



COMPENDIUM ON NO COST AND LOW COST TECHNOLOGIES Developed by SAUs in Karnataka



ಖರ್ಚಿಲ್ಲದ ಮತ್ತು ಕಡಿಮೆ ವೆಚ್ಚದ ತಂತ್ರಜ್ಞಾನಗಳನ್ನು ಪ್ರಚಲಿತ ಪಡಿಸುವ ದಿಕ್ಕಿನಲ್ಲಿ
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1.0 Background

Karnataka Agriculture Price Commission (KAPC) made a beginning on this project with a meeting held on 16-9-2016 with the Directors of Extension and Scientists of Agriculture and Horticulture Universities in the state regarding prospects of documentation and dissemination of cost/labour saving agri. & horticulture mechanization and low cost/no cost technologies developed by State Agriculture & Horticulture Universities.

KAPC emphasised in the very initial discussions that with the current idea of doubling the farmers' income it is important to concentrate on cost reducing technologies instead of focusing only on enhancing the productivity without looking into its economic implications in terms of cost of production. Hence, it was strongly felt that the need of the hour is to identify different technologies concerning with the farm mechanization and other low cost/no cost proven technologies which were already developed by the Universities and other agencies, document them in a systematic manner and to develop a road map for dissemination. It was agreed that lack of proper documentation on benefits of the technologies in economic terms and need for involving economists to come out with tangible benefits though simple partial budgeting techniques would go a long way in effective outreach of technologies to needy farmers.

Duration of this documentation assignment was initially framed to be of six months and KAPC agreed that it would meet the recurring expenses for the same and also support the SAUs in terms of services of specialized consultants and experts identified by KAPC to achieve uniformity among different Universities in the entire process of documentation.

There was a clear consensus that though there are many technologies developed by universities their adoption is not up to expected level and also the need for including all of them in Package of Practises published by Universities has to be given due attention.

Noteworthy initiative of the State Government through the Custom Hiring Centres in providing services of farm machinery at affordable prices to farmers was stated as a relevant point at this juncture. Efforts on using these custom hiring centres for disseminating the technologies which are going to be identified and documented now was considered very significant and KAPC agreed to pursue this aspect.

Simple but proven technologies like agronomical practices and seed treatment which were not being adopted by many farmers speaks of the dissemination gap which needs to be addressed on priority. Adoption of them will definitely lead to reduction in costs at different levels of crop growth and consequently in the cost of cultivation. Due identification of the essential and avoidable operations which involves lot of cost saving has to be given due importance. There were instances of indiscriminate spraying of PP chemicals particularly in case of commercial crops; many of those pests/ diseases could be prevented through seed treatment itself with minimum cost, instead of going for spraying in later stages is a point which was deliberated in detail.

On cost minimization techniques it was agreed that there has to be focus both on cost of production and exploring if cost on some of the operations could be minimised or eliminated. Such efforts it was stated, would lead to maximization of farm income by optimizing the farming operations. It is in this context need arose for benchmarking and prioritizing the available technologies and importance of putting a clear-cut road map for achieving the said objectives. A definite course of action was agreed to and the following action points were listed:

KAPC to enter into an agreement with the Directors of Extensions of all the five universities on 'Systematic documentation and create a road map for dissemination of cost/labour saving agri. & horticulture mechanization and low cost/no cost technologies'.

Project team it was stated should be multidisciplinary consisting of extension, agronomy, engineering and agri. economics and others. Along with Principle investigator, there should be at least two Co-PIs, among them one should be from agri. Economics. The project tenure will be for six months only, and efforts should be limited to proven technologies already available with the Universities and also with the other ICAR institutes.

All the universities agreed to send the information on different technologies to KAPC. KAPC agreed to convene technical meetings to prioritize the technologies on a broader framework. Need for some sort of SWOT analysis on each of the technologies and to document the same for the benefit of end users.

Each university agreed to hold one technical workshop involving all the departments and scientists from other concerned ICAR institutes to pool the available technologies. The need for two stakeholder workshops involving farmers, one in the initial stage to get inputs on proposed assignment and second before finalization of the report was duly recognised.

All five universities agreed to finalize the roadmap for the dissemination in consultation with the consultants and experts identified by KAPC. On inclusion of information farm mechanization & low cost technologies along with economic indicators in POP (package of practice), KAPC decided to write to the secretary for further steps in that regard. It was felt that a separate chapter can be included in POP on these aspects to highlight the importance of no/low cost technologies.

It was also decided to advice State Department of Agriculture to place machinery & equipments developed by universities at custom hiring centres. On inclusion of post harvest technologies option was kept open to either to include them under the present exercise or to think of a separate assignment at a later date.

All universities were to work out a detailed road map with timeline for accomplishing the objectives of the task in consultation with the consultant identified by KAPC. KAPC decided to develop a memorandum of understanding with details tasks to be accomplished with a time line to be agreed upon and signed by each university.

2.0 Objectives

Based on a detailed deliberation on the various issues as above it was decided and agreed upon the following objectives to be accomplished with the proposed collaborative efforts of KAPC along with State Agriculture and Horticulture Universities through a participatory approach.

■ **Identification** of available mechanization and low cost technologies in agriculture and horticulture crops at SAUs along with prioritization of different **crop specific technologies**. Documenting the **prioritized technologies** in a well structured manner in consultation with the documentation consultant identified by KAPC.

■ To bring out **simple publications** both in printed and video formats on each of the technologies in Kannada consisting of feasibility, scope and bottle necks/difficulties for **effective dissemination**. Further, to demonstrate the economic viability of the technologies through simple **partial budgeting** techniques and to develop a road map for dissemination.

Regarding the budgetary support from KAPC, the agreed items included SAUs hiring a project assistant, a **technical workshop** on available technologies involving scientists/ researchers/ private companies involved in farm mechanization and farmers. Two **stakeholders' workshop** involving farmers one in the initial stage to get feedback on the assignment and second before final output were suggested. Cost of **publishing and preparation of videos**, travel and stationary expenses and TA/DA expenses of documentation consultant identified by KAPC were included in the budget. It was also agreed that if required the amount allocated for publications may be pooled since, number of publications from different universities may vary from university to university based on final selected list.

3.0 Process initiatives

Agrinsights in its role as a consultant, expected to coordinate with all the SAUs in initiating the processes, designed a checklist for compliance of action points as also to ensure fulfilment of the set objectives as above. The checklist was circulated for SAUs to report compliance and the duly filled in formats were used for deliberations and in assessment of initial progress in various meetings and discussions.

In the standardized format designed by Agrinsights there were fourteen aspects on which information on technologies was called for. In the documentation format the following particulars were to be furnished for each technology.

