	620	770	1690	2130	2510	3170	24	26

Taluk-wise mean crop yield data (kg ha^{-1}) under Bhoochetana II for *Kharif* 2017 in Karnataka

District	Taluk	Crop	Grain yield (kg/ha)		Fodder yield (kg/ha)		TDM yield (Kg/ha)		% Increase over FP	
			Farmers practice	Improved practice	Farmers practice	Improved practice	Farmers practice	Improved practice	Grain	Fodder
Chitradurga	Hosadurga	*Kharif* Ragi	1150	1320	2910	3430	4540	5410	15	18
Chitradurga	Molakalmuru	*Kharif* Foxtail millet (Korralu)	980	1160	2400	2830	3660	4360	18	18
Chitradurga	Molakalmuru	*Kharif* Groundnut	1170	1300	1510	1820	2680	3120	11	21
Chitradurga	Molakalmuru	*Kharif* Pearl millet	1030	1310	1730	2200	3300	4220	27	27
Dakshina Kannada	Bantwal	*Kharif* Paddy	1900	2490	3240	4060	5140	6550	31	25
Dakshina Kannada	Beltangadi	*Kharif* Paddy	4610	5870	6520	8410	11130	14280	27	29
Dakshina Kannada	Mangalore	*Kharif* Paddy	2380	3180	3400	4660	5780	7840	34	37
Dakshina Kannada	Sulya	*Kharif* Paddy	3700	4470	3650	5710	7350	10180	21	56
Davanagere	Channagiri	*Kharif* Paddy	3670	4360	4200	5410	7870	9760	19	29
Davanagere	Channagiri	*Kharif* Ragi	1750	1990	4600	5980	7020	8890	14	30
Davanagere	Davanagere	*Kharif* Foxtail millet (Korralu)	1630	1930	2950	3800	4570	5730	18	29
Davanagere	Davanagere	*Kharif* Ragi	2060	2520	4070	4740	7140	8570	22	16
Davanagere	Harapanahalli	*Kharif* Groundnut	1100	1270	2680	3180	3790	4440	15	19
Davanagere	Harapanahalli	*Kharif* Maize	5000	5850	2400	2720	9290	10430	17	13
Davanagere	Harapanahalli	*Kharif* Pigeonpea	80	100	250	310	400	490	25	24
Davanagere	Harapanahalli	*Kharif* Ragi	1980	2310	3970	4730	7300	8670	17	19
Davanagere	Harihara	*Kharif* Paddy	3070	3470	3630	4260	6700	7730	13	17
Davanagere	Harihara	*Kharif* Ragi	1890	2220	5170	5810	7950	9070	17	12
Davanagere	Honnali	*Kharif* Groundnut	2170	2480	6610	8170	8780	10650	14	24
Davanagere	Honnali	*Kharif* Pigeonpea	210	240	380	440	720	840	14	16
Davanagere	Honnali	*Kharif* Ragi	2070	2400	5820	6980	8780	10300	16	20
Davanagere	Jagaluru	*Kharif* Groundnut	1530	1790	2060	2390	3590	4180	17	16
Davanagere	Jagaluru	*Kharif* Ragi	2110	2450	3050	3530	6710	7470	16	16
Dharwad	Dharwad	*Kharif* Paddy	1570	1980	2570	2950	4130	4930	26	15

Taluk-wise mean crop yield data (kg ha^{-1}) under Bhoochetana II for *Kharif* 2017 in Karnataka

District	Taluk	Crop	Grain yield (kg/ha)		Fodder yield (kg/ha)		TDM yield (Kg/ha)		% Increase over FP	
			Farmers practice	Improved practice	Farmers practice	Improved practice	Farmers practice	Improved practice	Grain	Fodder
Dharwad	Kalaghatagi	*Kharif* Paddy	910	1130	1720	2030	2630	3160	24	18
Dharwad	Kundagol	*Kharif* Pearl millet	540	670	1020	1240	1560	1910	24	22
Hassan	Alur	*Kharif* Ragi	970	1160	2580	3020	4040	4790	20	17
Hassan	Arkalgud	*Kharif* Ragi	1170	1520	1910	1770	2270	3370	30	-7
Hassan	Arsikere	*Kharif* Ragi	1580	2100	750	1010	880	2030	33	35
Hassan	Belur	*Kharif* Paddy	4020	4780	4750	5320	8770	10100	19	12
Hassan	Belur	*Kharif* Ragi	1160	1460		1090	1230	2630	26	
Hassan	Channarayapattana	*Kharif* Ragi	1330	1750	1810	2390	3190	4030	32	32
Hassan	Hassan	*Kharif* Ragi	1100	1340	730	1000	1850	2500	22	37
Hassan	Holenarasipura	*Kharif* Paddy	3840	4680	3600	4140	7440	8820	22	15
Hassan	Holenarasipura	*Kharif* Ragi	960	1190	2180	2720	3610	4360	24	25
Hassan	Sakaleshpura	*Kharif* Paddy	4420	5610	2740	3420	7160	9030	27	25
Haveri	Byadgi	*Kharif* Paddy DSR	430	580	4170	4910	5810	6920	35	18
Haveri	Hangal	*Kharif* Paddy DSR	750	950	4290	5450	6430	8280	27	27
Haveri	Haveri	*Kharif* Foxtail millet (Korralu)	1310	1740	2110	2610	2720	3410	33	24
Haveri	Haveri	*Kharif* Little millet (Samalu)	1170	1390	2390	2830	2850	3410	19	18
Haveri	Hirekerur	*Kharif* Groundnut	2420	2910	4280	5350	6700	8260	20	25
Haveri	Ranibennur	*Kharif* Groundnut	1750	2090	2840	3410	4590	5500	19	20
Haveri	Savanur	*Kharif* Groundnut	1560	1840	2620	3220	4180	5060	18	23
Haveri	Savanur	*Kharif* Little millet (Samalu)	1050	1250	1910	2220	2360	2760	19	16
Haveri	Shiggaon	*Kharif* Little millet (Samalu)	540	680	1260	1490	1690	2030	26	18
Haveri	Shiggaon	*Kharif* Paddy DSR	1420	1820	3750	4460	6570	7850	28	19
Kalaburagi	Afzalpur	*Kharif* Pigeonpea	260	350	380	480	800	1010	35	26
Kalaburagi	Aland	*Kharif* Pigeonpea	210	290	470	560	810	1030	38	19

Taluk-wise mean crop yield data (kg ha^{-1}) under Bhoochetana II for *Kharif* 2017 in Karnataka