1. *Title of technology:*
(As originally framed in the official document of the university)
2. *Category classification:*
(Preparatory and pre planting aspects, crop production, crop protection, Harvesting and post harvest technologies)
3. *Year of release :*
(Mention year if it is in the last five years or as > 5 yrs, > 10yrs, > 15 yrs)
4. *Technology source/acknowledgements:*
(Follow the university norm of mentioning the name of Univ / Dept or acknowledging the contributors as the case may be)
5. *Technology description:*
(Describe in one or two small paragraphs the most essential aspects of the technology)
6. *Recommended practices/process:*
(Explain the technology in terms of step by step instructions to practitioners)
7. *Intended outcome and expected results:*
(On adoption of technology, what can be achieved and what are the benefits?)

8. *Specific advantages:*
(What is unique about the technology and expected advantages?)
9. *Limitations if any:*
(What are the prerequisites to realise the full benefits?)
10. *Quantification of cost reduction and other benefits for all technologies:*
 - 10.1 *Quantification of cost reduction and other benefits specific to farm machinery*
 - i. *Investment analysis*
 - ii. *Is it suitable for custom hiring or actual purchase*
 - iii. *Others, if any:*
11. *Dissemination efforts:*
12. *Adoption levels:*
13. *Inclusion in POP:*
14. *Suitability for video or other latest modes of reach out to farmers:*

The documentation format carried a specific instructions that inputs for Cost quantification, benefits and all aspects related to economics should be provided by agriculture economist in the SAU teams. Similarly, the inputs on dissemination, adoption, inclusion in POP and modes of reach out are to be taken care of by extension specialists in the teams.

For technical workshops conducted by the universities there was no specific format suggested and the SAUs were expected to list all the proposed technologies with full details for deliberation with domain specialists and subject matter experts. The package of technologies so validated were to be presented in a stakeholder workshop for user acceptability and suggestions for finalisation. However, for the stakeholder workshop a format was designed for obtaining feedback and noting the issues raised by the farmers. This format carried certain objective questions related to all the technologies. The formats in Kannada were distributed to the participant farmers for obtaining the feedback and their valid suggestions.

To facilitate SAUs to carry out partial budgeting a spread sheet format was prepared and sent to all SAUs. Four separate spread sheets were designed for the four categories viz. Crop production, Crop protection, Farm mechanisation and Post harvest technologies. In each partial budgeting case the SAUs were required to specify the technology followed by a situation analysis. In situation-1 they were suggested to give the position 'before' (without adoption) followed by situation-2 i.e. 'after' (with adoption). For the two situations they were required to provide computation of costs (debit) and benefits (credit). In the analysis part they required to arrive at net returns and compute the BC ratio. The important aspect in the format was the need for justification of costs and benefits. It was suggested to provide source/authenticity of information used in the computation through relevant research findings, university rates, feedback from farmers and market rates as applicable in individual technologies.

The various documentation process formats are furnished under **Annexure-9** for ready reference.

4.0 Process documentation

After the formalities of officialisation and communications from KAPC the project work at SAUs started around Sept./Oct.2016. The initial steps included submission of project proposals followed by a plan of work by each SAU. The initial response and commencement of work varied widely, with

the universities with the University of Agricultural Sciences, Bangalore (UASB) and University of Horticultural Sciences, Bagalkot (UHSB), catching-up immediately with University of Agricultural Sciences Raichur (UASR) joining little later. However, the University of Agricultural Sciences Dharwad (UASD), trailed behind from the very beginning. Even with the appointment of the project assistants there were much delays contributing to delay project takeoff. Further, processes of technical workshop and stakeholder workshop were carried out by universities in their own pace. Even in submission of the monthly progress reports universities adopted intervals suited to them and it lacked desired regularity on the whole there was substantial delays in various stages of the project.

Agrinsights team visited all the universities and participated in the workshops and deliberations providing their inputs in the process throughout the period. Further, regular updates were given to KAPC on project progress and more specifically in the three specific reports dated 3-09-2017, 12-12-2017 and 3-03-2018. The SAUs on completion of the process submitted their final report to KAPC and Agrinsights during Feb to May 2018 which has been taken forward in this documentation. The draft findings were presented to KAPC inhouse consultants on 4-4-2018 at Agrinsights office followed by a presentation to KAPC Chairman on 2-6-2018. The project progress log sheet along with project process documentation including the photo documentation is furnished in **Appendix-F**.

5.0 Overview on technologies

The technologies provided by the four SAUs in the state has been pooled and reviewed from the point of view of a compendium to be prepared. A detailed structuring has been attempted in terms of four categories of technologies viz. **Crop production, Crop protection, Farm mechanisation and Post harvest** aspects. The details on selected technology categories is given under **Annexure-2.0**. Within each category there has been a bifurcation of crop specific technologies and generally applicable technologies.

A technology which specifically addresses a given crop is treated as a crop specific technology. In case of a generally applicable technology its application is across a number of crops and may be in the nature of an agronomic practice or a broad based plant protection methodology or such other practices followed generally. The subcategories under generally applicable technologies in terms of those related to production, protection and mechanisation discussed here are as follows:

	Production	Protection	Mechanisation
▪ Soil/moisture conservation/enrichment	✓		✓
▪ Cropping system	✓		
▪ Land preparation	✓		
▪ Seed treatment	✓		
▪ Planting / sowing			✓
▪ Nutrient management	✓		
▪ Irrigation/fertigation	✓		
▪ Intercultivation	✓		✓
▪ Plant protection		✓	✓
▪ Use of machinery/equipment	✓		✓
▪ Harvesting			✓
▪ Post harvest and value addition			✓

The coverage under crop specific technologies is in terms of production, protection and farm mechanisation technologies for individual crops plus crop processing and value addition technologies specific to some crops and there are also few technologies given for a group of crops.

The technologies under the post harvest aspects include food processing, packing, preservation and storage.