District	Taluk	Crop	Grain yield (kg/ha)		Fodder yield (kg/ha)		TDM yield (Kg/ha)		% Increase over FP	
			Farmers practice	Improved practice	Farmers practice	Improved practice	Farmers practice	Improved practice	Grain	Fodder
Kalaburagi	chincholi	*Kharif* Pigeonpea	240	310	510	640	890	1140	29	25
Kalaburagi	Chittapur	*Kharif* Pigeonpea	200	270	480	620	810	1050	35	29
Kalaburagi	Gulbarga	*Kharif* Pigeonpea	230	320	460	660	840	1170	39	43
Kalaburagi	Jewargi	*Kharif* Pigeonpea	160	200	470	600	710	930	25	28
Kalaburagi	Sedam	*Kharif* Pigeonpea	170	230	510	680	790	1050	35	33
Kodagu	Madikeri	*Kharif* Paddy	4600	5260	8590	9810	13190	15070	14	14
Kodagu	Somvarpet	*Kharif* Paddy	4830	6240	8660	10120	13490	16370	29	17
Kodagu	Virajpet	*Kharif* Paddy	4560	5690	7410	9150	11970	14840	25	23
Kolar	Kolar	*Kharif* Ragi	2340	2850	4040	5380	6810	8910	22	33
Kolar	Malur	*Kharif* Ragi	2730	3140	4240	5180	7670	9320	15	22
Kolar	Mulbagal	*Kharif* Ragi	1960	2580	5330	6100	8170	9920	32	14
Kolar	Srinivaspur	*Kharif* Ragi	2070	2640	4450	5490	7590	9910	28	23
Mandya	Srirangapatna	*Kharif* Paddy	2780	3280	7380	8910	10150	12180	18	21
Mandya	Srirangapatna	*Kharif* Ragi	1170	1350	3510	3980	5850	6750	15	13
Mysuru	H D Kote	*Kharif* Maize	1200	1510	770	960	2220	2850	26	25
Mysuru	H D Kote	*Kharif* Paddy	1700	2100	1900	2390	3600	4490	24	26
Mysuru	H D Kote	*Kharif* Ragi	730	950	710	980	1830	2320	30	38
Mysuru	Hunsuru	*Kharif* Maize	950	1150	800	1130	1960	2550	21	41
Mysuru	K R Nagara	*Kharif* Paddy	1660	1970	1740	1940	3400	3900	19	11
Mysuru	Periyapatna	*Kharif* Maize	1060	1400	990	1260	2270	2980	32	27
Mysuru	T Narasipura	*Kharif* Paddy	1390	1870	1750	2310	3140	4180	35	32
Raichur	Devadurga	*Kharif* Cotton	1500	1840					23	
Raichur	Devadurga	*Kharif* Paddy	2870	3540	3170	3840	6040	7380	23	21
Raichur	Devadurga	*Kharif* Pearl millet	1210	1470	4200	5000	5840	7060	21	19

Taluk-wise mean crop yield data (kg ha^{-1}) under Bhoochetana II for *Kharif* 2017 in Karnataka

District	Taluk	Crop	Grain yield (kg/ha)		Fodder yield (kg/ha)		TDM yield (Kg/ha)		% Increase over FP	
			Farmers practice	Improved practice	Farmers practice	Improved practice	Farmers practice	Improved practice	Grain	Fodder
Raichur	Devadurga	*Kharif* Pigeonpea	340	460	640	780	970	1240	35	22
Raichur	Lingsugur	*Kharif* Cotton	1610	1800					12	
Raichur	Lingsugur	*Kharif* Pearl millet	1470	1960	2480	3270	4510	5930	33	32
Raichur	Lingsugur	*Kharif* Pigeonpea	300	350	520	600	810	950	17	15
Raichur	Manvi	*Kharif* Cotton	1660	1840					11	
Raichur	Manvi	*Kharif* Paddy	1980	2660	2800	3470	4780	6130	34	24
Raichur	Manvi	*Kharif* Pearl millet	1590	2030	2490	3170	4660	5940	28	27
Raichur	Manvi	*Kharif* Pigeonpea	390	540	710	950	1100	1490	38	34
Raichur	Raichur	*Kharif* Cotton	1360	1630					20	
Raichur	Raichur	*Kharif* Paddy	2000	2800	2360	3080	4360	5870	40	31
Raichur	Raichur	*Kharif* Pearl millet	1320	1720	2670	3260	4430	5530	30	22
Raichur	Raichur	*Kharif* Pigeonpea	370	440	740	790	1110	1230	19	7
Raichur	Sindhnur	*Kharif* Cotton	1130	1360					20	
Raichur	Sindhnur	*Kharif* Paddy	1950	2540	3100	4060	5050	6610	30	31
Raichur	Sindhnur	*Kharif* Pearl Millet	1580	2030	3420	4350	5610	7140	28	27
Raichur	Sindhnur	*Kharif* Pigeonpea	310	450	530	640	840	1090	45	21
Ramanagara	Channapattana	*Kharif* Ragi	1120	1310	3360	4090	4750	5730	17	22
Ramanagara	Kanakapura	*Kharif* Groundnut	850	1020	780	870	1630	1890	20	12
Ramanagara	Kanakapura	*Kharif* Ragi	1530	1830	2660	3130	4680	5600	20	18
Ramanagara	Magadi	*Kharif* Ragi	1360	1580	2220	2640	4140	4880	16	19
Ramanagara	Ramanagara	*Kharif* Ragi	1750	2020	2640	3150	4980	5920	15	19
Tumakuru	Chiknayakanhalli	*Kharif* Ragi	870	1090	1140	1470	2400	3030	25	29
Tumakuru	Gubbi	*Kharif* Ragi	520	680	720	900	1470	1900	31	25
Tumakuru	Koratagere	*Kharif* Ragi	1080	1360	1500	1860	3140	3930	26	24

Taluk-wise mean crop yield data (kg ha^{-1}) under Bhoochetana II for *Kharif* 2017 in Karnataka

District	Taluk	Crop	Grain yield (kg/ha)		Fodder yield (kg/ha)		TDM yield (Kg/ha)		% Increase over FP	
			Farmers practice	Improved practice	Farmers practice	Improved practice	Farmers practice	Improved practice	Grain	Fodder
Tumakuru	Kunigal	*Kharif* Ragi	1570	2050	2350	3030	4720	6030	31	29
Tumakuru	Madhugiri	*Kharif* Groundnut	590	760	770	880	1360	1640	29	14
Tumakuru	Pavagada	*Kharif* Groundnut	480	600	980	1170	1460	1770	25	19
Tumakuru	Sira	*Kharif* Groundnut	450	590	690	810	1140	1400	31	17
Tumakuru	Tiptur	*Kharif* Ragi	1280	1680	2870	3470	4780	5900	31	21
Tumakuru	Tumakuru	*Kharif* Ragi	1100	1340	1380	1630	2950	3560	22	18
Tumakuru	Turuvekere	*Kharif* Ragi	1940	2350	2040	2620	4930	6100	21	28
Udupi	Karkala	*Kharif* Paddy	4570	5300	5020	5940	9590	11240	16	18
Udupi	Kundapura	*Kharif* Paddy	4430	5360	5990	7370	10420	12730	21	23
Udupi	Udupi	*Kharif* Paddy	3990	5230	6170	7360	10160	12590	31	19
Vijayapura	B Bagewadi	*Kharif* Pearl millet	1100	1440	1240	1630	2800	3670	31	31
Vijayapura	B Bagewadi	*Kharif* Pigeonpea	480	600	580	750	990	1370	25	29
Vijayapura	Indi	*Kharif* Pearl millet	720	950	940	1200	2070	2670	32	28
Vijayapura	Indi	*Kharif* Pigeonpea	450	590	960	1230	1570	2080	31	28
Vijayapura	Muddebihal	*Kharif* Pearl millet	980	1240	1300	1560	2900	3540	27	20
Vijayapura	Muddebihal	*Kharif* Pigeonpea	1450	1900	510	710	810	1150	31	39
Vijayapura	Sindagi	*Kharif* Pearl millet	920	1230	1270	1750	2700	3660	34	38
Vijayapura	Sindagi	*Kharif* Pigeonpea	1080	1360	590	900	950	1430	26	53
Vijayapura	Vijayapura	*Kharif* Pearl millet	1210	1560	1270	1600	2650	3470	29	26
Vijayapura	Vijayapura	*Kharif* Pigeonpea	590	760	700	880	1100	1450	29	26
Yadgir	Hunasagi	*Kharif* Pigeonpea	130	170	140	180	330	430	31	29
Yadgir	Shahapur	*Kharif* Paddy	5160	6380	2810	3260	7970	9630	24	16
Yadgir	Shahapur	*Kharif* Pigeonpea	110	140	150	200	330	420	27	33
Yadgir	Shorapur	*Kharif* Paddy	4020	5140	2630	2930	6650	8070	28	11

Taluk-wise mean crop yield data (kg ha^{-1}) under Bhoochetana II for *Kharif* 2017 in Karnataka

District	Taluk	Crop	Grain yield (kg/ha)		Fodder yield (kg/ha)		TDM yield (Kg/ha)		% Increase over FP	
			Farmers practice	Improved practice	Farmers practice	Improved practice	Farmers practice	Improved practice	Grain	Fodder
Yadgir	Yadgir	*Kharif* Paddy	4910	6120	2950	3420	7850	9540	25	16
Yadgir	Yadgir	*Kharif* Pigeonpea	150	180	170	210	380	470	20	24
Bagalkot	Bagalkot	*Kharif* Pigeonpea	840	1100	880	1210	2190	2930	31	38
Bagalkot	Hunagund	*Kharif* Pigeonpea	650	880	990	1330	2150	2830	35	34
Shivamogga	Bhadravathi	*Kharif* Paddy DSR	5620	6380	3930	4680	9550	11060	14	19
Shivamogga	Hosanagara	*Kharif* Paddy DSR	3430	4510	8020	9740	11450	14250	31	21
Shivamogga	Sagara	*Kharif* Paddy DSR	2400	4170	10050	10680	12450	14850	74	6
Shivamogga	Shikaripura	*Kharif* Paddy DSR	4300	5390	4640	5430	8940	10810	25	17
Shivamogga	Shivamogga	*Kharif* Paddy DSR	3890	4940	4350	5530	8240	10470	27	27
Shivamogga	Soraba	*Kharif* Paddy DSR	3290	4100	3630	4740	6910	8840	25	31
Shivamogga	Thirathahalli	*Kharif* Paddy DSR	3530	4420	6570	7960	10100	12380	25	21
Ballari	HB Halli	*Rabi* Chickpea	520	700	700	930	1230	1640	35	33
Ballari	Hoovina Hadagalli	*Rabi* Chickpea	740	1000	770	1060	1520	2060	35	38
Ballari	Hoovina Hadagalli	*Rabi* Sorghum	1070	1400	1870	2300	3310	4280	31	23
Ballari	Kudligi	*Rabi* Chickpea	860	1160	850	1120	1700	2280	35	32
Haveri	Hirekerur	*Rabi* Sorghum	1340	1570	1720	2090	3470	4080	17	22
Haveri	Savanur	*Rabi* Sorghum	1400	1660	1350	1670	3070	3720	19	24
Haveri	Ranebennur	*Rabi* Sorghum	1630	1920	2320	2800	4510	5550	18	21
Raichur	Devadurga	*Rabi* Chickpea	740	850	530	630	1260	1480	15	19
Raichur	Lingsugur	*Rabi* Chickpea	780	960	580	720	1360	1680	23	24
Raichur	Manvi	*Rabi* Chickpea	650	790	470	590	1120	1390	22	26
Raichur	Raichur	*Rabi* Chickpea	800	940	640	750	1440	1680	18	17
Raichur	Sindhnur	*Rabi* Chickpea	660	790	510	640	1170	1430	20	25
Koppal	Kushtagi	*Rabi* Chickpea	500	620	220	280	720	900	24	27

Taluk-wise mean crop yield data (kg ha^{-1}) under Bhoochetana II for *Kharif* 2017 in Karnataka

District	Taluk	Crop	Grain yield (kg/ha)		Fodder yield (kg/ha)		TDM yield (Kg/ha)		% Increase over FP	
			Farmers practice	Improved practice	Farmers practice	Improved practice	Farmers practice	Improved practice	Grain	Fodder
Koppal	Kushtagi	*Rabi* Sorghum	1320	1750	2220	2620	3790	4690	33	18
Koppal	Yelbarga	*Rabi* Chickpea	330	430	170	230	500	660	30	35
Koppal	Yelbarga	*Rabi* Sorghum	1210	1590	2290	2840	3770	4720	31	24
Gadag	Gadag	*Rabi* Chickpea	120	150	110	140	220	300	25	27
Gadag	Gadag	*Rabi* Sorghum	210	290	570	740	860	1150	38	30
Bagalkot	Badami	*Rabi* Chickpea	380	510	310	430	690	940	34	39
Bagalkot	Bagalkot	*Rabi* Chickpea	290	380	330	410	620	800	31	24
Bagalkot	Hungund	*Rabi* Chickpea	250	350	210	300	460	650	40	43
Bagalkot	Mudhol	*Rabi* Chickpea	220	300	210	260	430	560	36	24
Belagavi	Bailahongal	*Rabi* Sorghum	830	1050	3060	3630	4100	4950	27	19
Belagavi	Belagavi	*Rabi* Sorghum	700	930	1270	1710	2230	2960	33	35
Belagavi	Hukkeri	*Rabi* Sorghum	560	720	1360	1680	2070	2620	29	24
Belagavi	Ramdurg	*Rabi* Sorghum	920	1140	1520	1870	2650	3260	24	23
Belagavi	Savadatti	*Rabi* Sorghum	610	770	1130	1480	1880	2410	26	31

Annexure II

District-wise progress of Bhoochetana during *kharif* 2017

As indicated earlier, a cluster of 100 ha was used to demonstrate the new technologies, such as improved crop cultivars, management practices, IPM, INM, IDM, etc., in each district along with Farmer Field Schools. A number of success stories have been developed, highlighting the importance of improved management practices in realizing the economic, environmental and social benefits of different interventions.