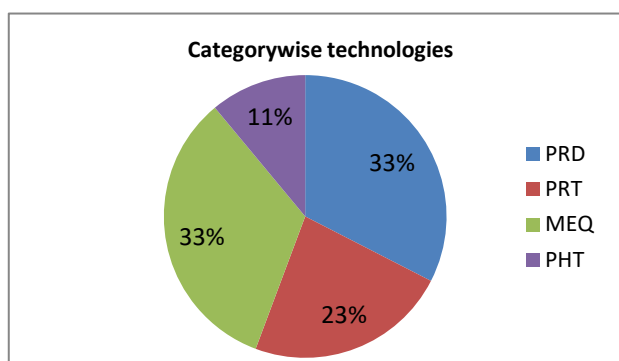
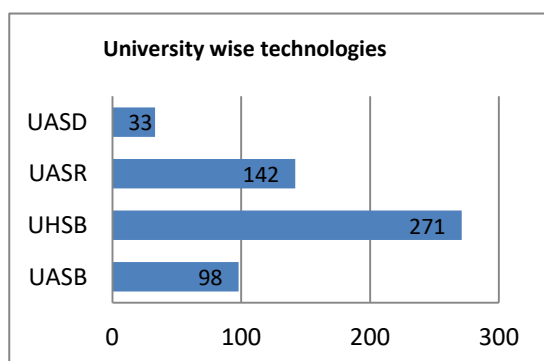
	Agro and Food processing	Packaging	Preservation and Storage
▪ CO ₂ enriched grain packaging equipment		✓	
▪ Pedal and motorised ice crushing machine			✓
▪ Large scale multi mode dryer			✓
▪ Brining Preservation of vegetables			✓
▪ Dry fig making technology			✓
▪ Papaya jam technology	✓		
▪ Aloe vera leaf powder	✓		
▪ Aloe vera pulp powder	✓		
▪ Aloe vera and Amla drink	✓		
▪ Aloe vera and Mosambi drink	✓		
▪ Fish de-boner machine	✓		

6.0 Technology documentation

The technology documentation starts with pooling of technologies. The summary of documented technologies is given under **Annexure-1**. The total number of technologies furnished by the four SAUs as a part of this project is 544 across four categories is summarised as follows:

(No. of technologies)

		UASB	UHSB	UASR	UASD	Total	
1	Crop production technologies (PRD)	23	101	40	13	177	33%
2	Crop protection technologies (PRT)	29	42	44	11	126	23%
3	Farm mechanisation technologies (MEQ)	35	100	38	8	181	33%
4	Post harvest technologies (PHT)	11	28	20	1	60	11%
TOTAL		98	271	142	33	544	
		18%	50%	26%	6%		



In furnishing the information on 544 technologies as above in the suggested documentation format by SAUs there were many limitations / short comings as follows:

Technology title was furnished in all the cases. However, the titles in some cases did not match with the **category** like for e.g. mechanization cases reported under crop production. The **year** of release given broadly relates to > 5, >10 and > 15 years and most of the technologies are old ones with good number of recent technologies also given. In UASB a large number of technologies are the university's own source while in Bagalkot the out sourced technologies are substantial.

Technology description and recommended practices were reported in an overlapping way in many cases and there were instances of information being sketchy. This information is the core of documentation and has implication in determining the efficacy of dissemination processes.

The **intended outcome and expected results** as well as limitations are important in the context of partial budgeting. Further, this information would be useful for convincing the farmers on adoption of technologies. Both in brochures and video clippings to be prepared this can add substance and hence are important. In many cases the information on this account was found to be lacking.

Investment analysis on farm machinery and related information had not been furnished to full extent except mentioning suitability for custom hiring or actual purchase. Similarly, **dissemination efforts and adoption levels** were not given in any detail, with only mention being made of a percentage adoption level without there being any area specificity or number of farmers involved. Inclusion of technologies in **POP** was mentioned in <50% of the cases with a clear indication that there is need for a large number requiring compliance on this aspects.

On the **suitability for video** or other modes of dissemination there was no review based feedback which could help an action oriented classification. However, in some cases where such documentation has already been taken up a mention has been made accordingly.

From the review as above it was found that all the furnished technologies cannot be taken forward without a proper processing and selection.

6.1 Technology prioritisation

Based on the quality and adequacy of information furnished in the technology documentation format there was a need for proper sorting and selection. Further, a need was felt to converge on technologies in terms of crop specificity or otherwise. The need for segregating the technologies as no cost and low cost figured prominently. In the low cost technologies it was felt that a threefold classification viz. low cost lowest, low cost medium and low cost satisfactory could be helpful. The technologies beyond these groupings had to be designated as cost effective technologies. Going by the objectives there was need to assign priority to the technologies in the documentation for which the following approach was adopted in prioritisation:

Priority	Technologies
P1	No cost technologies
P2	Low cost lowest
P3	Low cost medium
P4	Low cost satisfactory
P5	Cost effective technologies

As for the basis for prioritisation as above there was no way of adopting a any quantitative approach. All technologies where there were no additional costs were considered as no cost technologies which should receive the highest priority. In the next three categories, based on the review of furnished technologies a subjective judgement was made as to whether a technology is very adoptable by even a marginal farmer and if so to be considered as low cost lowest. In case of medium and satisfactory category the criteria is whether the technologies can be easily adopted by small farmers and others. All the other technologies which could not fit in here were shifted to the last category of cost effective technologies. In doing so there is a total reliance that the universities have made their best judgement on ensuring that the furnished technologies are in the no cost and low cost categories in tune with the set priorities and objectives and there are no other cases included in their list.

6.2 Rating of the technologies

The quality and adequacy of information provided in the technology documentation format was subjected to the following rating criteria.

Criteria	Max.wt	Information matrix				
Year of release	0.5	Given	Not given			
		0.5	0			
Technology source/acknowledgements	1	Given	Not given			
		1	0			
Technology description	4	Sufficient to be put on a brochure	Sufficient to understand the technology	Not sufficient		
		4	2	0		
Recommended practices/process	3	Sufficient to be followed by an unskilled person	Sufficient to be followed by a specialist	Not sufficient		
		3	1.5	0		
Intended outcome and expected results	3	Given and clear	Given clear but not sufficient	Given but not clear & not sufficient	Not given	
		3	2	1	0	
Specific advantages	2	Given and relevant	Given but not totally accurate	Not given/Not relevant		
		2	1	0		
Limitations if any	0.5	Given	Not given			
		0.5	0			
Quantification of cost reduction and other benefits for all technologies	3	Given and clear	Given but not clear or not sufficient	Not given		
		3	1	0		
Inclusion in POP	2	Yes	No			
		2	0			
Partial budgeting	1	Given	Not given			
		1	0			
Prioritization	5	P1	P2	P3	P4	P5
		5	4	3	2	1
	25					

It can be observed that the above rating integrates the prioritisation of technologies also in to its fold and thus makes it a holistic assessment. All the technologies which scored more than 50% were taken in to account for the list of selected technologies. It is relevant to note here that there were some technologies with very scanty

information or were not exactly farmer specific technologies which were precluded from the rating process itself.

It is important to note that the rating as above is not a judgement on relevance or importance of any technology nor on its authenticity. The rating is only an attempt to decide on a proper sorting of technologies which can be considered for taking it forward for dissemination process. All the technologies subject to fulfilling of the qualifying process are to be therefore considered as technologies worthy of dissemination subject to compliance on their requirement.