1. Kharif 2017 Bhoochetana/Bhoosamrudhi Progress Report				
District: Bagalkot				**Name of RT: Manjunath Beedi**
				Name of SO: Shivakumar T H
				Name of DC: Sudi Raghavendra Rao
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	68	
2	Farmer Field School	6	5	
3	**Documentation**			
	A. Success Stories (No)	5	3	Improved crop management & benefits
	B. Videos (No)	3	1	
4	Using new agriculture machinery (No)	1	1	BBF, Nipping
5	Crop-wise Area Target/Sown	8000	4030	
	A. Minor millet	5500	3688	
	B. Pigeonpea (Dibbling)	1000	294	
	C. Pigeonpea (Transplanting)	500	48	
	D. Groundnut (Raised Bed)	1000	0	
6	ICRISAT varieties - Area Target/Sown			
	A. Pigeonpea (Dibbling)-ICPL87119	12	12	Flowering stage
	B. Greengram-IPM2-14	2.4	2.4	Crop dried due to moisture stress
	C. Pigeonpea-ICPL161	2	2	Harvesting stage
7	Any other technologies			
	Pigeonpea transplanting with drip irrigation	10	10	

2. Kharif 2017 Bhoochetana Progress Report				
District: Bengaluru R&U				**Name of RT: Ramu V**
				Name of SO: Swati Kini
				Name of DC: Girish Chander
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	85	
2	Farmer Field School	6	6	
3	**Documentation**			
	A. Success Stories (No)	3	2	
	B. Videos (No)	3	3	
4	Using the new agriculture Machinery (No)			
	Reaper Harvester		50	
5	Crop-wise Area Target/Sown			
	A. Ragi	38	23	
	B. Millets	2	2	
	C. Pigeonpea	30	30	
	D. Castor	24	24	
	E. Gliricidia	6	6	
6	ICRISAT varieties - Area Target/Sown			
	A. Pigeonpea ICPL- 87119	10	10	
	B. Pigeonpea ICPH- 2740	10	10	
	C. Castor DCH 177	5	5	
	D. Castor DCS 107	5	5	
7	Any other technologies			
	Aerobic compost preparation	60	60	
	Kitchen gardening	150	150	
	Transplanting in pigeonpea		0.4	

3. Kharif **2017 Bhoochetana/Bhoosamrudhi Progress Report**				
District: Bidar				**Name of RT: Manjunath**
				Name of SO: Raghavendra
				Name of DC: Gajanan LS
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement**	**Remarks**
1	Improved Technologies Demonstration	100	100	Harvesting stage
2	Farmer Field School	30	30	
3	**Documentation**			
	A. Success Stories (No)	1	0	Pigeonpea success story be
	B. Videos (No)	1	1	
4	Using the new agriculture Machinery (No)			
	Seed dibbler for sowing and gap filling	1	1	
	Nipping machine	1	1	
5	Crop-wise Area Target/Sown			
	A. Pearl millet	100	350	
	B. Pigeonpea dibbling	3000	3400	
	C. Pigeonpea transplanting	50	100	
6	ICRISAT varieties - Area Target/Sown			
	A. Pigeonpea ICPH 2740	10	10	Harvesting stage
	B. Greengram –SML 668	25	25	
	C. Blackgram –T9	20	20	
	D. Sorghum – CSV17	30	30	
	E. Soybean	25	25	
7	Any other technologies			
	A. Laser land leveler			
	B. Relay planter or multi crop zero till planter			
	c. Pigeonpea boom sprayer/reaper			

4. Kharif **2017 Bhoochetana/Bhoosamrudhi Progress Report**				
District: Chikkamagaluru				**Name of RT: Chethan KR**
				Name of SO: Akash Swamy
				Name of DC: Anantha KH
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	100	
2	Farmer Field School	07	07	
3	**Documentation**			
	A. Success Stories (No)	9	8	
	B. Videos (No)	3	3	
4	Using the new agriculture Machinery (No)	5	3	
5	Crop-wise Area Target/Sown			
	A. Paddy	70	70	
	B. Ragi	25	25	
	C. Groundnut	5	5	
6	ICRISAT varieties - Area Target/Sown			
	A. Ragi	2	2	
	B. Maize (HT – 5402)	2	2	
7	Any other technologies			

5. Kharif **2017-18 Bhoochetana Progress Report**				
District: Dharwad		**Name of RT: Basavaraj M Jagadannavar**		
		Name of SO: Maktumsab M Tahshildar		
		Name of DC: Sudi Raghavendra Rao		
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration			
	DSR Paddy	100	100	DSR PADDY
2	Farmer Field School	5	2	Remaining 3 will be covered in *rabi*
3	**Documentation**			
	A. Success Stories (No)	9	5	1) Mevina Girani: Farmer Name Saleem Peerajade-Garag 2) Farm Mechanization 3) Minor Millets as inter crop: Ishwaregouda 4) Agro-Forestry cropping method 5) BBF method sowing in chickpea
	B. Videos (No)	3	3	1) DSR 2) Mevina Girani 3) Relay planting: chickpea relayed with cotton (Ningappa Sunkad at Tadakoda, Dharwad taluk)
4	Using the new agriculture Machinery (No)			
	DSR	5	5	
	BBF	1	1	
	Reapers	1	1	
	Relay planter	1	1	
5	Crop-wise area Target/Sown			
	a. DSR Paddy	100	100	
	b. Groundnut	-	20	
	c. Minor Millets	-	25	
6	ICRISAT varieties - Area Target/Sown	-	-	
7	Any other technologies	-	-	

6. Kharif **2017 Bhoochetana/Bhoosamrudhi Progress Report**				
District: Gadag		**Name of RT: Mr. Manunath P Jangawad**		
		Name of SO: Mr. Bheemanna		
		Name of DC: Raghavendra Rao Sudi		
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	46	
2	Farmer Field School	5	0	Due to drought *kharif* BC programmes have been planned for *rabi* season – as per TO JDA; Techno promoters not recruited
3	**Documentation**			
	A. Success Stories (No)	5	5	
	B. Videos (No)			
4	ICRISAT varieties - Area Target/Sown			
	A. Pigeonpea ICPH 2740	3	3	
	B. Maize	12	12	
	C. Sorghum CSV23	10	10	
5	Any other technologies			

7. Kharif 2017 Bhoochetana/Bhoosamrudhi Progress Report				
District: Hassan		**Name of RT: Bheemanaika BR**		
		Name of SO: Swathi Kini		
		Name of DC: Kaushal K Garg		
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	40	
2	Farmer Field School	8	4	Drought affected
3	**Documentation**			
	A. Success Stories (No)	3	0	Drought affected
	B. Videos (No)	0	0	
4	Using the new agriculture Machinery (No)			
5	Crop-wise Area Target/Sown			
	A. Ragi	7867	7867	
	B. Paddy	1300	1300	
	C. Chickpea	1400	0	
	D. Minor millets	100	100	
	Total	10667	9267	
6	ICRISAT varieties - Area Target/Sown			
	A. Pigeonpea	25	12	
	B. Castor	10	5	
	C. Vegetable kits	2	1	
7	Any other technologies			

8. Bhoochetana Progress Report 2017-18				
District: Kolar		**Name of RT : Shankarappa H.V** **Name of SO: Lakshmidevi S.V.** **Name of DC: Mukund D Patil**		
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	100	Minor Millets are at the harvesting stage
2	Farmer Field School	5	4	Three sessions completed.
3	**Documentation**			
	a. Success Stories (No)	12	0	Processing
	b. Videos (No)	12	0	
4	Using the new agriculture missions (No)			
	a. Transplanting in pigeonpea	20	20	Flowering stage
	b. Raised bed technology adopted in groundnut and intercropping system	2	2	Pod formation stage
	c. Dibbling Method Planting in pigeonpea	5	5	Flowering stage
	d. Guli/Guni method of ragi cultivation	20	20	Ear head formation stage
	e. Line sowing in ragi	10	10	Ear head formation stage
5	Crop-wise Area Target/Sown			
	a. Ragi	30	30	Ear head formation stage
	b. Pigeonpea	25	25	Flowering stage
	c. Maize			
	d. Groundnut	2	2	Harvesting stage
	e. Minor Millets	10	10	Harvesting stage
	f. Castor	4	4	Crop condition is good
6	ICRISAT varieties - Area Target/Sown			
	a. Castor DCH-177	2	2	Crop condition is good
	b. Pearl Millet			

9. Kharif 2017-18 Bhoochetana/Bhoosamrudhi Progress Report				
District: Chamarajanagara				**Name of RT: Nagaraja Hegde**
				Name of SO: Vinay Krishnamurthy
				Name of DC: Srinivas Rao CH
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	48	
2	Farmer Field School	16	6	
3	**Documentation**			
	A. Success Stories (No)	5	2	
	B. Videos (No)	2	1	
4	Using the new agriculture Machinery (No)			
5	Crop-wise Area Target/Sown			
	a. Maize	41330	24329	Harvested
	b. Groundnut	13505	6269	Harvesting stage
	c. Ragi	15110	23303	Harvesting stage
	d. Pigeonpea	1080	838	Harvested
	e. Greengram	5100	3388	Harvested
6	ICRISAT varieties - Area Target/Sown			
	Groundnut ICGV91114	1.5	1.5	90 days old
	Pigeonpea ICPH2740	2	2	Harvesting stage
	Pigeonpea ICPL87119	1	1	Harvested
	Ragi MR1	3	3	Harvesting stage
	Ragi GPU28	2	2	Harvesting stage
	Castor DCH177	1	1	Harvested
	Black gram T9	1	1	Crop loss due to drought
	Black gram PU 31	2	2	Crop loss due to drought
	Greengram IPM 2-14	1	1	Crop loss due to drought
7	Any other technologies			
	Drip irrigated pigeonpea	1	1	Crop in good condition
	BBF method groundnut	1.5	1.5	90-days-old
	Pigeonpea on bunds; and intercrop in Turmeric	1	1	Harvested

10. Kharif 2017 Bhoochetana/Bhoosamrudhi Progress Report				
District: Chitradurga				**Name of RT: Dasaiah O**
				Name of SO: Sindu Singh
				Name of DC: Ch Srinivas Rao
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	80	
2	Farmer Field School	6	6	
3	**Documentation**			
	A. Success Stories (No)	6	2	
	B. Videos (No)	8	4	
4	Using the new agriculture Machinery (No)	0	0	
5	Crop-wise Area Target/Sown			
	A. Groundnut	12000	9035	
	B. Ragi	5000	3828	
	C. Pigeonpea	1000	457	
	D. Minor millets	3000	1860	
6	ICRISAT varieties - Area Target/Sown			
	A. Pigeonpea	10	10	
	B. Pearl millet	10	10	
	C. Castor	4	4	
	D. Maize	10	10	
7	Any other technologies	0	0	

11. Kharif **2017 Bhoochetana/Bhoosamrudhi Progress Report**				
District: Davanagere				**Name of RT: K R Prakash Naik**
				Name of SO: Sindhu Singh
				Name of DC: Ch Srinivasa Rao
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	100	
2	Farmer Field School	6	6	Total participants: 150
3	**Documentation**			
	A. Success Stories (No)	4	4 (in progress)	
	B. Videos (No)	12	12	
4	Using the new agriculture Machinery (No)	03	03	
5	Crop-wise Area Target/Sown			
	A. DSR Paddy	200	1056	
	B. Machine transplanting paddy	3000	78	
	C. Ragi seed drilling with transplanting	4500	5722	
	D. Minor millet	1000	808	
	E. Dibbling method - pigeonpea	500	123	
	F. BBF method - groundnut	1000	1288	
	Total	**10200**	**9075**	
6	ICRISAT varieties - Area Target/Sown (acres)			
	A. BBF groundnut	3	3	
	B. Dibbling method pigeonpea	30	30	
	C. Maize	6	6	
	Total	**39**	**39**	

12. Kharif **2017-18 Bhoochetana/Bhoosamrudhi Progress Report**				
District: Mandya				**Name of RT: Nagappa**
				Name of SO: Vinay Krishnamurthy
				Name of DC: Srinivasa Rao CH
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	24	
2	Farmer Field School	7	5	
3	**Documentation**			
	A. Success Stories (No)	5	2	Remaining will be done in coming weeks
	B. Videos (No)	2	2	
4	Using the new agriculture Machinery (No)			
5	Crop-wise Area Target/Sown			
	1. Paddy	4000	3000	Harvesting stage
	2. Ragi	3000	2500	Harvesting stage
	3. Pigeonpea	2000	1500	Harvested
	4. Maize	300	300	Harvesting stage
6	ICRISAT varieties - Area Target/Sown			
	a. Pigeonpea - ICPH 2671 (30 kg)	13.5	4	Harvested
	b. Maize -HT 5402 (30 kg)	6	3	85-days-old
7	Any other technologies			
	Mechanical Transplanting			

13. Kharif 2017 Bhoochetana/Bhoosamrudhi Progress Report				
District: Mysuru		**Name of RT: Shivalinganayaka BM**		
		Name of SO: Vinay Krishnamurthy		
		Name of DC: Srinivasa Rao CH		
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	46	
2	Farmer Field School	7	5	
3	**Documentation**			
	A. Success Stories (No)	7	2	In progress
	B. Videos (No)	7	5	In progress
4	Using the new agriculture Machinery (No)	1		
5	Crop-wise Area Target/Sown			
	A. Paddy	102650	57110	Grain-filling Stage
	B. Maize	37550	38423	Harvesting stage
	C. Ragi	40000	32175	Harvesting stage
	d. Cotton	47780	47675	Harvesting stage
	e. Cowpea	25550	32412	Harvesting stage
	f. Pigeonpea	3450	2275	Harvesting stage
6	ICRISAT varieties - Area Target/Sown			
	A. Ragi	10	7	
	A. Maize	21	16.5	
	B. Black gram	5	2	
	C. Pigeonpea	9	5	
7	Any other technologies			
	Mechanical Transplanting	9	6	