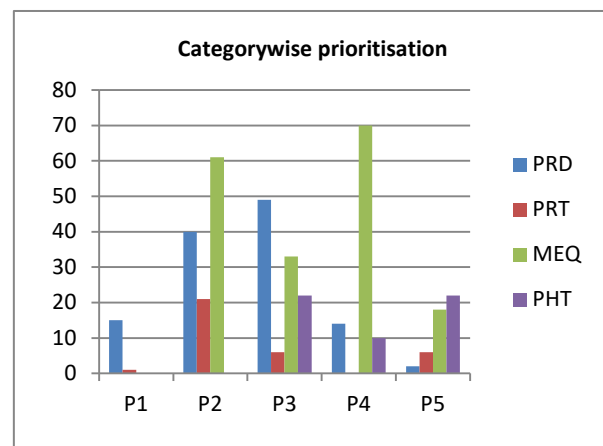
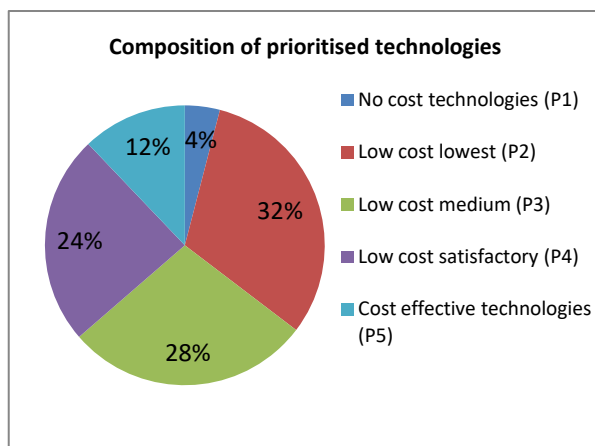
6.3 Selection of technologies

Of the 544 technologies documented as above 196 technologies have been selected based on the prioritisation and rating process referred above. The reconciliation of 348 technologies that are excluded is as follows:

▪ Excluded in prioritisation for want of adequate information or not suitable for prioritisation	154
▪ Technologies with < 50% rating	194
Total excluded technologies	348

In the first step as an outcome of prioritisation 390 technologies are shortlisted as follows:

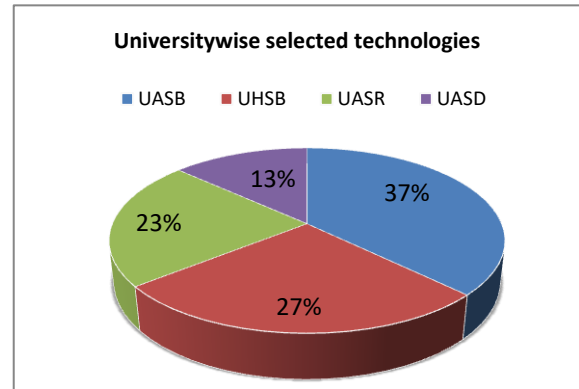
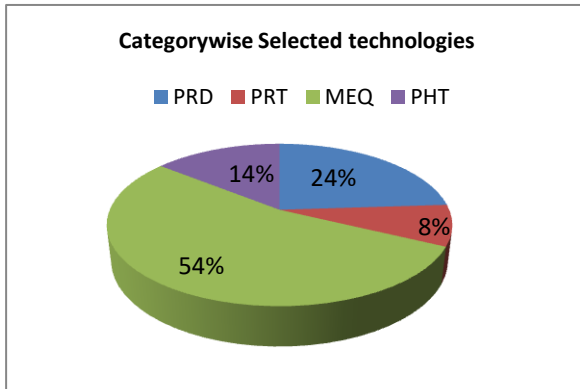
Priority	PRD	PRT	MEQ	PHT	Total	% of Total
▪ No cost technologies (P1)	15	1	-	-	16	4%
▪ Low cost lowest (P2)	40	21	61	-	122	31%
▪ Low cost medium (P3)	49	6	33	22	110	28%
▪ Low cost satisfactory (P4)	14	-	70	10	94	24%
▪ Cost effective technologies (P5)	2	6	18	22	48	12%
Total	120	34	182	54	390	100%



These 390 technologies have been subjected to the rating exercise and those technologies scoring more than 50% have been finalised as selected technologies. The details on selected and excluded technologies are as follows:

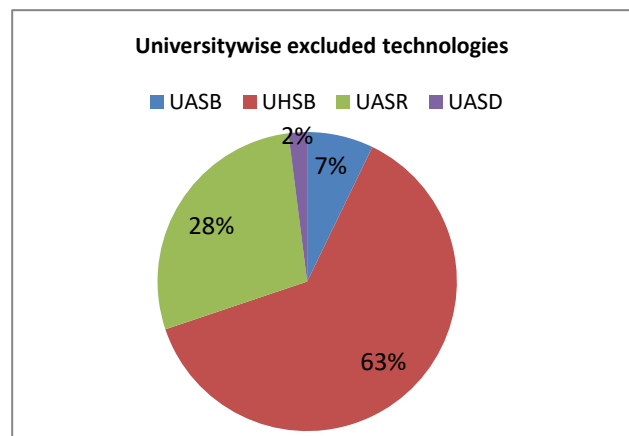
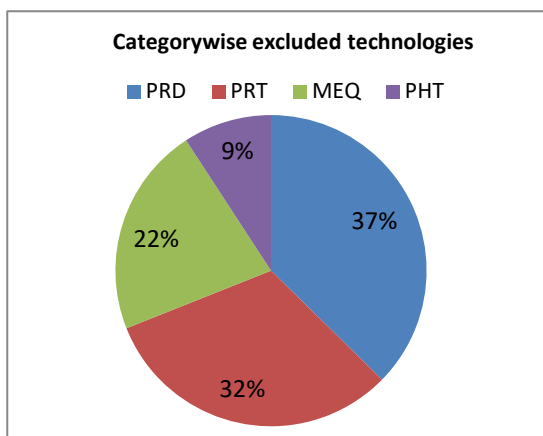
◆ **Selected technologies**

		UASB	UHSB	UASR	UASD	Total
1.0	Crop production technologies (PRD)	21	11	3	12	47
2.0	Crop protection technologies (PRT)	7		2	7	16
3.0	Farm mechanisation technologies (MEQ)	35	40	24	6	105
4.0	Post harvest technologies (PHT)	10	2	15	1	28
	TOTAL	73	53	44	26	196



◆ **Excluded technologies**

		UASB	UHSB	UASR	UASD	Total
1.0	Crop production technologies (PRD)	2	90	37	1	130
2.0	Crop protection technologies (PRT)	22	42	42	4	110
3.0	Farm mechanisation technologies (MEQ)	-	60	14	2	76
4.0	Post harvest technologies (PHT)	1	26	5	-	32
	TOTAL	25	218	98	7	348



6.4 Technology categories

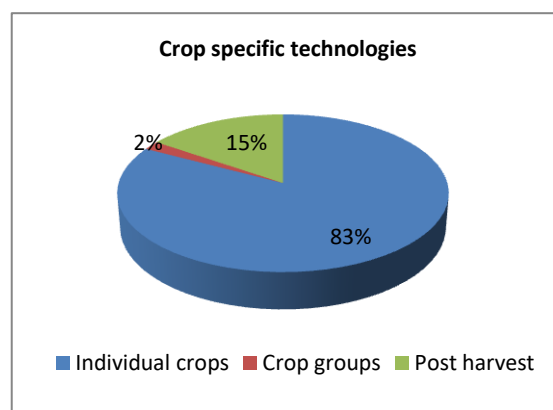
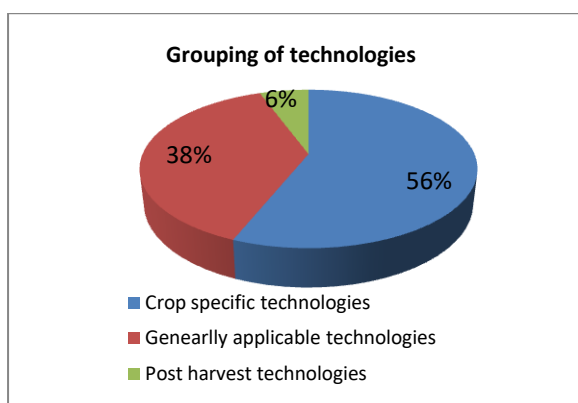
In the **selected technologies** 54% relate to farm mechanisation technologies followed by crop production technology as the next in position (24%). While the post harvest technologies take a share of 14% the least is in the case of crop protection technologies (8%). These percentages when compared with **exclusion** it is evident that the same is least in case of post harvest technologies (9%)

and farm mechanisation (22%). The higher exclusion in crop protection (32%) corroborates with lowest selection as seen above. In case of production technology the exclusion is (37%). In terms of the share of universities the highest inclusion/selection in technologies is in case of UASB (37%) followed by UHSB (27%) and UASR (22%), the least in case of UASD (13%).

6.5 Grouping of technologies

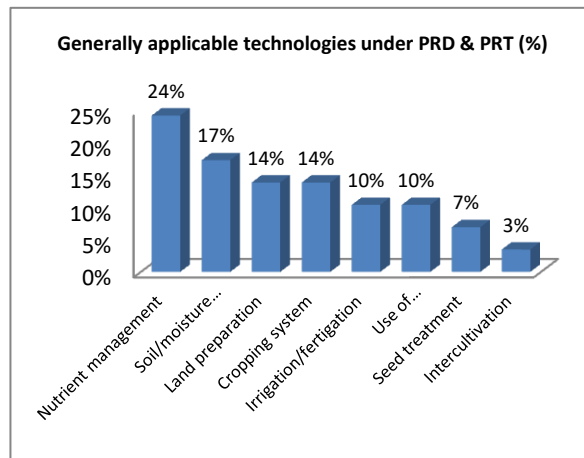
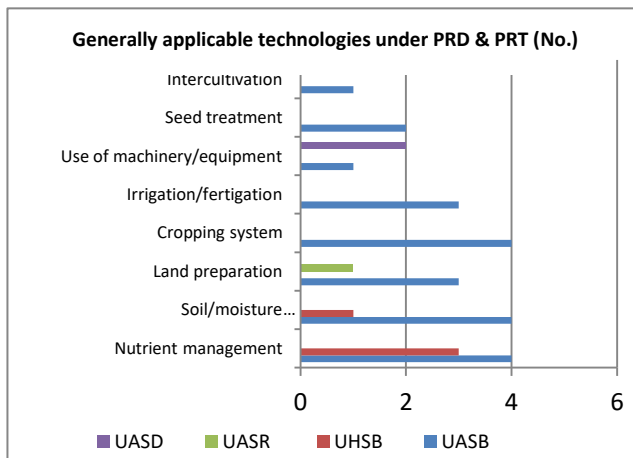
In terms of grouping the technologies crop specific technologies tops the lists with 110 listed cases the details on which is discussed later in the report. However, the groupwise breakup is given here:

		(No.of technologies)	
▪	Crop specific technologies	110	56%
	▶ Individual crops	91	
	▶ Crop groups	2	
	▶ Post harvest	17	
▪	Generally applicable technologies	75	38%
	▶ Production and protection	29	
	▶ Farm mechanisation	46	
▪	Post harvest technologies	11	6%
	Total	196	



Of the 75 generally applicable technologies there are 29 in the production and protection put together in the selected list as shown in this table:

		(No.of technologies)						
		UASB	UHSB	UASR	UASD	Total	%	Cum.%
▶	Nutrient management	4	3	-	-	7	24%	24%
▶	Soil/moisture conservation/enrichment	4	1	-	-	5	17%	41%
▶	Land preparation	3	-	1	-	4	14%	55%
▶	Cropping system	4	-	-	-	4	14%	69%
▶	Irrigation/fertigation	3	-	-	-	3	10%	79%
▶	Use of machinery/equipment	1	-	-	2	3	10%	90%
▶	Seed treatment	2	-	-	-	2	7%	97%
▶	Intercultivation	1	-	-	-	1	3%	100%
		22	4	1	2	29		
		76%	14%	3%	7%			



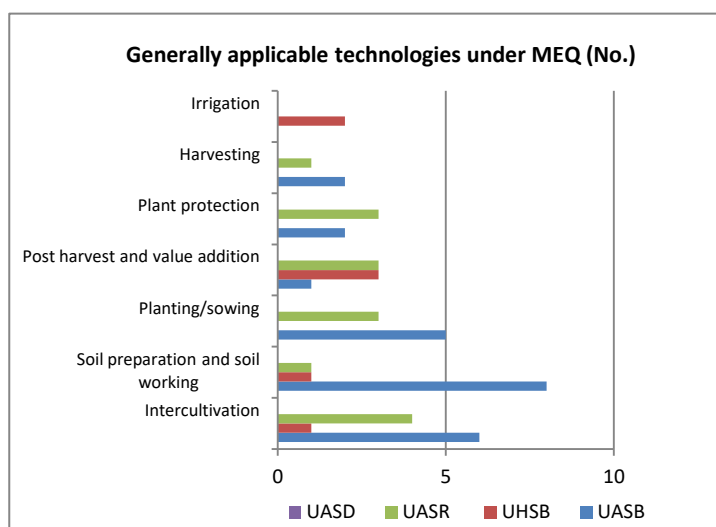
The generally applicable technologies related to nutrient management in crops is in the highest position as seen above. This along with Soil/moisture conservation/enrichment, Land preparation, Cropping system and Irrigation/fertigation constitute nearly 80% of the generally applicable technologies.