14. Kharif 2017 Bhoochetana/Bhoosamrudhi Progress Report				
District: Ramanagara		**Name of RT: Nanjundegowda K C**		
		Name of SO: Swati Kini		
		Name of DC: Ch Srinivas Rao		
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	90.6	
2	Farmer Field School	4	4	
3	**Documentation**			
	A. Success Stories (No)	1	1	
	B. Videos (No)	1	1	
4	Using the new agriculture Machinery (No)			
	Seed-cum-fertilizer drill		1-Ragi	
5	Crop-wise Area Target/Sown			
	Ragi-Cowpea 8:2		4.6 ha	
	Machine sowing		6.0 ha	
	Transplanting		3.6ha	
6	ICRISAT varieties - Area Target/Sown			
	A. Ragi - MR1	1.6	1.6	
	B. Groundnut - ICGV 91114	9.6	9.6	

15. Kharif **2017 Bhoochetana/Bhoosamrudhi Progress Report**				
District: Raichur				**Name of RT: Shankargouda**
				Name of SO: Bheemanna
				Name of DC: Gajanan LS
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	92	Pigeonpea dibbling/transplanting, nipping, and IET paddy DSR method, Pigeonpea + Greengram intercropping system
2	Farmer Field School	5	5	5 Taluks, 5 RSK selected, and FFS Class 9 lesson going on (paddy and pigeonpea)
3	**Documentation**			
	A. Success Stories (No)	5	5	
	B. Videos (No)	10	6	Nipping, Importance of Bio Fertilizers, Seed Treatment, BBF/DSR paddy sowing, Siridanya Field Day program
4	Using the new agriculture Machinery (No)	5	4	BBF, Nipping, dibbling in pigeonpea crop; and transplanting
5	Crop-wise Area Target/Sown			
	A. Pigeonpea	58545	46065	
	B. Pigeonpea (Irrigation)	3050	1080	Transplanted and dibbling
	C. Paddy	131955	22822	
	D. DSR	5600	9678	
6	ICRISAT varieties - Area Target/Sown			
	A. Pigeonpea ICPH 2740	50	50	
	B. Pigeonpea ICPH-2761	10	10	
	C. Pigeonpea ICPL-76119	5	5	
	D. Pearl millet Dhanashakti	10	10	
	E. Greengram 2-14	4	4	
7	Any other technologies			
	A.DSR Paddy	5000	3510	
	B. Land laser leveler	200	70	

16. Kharif **2017 Bhoochetana/Bhoosamrudhi Progress Report**				
District: Shimogga				**Name of RT: Sunithamma. M**
				Name of SO: Akash Swamy
				Name of DC: KH Anantha
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	59	
2	Farmer Field School	39	39	
3	**Documentation**			
	A. Success Stories (No)	2	2	
	B. Videos (No)	4	4	
4	Using the new agriculture Machinery (No)	2	2	
5	Crop-wise Area Target/Sown			
	A Paddy-DSR	2500	280.3	
	B. Minor millet	100	19.2	
	C. Paddy machine planting	700	485.3	
6	ICRISAT varieties - Area Target/Sown			
	A. Maize		10.2	
	B. Pigeonpea		9.2	
	C. Vegetable		3.3	
7	Any other technologies			

17. Kharif **2017 Bhoochetana Progress Report**				
District: Udupi				**Name of RT: Mahesh J H**
				Name of SO: Thriveni K P
				Name of DC: G Pardhasaradhi
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	33	22 ha committed
2	Farmer Field School	3	3	
3	**Documentation**			
	A. Success Stories (No)	5	1	
	B. Videos (No)	3	3	
4	Using the new agriculture Machinery (No)			
5	Crop-wise Area Target/Sown			
	A. Paddy	2000	1447	

18. Kharif **2017 Bhoochetana/Bhoosamrudhi Progress Report**				
District: Uttara Kannada				**Name of RT: Krishna Bhat**
				Name of SO: Shyamkumar
				Name of DC: Gajanan LS
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	100	
2	Farmer Field School	35	35	
3	**Documentation**			
	A. Success Stories (No)	12	4	
	B. Videos (No)	12	4	
4	Using the new agriculture Machinery (No)		2	
5	Crop-wise Area Target/Sown			
	A. Paddy DSR	4000	2650	
	B. Paddy machine transplanting	300	309	
6	ICRISAT varieties - Area Target/Sown			
	A. Maize		9.2	

19. Kharif **2017 Bhoochetana/Bhoosamrudhi Progress Report**				
District: Tumkur				**Name of RT: Somakumar.K**
				Name of SO: Prashant Kumar P
				Name of DC: Kaushal K Garg
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	78	Remaining area will be covered in summer
2	Farmer Field School	10	8	
3	**Documentation**			
	A. Success Stories (No)	5	2	
	B. Videos (No)	10	3	
4	Using the new agriculture machinery (No)			
5	Crop-wise Area Target/Sown			
	A. Groundnut	40	22	
	B. Pigeonpea	40	40	
	C. Millets	20	16	
6	ICRISAT varieties - Area Target/Sown			
	A. Pearl millet - Dhanshakti	8	8	
	B. Castor - DCH 177	16	16	
	C. Sorghum - CVH 24MF	5	5	