The technologies under mechanisation in the generally applicable group are as follows:

		(No. of technologies)						
		UASB	UHSB	UASR	UASD	Total	%	Cum.%
▶	Intercultivation	6	1	4	-	11	24%	24%
▶	Soil preparation and soil working	8	1	1	-	10	22%	46%
▶	Planting/sowing	5	-	3	-	8	17%	63%
▶	Post harvest and value addition	1	3	3	-	7	15%	78%
▶	Plant protection	2	-	3	-	5	11%	89%
▶	Harvesting	2	-	1	-	3	7%	96%
▶	Irrigation	0	2	-	-	2	4%	100%
		24	7	15	-	46		
		52%	15%	33%	-	100%		

It can be seen that > 60% of the technologies relate to Soil preparation and soil working, planting/sowing and intercultivation. Later, post harvest and value addition, plant protection and harvesting are in a sequence with irrigation technologies listed at the end.

In both the cases as above UASB leads in number of generally applicable technologies related to production, protection and mechanisation followed by technologies from UASR.

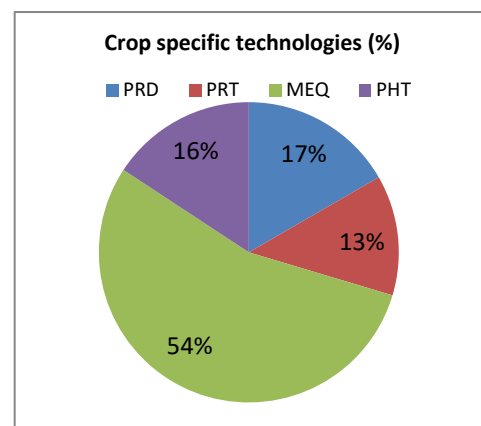
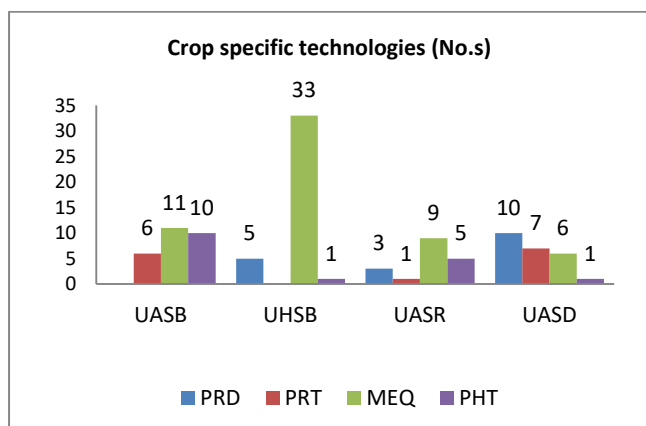


The balance list of the non crop specific technologies relates to Agro and Food processing (6 nos.), packaging (1 no.) and Preservation and Storage (4 nos.)

6.6 Crop specific technologies

There are 110 crop specific technologies of which 91 relate to specific individual crops, two technologies that relate to group of crops and 17 crop specific processing and value addition technologies. The breakup of the crop specific technologies is as follows:

		(No.of technologies)				Total	%
		UASB	UHSB	UASR	UASD		
1.0	Crop production technologies (PRD)		5	3	10	18	17%
2.0	Crop protection technologies (PRT)	6		1	7	14	13%
3.0	Farm mechanisation technologies (MEQ)	11	33	9	6	59	55%
4.0	Post harvest technologies (PHT)	10	1	5	1	17	16%
	TOTAL	27	39	18	24	108	
		25%	36%	17%	22%		



The crop specificity of technologies being highest in farm mechanisation is a notable aspect followed by production and post harvest aspects and the least being crop protection. The balance two technologies relate to crop groups viz. Nutrient management for organic production in Maize-Potato-Onion cropping system and low cost rainwater harvesting structure for fruit orchards under crop production technology category. The number of technologies vs. specific crops is shown here:

Tech. frequency	No. of tech.	No. of crops	Crops
1	17	17	Black Gram, Bengal Gram, Pepper, Banana, Pineapple, Fig, Aonla, Ber, Walnut, Tomato, Brinjal, Polebeans, Green pea, Potato, Mushroom, Honey and Starch (not crops)
2 to 3	40	18	Tur, Ginger, Ragi, Foxtail millet, Sunflower, Cotton, Chilli, Turmeric, Garlic, Mango, Safflower, Arecanut, Tamarind, Alovera, Grapes, Sapota, Apricot and Onion
5 to 10	27	4	Coconut, Maize, Tur and Ginger
> 10	24	2	Groundnut and paddy
	108	41	

The crops in the top bracket in terms of number of technologies that converge from production, protection, mechanisation and post harvest are:

(no.of technologies)

	Crop	Category				Total
		PRD	PRT	MEQ	PHT	
➤	Groundnut	2	1	7	4	14
➤	Paddy	1	2	7		10
➤	Coconut	2	1	4	2	9
➤	Maize	2	2	4		8
➤	Tur	4		1		5
➤	Ginger		1	4		5
		11	7	27	6	51

The details on generally applicable and crop specific technologies are given in **Annexure 3 and 4**.

6.7 Repetition in technologies

Under generally applicable technologies there is one repetition in UASD related to mechanised sowing. In crop specific technologies there are three technologies in UHSB that relate to coconut slicing machine, low cost ginger storage structure and mango harvester which seems to be repetitions. In UASR there is one technology related to sunflower seed harvester which is repeated. There are some technologies which are found to be repetition between UASB and UHSB under category of PHT and MEQ that relate to arecanut de-husker, tamarind de-husker and sapota/mango harvesters. The details in this regard are given in **Annexure-5**.