20. Kharif **2017 Bhoochetana/Bhoosamrudhi Progress Report**				
District: Vijayapura				**Name of RT: Shreevani Kulkarni**
				Name of SO: Shivakumar T H
				Name of DC: Sudi Raghavendrarao
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	88	
2	Farmer Field School	06	06	1) ICRISAT conducted FFS in Mukartihal village of B. Bagewadi taluk: 10 Sessions completed and 10 topics covered on pigeonpea crop 2) ICRISAT monitoring FFS in Hallur village of Muddebihal taluk: 10 Sessions completed on Pigeonpea and on Bajra intercropping 3) ICRISAT monitoring FFS in Ingaleshwar village of B. Bagewadi taluk: 10 Sessions completed; selected crops: pigeonpea 4) ICRISAT monitoring FFS in D. Ganganalli village of Sindagi taluk: 10 Sessions completed; selected crop: pigeonpea transplanting 5) ICRISAT monitoring FFS in Tikota village of Vijayapura taluk: 10 Sessions completed; selected crop: pigeonpea 6) ICRISAT monitoring FFS in Chadachan village of Indi taluk: 10 Sessions completed; selected crop: pigeonpea dibbling
3	**Documentation**			
	A. Success Stories (No)	12	10	1. Ravindra Basavaraj Belli of Mukartihal Village (B. Bagewadi taluk) Story No. 73 – Pearl millet variety comparison 2. Ravutappa Shivappa Hullur of Mukartihal (B. Bagewadi taluk) – Pearl millet wide row spacing 3. Vijayalaxmi Basappa Hokrani of Mulwad village (B. Bagewadi taluk) Story no. 89 – Millets 4. Virupaxappa Basappa Kinagi of Golasangi village (B. Bagewadi taluk) Story No. 421/3 – Pigeonpea transplanting 5. Chandrashekhar Paramanna Cheeraladinni of Taranal (Muddebihal taluk) – Pigeonpea dibbling 6. Mahammad Karkun of Hallur village (Muddebihal taluk) – Intercropping pearl millet & pigeonpea 7. Sadashiv Siddanagouda Ibrahimpur of Tarnal (Muddebihal taluk) Story No. 2/2 – Variety comparison pigeonpea 8. Hanamant Chandramappa Karjagi of Beeraladinni (B. Bagewadi taluk) Story No. 17 – Pigeonpea comparison 9. Shivayya Mallayya Hiremath of Beeraladinni (B. Bagewadi taluk) – Story No 55 – Variety comparison of pigeonpea 10. Shri Shivappa Basappa Gudadinni of Mukartihal village (B. Bagewadi taluk) – Pigeonpea variety comparison
	B. Videos (No)	04	04	1. Seed treatment 2. Nipping in pigeonpea 3. BBF landform for moisture conservation 4. Organic pesticide preparing (neem, garlic and chilli)
4	Using the new agriculture Machinery (No)	02	02	1. BBF 2. Nipping
5	Crop-wise Area Target/Sown	100	88	Total Farmers: 90
	A. Siridhanya	60	60	Adopting wide row spacing (55 ha B. Bagewadi taluk, 5 ha Muddebihal taluk): 60 Farmers
	B. Pigeonpea & Siridhanya	10	8	Intercropping (4ha B. Bagewadi taluk, 4ha Muddebihal taluk): 10 Farmers
	C. Pigeonpea transplanting	15	10	(5 ha B. Bagewadi taluk, 5 ha Muddebihal taluk): 10 Farmers
	D. Pigeonpea dibbling	15	10	(5 ha B. Bagewadi taluk, 5 ha Muddebihal taluk): 10 Farmers
6	ICRISAT varieties - Area Target/Sown			
	A. Pearl millet - Dhanashakti	2	2	2 ha Sole crop variety comparison (3 Farmers)
	B. Greengram 2-14	4	4	4 ha Sole with BBF (4 Farmers) (2 Farmers had crop loss due to moisture stress)
	C. Foxtail millet - Suryanandi	4	4	4 ha Sole crop (5 Farmers)
	D. Pigeonpea - ICPL 88039	2	2	Sole crop variety comparison (4 Farmers)
	E. Pigeonpea - ICPL 161	3	3	3 ha Sole crop variety comparison (3 Farmers)
	F. Pigeonpea - Asha ICPL 87119	2	2	Sole crop variety comparison (3 Farmers)
	G. Pigeonpea - ICPL 161 & Pearl millet Dhanashakti	2	2	Intercropping with pigeonpea (3 Farmers)
	H. Pigeonpea - ICPL 161 & Foxtail millet	1	1	Intercropping with foxtail millet (2 Farmers)
7	Any other technologies			15 ha BBF

21. Kharif 2017 Bhoochetana/Bhoosamrudhi Progress Report				
District: Haveri			**Name of RT: K Vishwanatha**	
			Name of SO: Shyamkumar	
			Name of DC: G Pardhasaradhi	
No	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	100	
2	Farmer Field School	7	7	
3	**Documentation**			
	A. Success Stories (No)	9	5	
	B. Videos (No)	3	2	
4	Using the new agriculture Machinery (No)	7	3	
5	Crop-wise Area Target/Sown			
	A. DSR Paddy	4000	4000	
	B. Groundnut	1500	639	
	C. Minor millets	500	450	
	Total	6000	5089	
6	ICRISAT varieties - Area Target/Sown			
	A. Maize - HT5402	2.5	2.5	
	B. Greengram - SML668	2	2	
	C. Pigeonpea - ICPH2740 & ICPL87119	5	5	
7	Any other technologies			
	BBF method & intercropping with pigeonpea and groundnut	1500	639	
	DSR paddy, wider space maintaining with INM	4000	4000	
	Minor millets & intercropping with pigeonpea	500	450	

22. Kharif 2017 Bhoochetana/Bhoosamrudhi Progress Report				
District: Ballari			**Name of RT: K. Ganga**	
			Name of SO: Shyamkumar	
			Name of DC: G. Pardhasaradhi	
No.	Name of the Component	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	100	
2	Farmer Field School	7	7	
3	**Documentation**			
	A. Success Stories (No)	9	Processing	
	B. Videos (No)	15	10	
4	Using the new agriculture Machinery (No)	6	Laser land leveler, DSR, Mech Paddy Trans	
5	Crop-wise Area Target/Sown			
	a. DSR	7000	6410	
	b. Mech paddy transplanting	1000	6	
	c. Pearl millet	2500	2910	
	d. Groundnut & intercropping	3000	2972	
		13500	12298	
6	ICRISAT varieties - Area Target/Sown			
	A. Pigeonpea - ICPH 2740	10	6	
	B. Pigeonpea ICPL 87119	6	3	
	C. Sorghum - CSV 23	10	10	
7	Any other technologies		Groundnut and pigeonpea intercropping, Minor millets demo, DSR, Army worm control	

23. Kharif 2017 Bhoochetana/Bhoosamrudhi Progress Report				
District: Koppal			**Name of RT: Mr. Shivakumar PH**	
			Name of SO: Mr. Bheemanna	
			Name of DC: Pardhasaradhi	
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	24	
2	Farmer Field School	5	0	
3	**Documentation**			
	A. Success Stories (No)	5	5	
	B. Videos (No)			
6	ICRISAT varieties Area Target/Sown			
	A. Pigeonpea ICPHL87119	9	9	
	B. Maize 5402	3	3	
	C. Pearl millet	7	7	

District-wise progress of Bhoochetana during *Rabi* 2017-18

24. Rabi 2017-18 Bhoochetana Progress Report				
District: Bagalkot			**Name of RT: ManjunathBeedi**	
			Name of SO: Shivakumar	
			Name of DC: Sudi Raghavendra Rao	
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	55	
2	Farmer Field School			
3	**Documentation**			
	A. Success Stories (No)	2	2	
	B. Videos (No)	1	1	
4	Using the new agriculture Machinery (No)			
5	Crop-wise Area Target/Sown			
	A. Chickpea	10000	6000	
	B. Sorghum	10000	5500	
6	ICRISAT varieties - Area Target/Sown			
	A. Chickpea - Jaki 9218	1.5	1.5	
	B. Chickpea - NBeG-47	1	1	
	C. Chickpea - JG-11	1.5	1.5	

25. Rabi 2017-18 Bhoochetana Progress Report				
District: Belagavi			**Name of RT: Manjunath Beedi**	
			Name of SO: Makthumsab Tahasildar	
			Name of DC: Sudi Raghavendra Rao	
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	58	
2	Farmer Field School	35		
3	**Documentation**			
	A. Success Stories (No)	2	1	
	B. Videos (No)	3	1	
4	Using the new agriculture Machinery (No)			
5	Crop-wise Area Target/Sown			
	A. Chickpea	8000	6020	
	B. Sorghum	14320	9362	
6	ICRISAT varieties - Area Target/Sown			
	A. Chickpea - Jaki 9218	1.5	1.5	
	B. Chickpea - NBeG-47	1	1	
	C. Chickpea - JG-11	1.5	1.5	
	D. Sorghum - M-35-1	2.5	2.5	

26. Rabi 2017-18 Bhoochetana Progress Report				
District: Bidar		**Name of RT: Manjunath**		
		Name of SO: Raghavendra		
		Name of DC: Gajanan		
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	10	50	
2	Farmer Field School	5	8	
3	**Documentation**			
	A. Success Stories (No)	1	0	
	B. Videos (No)	1	1	BBF Method
4	Using the new agriculture Machinery (No)			
	Seed dibbler for sowing and gap filling	1	1	
5	Crop-wise Area Target/Sown			
	A. Chickpea	7000	5000	
	B. Sorghum	3000	2800	
	C. Chickpea dibbling	500	350	
6	ICRISAT varieties - Area Target/Sown			
	A. JG-11	30	30	
	B. JAKI 3218	30	30	
	C. PBNS 12	20	18	
	D. M-35	50	50	
	E. CSV-23	50	50	
7	Any other technologies			

27. Rabi 2017-18 Bhoochetana Progress Report				
District: Chikkamagaluru		**Name of RT: Chethan K R**		
		Name of SO: Akash Swamy		
		Name of DC: Anantha KH		
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	500	500	
2	Farmer Field School	02	02	
3	Crop-wise Area Target/Sown			
	A. Chickpea	500	500	

28. Rabi 2017-18 Bhoochetana Progress Report				
District: Dharwad		**Name of RT: Basavaraj M Jagadannavar**		
		Name of SO: Maktumsab M Tahshildar		
		Name of DC: Sudi Raghavendra Rao		
Sl.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration			
	BBF	100	20	
	Relay planting	-	6	
	Sequence cropping paddy followed by pulses	-	80	
	Sugarcane trash cutter		20	
2	Farmer Field School	2	0	Not yet started
3	**Documentation**			
	A. Success Stories (No)	4	0	
	B. Videos (No)	0	0	
4	Using the new agriculture Machinery (No)			
	Nippers	8	8	
	Relay planter	1	1	
5	Crop wise Area Target/Sown			
	Chickpea (Machinery used)	900	1200	
6	ICRISAT varieties - Area Target/Sown			
	Chickpea a. NBeG-47	-	2	
	b. JG-11	-	2	
	c. Jaki-9218	-	2	
	Sorghum CSV-23	-	1	
	Safflower PBNS-12	-	1	
7	Any other Technologies			

29. Rabi 2017-18 Bhoochetana Progress Report				
District: Gadag		**Name of RT: Mr. Manunath P angawad**		
		Name of SO: Mr. Bheemanna		
		Name of DC: Raghavendra Rao Sudi		
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	80	60	
2	Farmer Field School	5	0	
3	**Documentation**			
	A. Success Stories (No)	10		Soon after harvest we will send the stories
	B. Videos (No)	5	0	
4	Using the new agriculture Machinery (No)			
5	Crop-wise Area Target/Sown			
6	ICRISAT varieties - Area Target/Sown			
	A. Chickpea - JG11	10	10	
	B. Chickpea - Jaki	11	11	
	C. Chickpea - NBeG47	10	10	

30. Rabi 2017-18 Bhoochetana Progress Report				
District: Davanagere		**Name of RT: K R Prakash Naik**		
		Name of SO: Sindhu Singh		
		Name of DC: Ch Srinivasa Rao		
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	100	
2	Farmer Field School	3	3	
3	**Documentation**			
	A. Success Stories (No)	6	In progress	
	B. Videos (No)	6	6	
4	Using the new agriculture Machinery (No)	01	01	
5	Crop-wise Area Target/Sown			
	A. Sorghum Quiyar Method & intercrop	4500	0	
	B. Chickpea Dibbling Method (ha)	400	400	
	C. Paddy followed by chickpea (ha)	100	0	
	D. Paddy followed by Cowpea (ha)	100	0	
6	ICRISAT varieties - Area Target/Sown			

31. Rabi 2017-18 Bhoochetana Progress Report				
District: Raichur		**Name of RT: Mr. Shankargouda**		
		Name of SO: Mr. Bheemanna		
		Name of DC: Gajanan S		
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	33	
2	Farmer Field School	5	2	
3	**Documentation**			
	A. Success Stories (No)	5	0	
	B. Videos (No)	10	0	
4	Using the new agriculture Machinery (No)			
5	ICRISAT varieties - Area Target/Sown			
	A. Chickpea - JG11	20	16	
	B. Chickpea - Jaki	20	17	

32. Rabi 2017-18 Bhoochetana Progress Report				
District: Vijayapura			**Name of RT: Shreevani Kulkarni**	
			Name of SO: Shivakumar T H	
			Name of DC: Sudi Raghavendra Rao	
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	60	
2	Farmer Field School	05	05	
3	**Documentation**			
	A. Success Stories (No)	05	02	
	B. Videos (No)	02	02	
4	Using the new agriculture Machinery (No)	02	02	BBF Nipping
5	Crop-wise Area Target/Sown			
	A. Rabi Sorghum	20	10	
	B. Chickpea	60	40	
	C. Chickpea & Rabi Sorghum Intercropping	20	10	
6	ICRISAT varieties - Area Target/Sown			
	A. Chickpea - Jaki 9218	01	01	
	B. Chickpea - NBEG 47	01	01	
7	Any other technologies		5	BBF

33. Rabi 2017-18 Bhoochetana Progress Report				
District: Haveri		**Name of RT: K Vishwanatha**		
		Name of SO: Shyamkumar		
		Name of DC: G Pardhasaradhi		
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	60	
2	Farmer Field School	0	0	
3	**Documentation**			
	A. Success Stories (No)	4	0	
	B. Videos (No)	2	0	
4	Using the new agriculture Machinery (No)			
5	Crop-wise Area Target/Sown			
	A. Rabi sorghum raised bed	4500	1700	
	B. Rabi sorghum wider space & Calcium chloride treatment	4320	3080	
	C. Paddy followed by chickpea, cowpea, greengram & black gram	2300	700	
	D. Hand dibbling in chickpea	80	40	
6	ICRISAT varieties - Area Target/Sown			
	Total	11200	6440	

34. Rabi 2017 Bhoochetana Progress Report				
District: Ballari		**Name of RT: K. Ganga**		
		Name of SO: Shyamkumar		
		Name of DC: G. Pardhasaradhi		
No.	Name of the Component	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	30	
2	Farmer Field School	0	0	
3	**Documentation**			
	A. Success Stories (No)	3	Processing	
	B. Videos (No)	2		
4	Using the new agriculture Machinery (No)			
5	Crop-wise Area Target/Sown			
	a. Chickpea hand dibbling	5000		
	b. Paddy followed chickpea	8000	3200	
	c. Paddy followed greengram	500		
	d. Sorghum raised bed	5000	500	
	e. Sorghum new technology	1120	900	
	Total	19620	4600	

35. Rabi **2017-18 Bhoochetana Progress Report**				
District: Koppal			**Name of RT: Mr. Shivakumar PH**	
			Name of SO: Mr. Bheemanna	
			Name of DC: G. Pardhasaradhi	
No.	**Name of the Component**	**Target (Ha/No)**	**Achievement (Ha/No)**	**Remarks**
1	Improved Technologies Demonstration	100	32	
2	Any other technologies			
	Precision farming	20	20	
	Vegetables shade net	2	2	