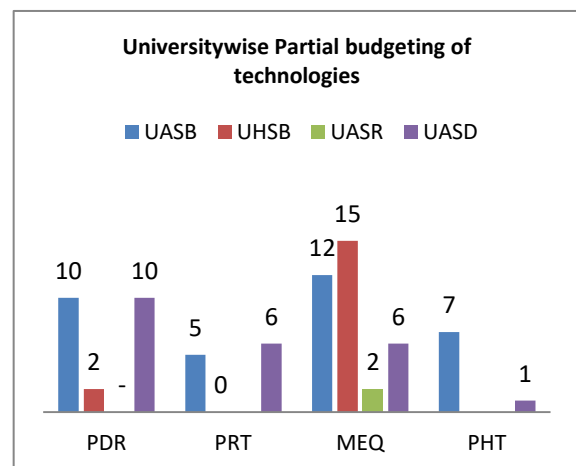
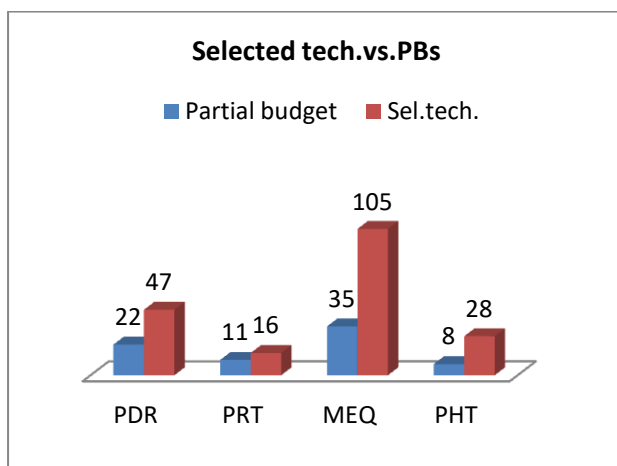
7.0 Partial budgeting of technologies

In all for 76 of the selected technologies the SAUs furnished Partial Budgeting (PB) covering the categories of production, protection, mechanisation and post harvest categories.

(no.of technologies)

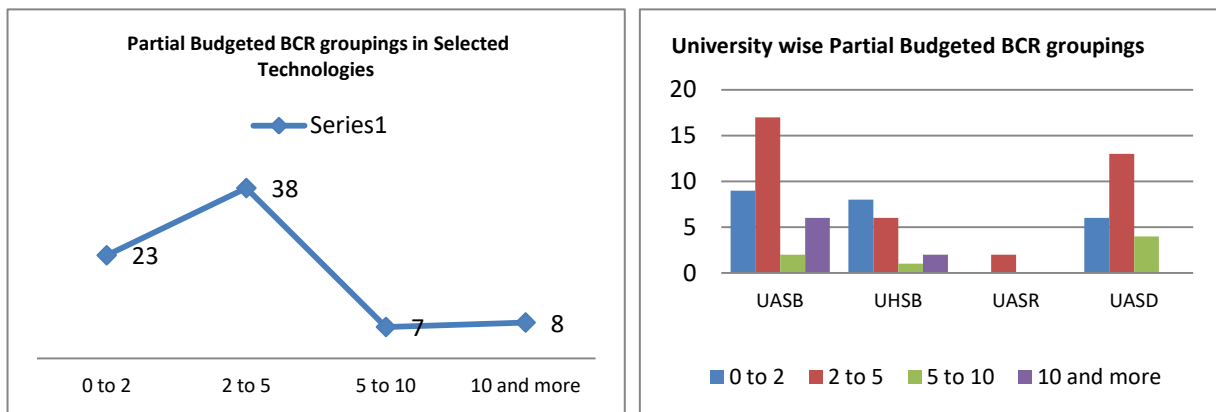
		UASB	UHSB	UASR	UASD	Total		% *
						No.PB	Sel.tech	
1.0	Crop production technologies	10	2	-	10	22	47	47%
2.0	Crop protection technologies	5	0		6	11	16	69%
3.0	Farm mechanisation technologies	12	15	2	6	35	105	33%
4.0	Post harvest technologies	7			1	8	28	29%
	TOTAL	34	17	2	23	76	196	

* % to total selected



The **benefit cost ratio (BCR) analysis** in the partial budgets prepared as above varies and a summary table of the BCR groupings is given here.

BCR	(No.of technologies)					Total	
	UASB	UHSB	UASR	UASD			
0 to 2	9	8	0	6	23		30%
2 to 5	17	6	2	13	38		50%
5 to 10	2	1	0	4	7		9%
10 and more	6	2	0	0	8		11%
Total	34	17	2	23	76		



The information on partial budgeting of technologies is given under **Annexure-6**.

8.0 Summary of findings

In giving a **background** for the project the context of the initiatives taken by the KAPC in documenting no cost and low cost technologies brought out by the four SAUs in the state has been discussed in detail. The project **objectives** have been defined and the **process initiatives** of Agrinsights as a consulting organisation have been narrated. The **process documentation** provided by the SAUs has been summarised in terms of technical and stakeholder workshops conducted and the validation process through which the technologies have been finalised.

In the **overview of technologies** the process of pooling all the technologies from the SAUs and categorising them has been explained apart from delving on technology groupings. In the categories crop production, crop protection, farm mechanisation and post harvest aspects have been given due focus. In the grouping, a clear segregation is shown between generally applicable technologies and crop specific technologies. The various sub items under the generally applicable technologies have been covered under the categories of production and protection followed by mechanisation and post harvest aspects.

In discussing the **technology documentation** the aspects covered sequentially are Technology prioritisation, Rating of the technologies, Selection of technologies. Further, the Technology categories, Grouping of technologies, Crop specific technologies and Repetition in technologies are discussed.

In the preamble part of the technology documentation the issues related to quality of information furnished by the SAUs as per the suggested documentation format has been brought forth. The constraints and limitations in the information furnished having determined the further course of documentation and selection of technologies is an aspect that has to be kept in mind. Accordingly, the following are important pointers that emerge.

- The prime focus of the KAPC initiative being on no cost and low cost technologies it is inevitable that technologies are to be **prioritised** and short listed from the pooled resource. It is towards this end the prioritisation categories of P1 to P5 have been attempted within the constraints of data limitations and an inevitable compromise on objectivity. The priority order decreases from P1 to P5 as it starts from no cost to three ranges of low cost to culminate in the last category being treated as cost effective.
- In **rating the technologies** it can be seen that on some select critical criteria the weightage assigned is substantial. The criteria assigned with higher weightage include sequentially, Prioritization (5), Technology description (4), Recommended practices/process (3), Intended outcome and expected results (3) and Quantification of cost reduction and other benefits (3) for all technologies. It can be seen that on total of 25 marks on which all technologies are rated, these five criteria put together are rightly given a due weightage of more than 70%.
- For **selection** a very reasonable cut off of technologies i.e. all those rated more than 50% have been adopted. Through this 196 technologies have been short listed which forms nearly 40 % of total pooled technologies of 544. This percentage on prioritised technologies of 390 works out to 50% . The point to be noted is that a major portion of elimination is not on account of rating but due to that has happened at prioritisation level because of scanty information in the documentation format furnished by the SAUs. If this information gap is bridged there is scope for substantial addition to short listed technologies.
- In the **categories** of selected technologies it could be observed that the mechanisation technologies are in the lead followed by production technologies. The lower number in the protection technologies is possibly due to lower number of no cost and low cost interventions available in this category. This needs deliberation and clarification from the university experts. Higher number of mechanisation technologies listed is in congruence of KAPC objective of considering mechanisation as a crucial intervention in cost reduction. It is desirable that more number of technologies in post harvest and value addition should have been available for taking it forward.
- The relevance of **grouping of technologies** should be seen in the methodology to be adopted in taking the technologies for larger outreach. While crop specific approach could be better in positioning the target group and making it more user oriented there is always need to find methods to reach out to farmers on generally applicable technologies also which could be adopted across different crops. It is satisfying to note that in the selected technologies a substantial number are crop specific technologies (nearly 60%). The crop specific post harvest technologies at 15% level shows that there needs to be more of these considering the policy priority on reducing post harvest losses and enhancing value addition.
- There are some repetitions in technologies on which there has to be discussion and reconciliation based on a consultative process between SAUs.
- Earlier KAPC had informed the Universities that partial budgeting should be 100% in case of farm mechanization and in other cases at least 30%. However the compliance in this regard shows that in case of farm mechanisation 100% coverage has not been fulfilled. Further, in case of UASR there is substantial deficit in number of partial budgeted technologies.

9.0 Road map for dissemination

While all the selected technologies can be taken forward as a compendium on low cost and no cost technologies for the benefit of farmers of the state, a select number of technologies as already decided can be used for brochure and short video clippings. Inclusion of all the selected technologies in the package of practice is also to be pursued. Based on a prorata allocation of share of selected technologies from each SAU a list for 115 technologies for brochures and 35 for video clippings (**Annexure-7**) has been suggested as follows:

■ For brochure

	Technologies	Selected No. of Technologies				
		UASB	UHSB	UASR	UASD	Total
➤	Crop Production technologies	18	4	1	7	30
➤	Crop Protection technologies	4		1	5	10
➤	Farm Mechanization technologies	16	24	15	5	60
➤	Post Harvest technologies	10		4	1	15
	Total	48	28	21	18	115

■ For video clippings

	Technologies	Selected No. of Technologies				
		UASB	UHSB	UASR	UASD	Total
➤	Crop Production technologies	2	1	1	1	5
➤	Crop Protection technologies	2		1	1	4
➤	Farm Mechanization technologies	9	6	4	3	22
➤	Post Harvest technologies	2		1	1	4
	Total	15	7	7	6	35

10.0 Conclusions and recommendations

The conclusions can be drawn on the outcome of the project in comparison with the set objectives at inception. The first objective of identification of available mechanization and low cost technologies for agriculture and horticulture crops at SAUs has been fulfilled in having documents, in all 544 technologies pooled from UASB, UHSB, UASR and UASD. The second objective mentioned is on prioritisation of different crop specific technologies. The prioritisation carried out in this compendium is twofold; one by way of segregating no cost, low cost and cost effective technologies and other is way of rating the technologies. In addition there is convergence in the objective in terms of identifying 110 crop specific technologies which can be taken forward for dissemination.

Documenting all these prioritised technologies in a well structured manner as set out in the objective has been duly complied with by Agrinsights in its role as a consultant. The next step in the process as mentioned in the objective is to bring out simple publications both in printed and video formats on each of the technologies in Kannada consisting of feasibility, scope and bottle necks/difficulties for effective dissemination. Towards this substantial efforts has gone in reviewing and rating the technologies culminating in a select list of technologies which can be taken forward for dissemination. Limitations and constraints in the excluded technologies are also abundantly made clear for possible corrective action and consequent inclusion in the later dissemination process.

Through the partial budgets properly classified and analysed an attempt has been made, despite the limitations and inadequacies in the information, to arrive at the support that can be derived for the dissemination of the technologies. Nearly 50% of the technologies being in the BCR range of 2-5 augers well with economic viability of the selected technologies and therefore can be relied upon.

As for the objective of developing a road map for dissemination through an objective process 115 technologies have been identified and suggested for brochures. Similarly, 35 technologies have been allocated to be selected from the above list for short video clippings. Going a step further, model brochure designs have been provided for reference, deliberations and finalisation (**Annexure-8**).

In the documented technologies UASB and UASR have furnished Kannada version of all technologies strictly in compliance of KAPC specification. However, in case of UHSB and UASD only English version is available. Accordingly, in the 115 technologies short listed for brochure also 28 technologies from UHSB and 18 technologies from UASD are in English which has to be referred to them for providing Kannada version.

11.0 Reference volumes on documented technologies

The details on each and every individual technology in the documentation format duly furnished by the Universities along with partial budgets and process documentation is compiled in six different volumes as an appendix to this report as follows:

		Volume
A	Crop production technologies	I
B	Crop protection technologies	II
C	Farm mechanisation technologies	III
D	Post harvest technologies	IV
E	Partial budgeting for technologies	V
F	Project process and photo documentation	VI

Compendium on No Cost and Low Cost Technologies

developed by SAUs in Karnataka

ANNEXURES

1.0	Summary of documented technologies	
2.0	Selected technology categories	
	2.1	Crop production technologies
	2.2	Crop protection technologies
	2.3	Farm mechanisation technologies
	2.4	Post harvest technologies
3.0	Generally applicable and crop specific technologies	
	3.1	Breakup of generally applicable and crop specific technologies
	3.2	Breakup of generally applicable technologies
	3.3	Categorywise generally applicable and crop specific technologies
4.0	Crop specific technologies	
	4.1	Crop list of selected technologies
	4.2	Details on selected crop specific technologies
5.0	Repetitions in selected technologies	
6.0	Partial budgeting of technologies	
	6.1	Summary of partial budgeting of technologies
	6.2	Partial budgeted BCR groupings in selected technologies
7.0	Technologies for brochure & video clippings	
	7.1	Allocation of technologies for brochure
	7.2	Allocation of technologies for video clippings
	7.3	Selected list of technologies for brochure and video clippings
8.0	Model brochure designs	
9.0	Documentation process formats	
	9.1	Check list for compliance of action points
	9.2	Technology data format
	9.3	Stakeholders feedback format
	9.4	Spread sheet for partial budgeting
	9.5	Technology rating format

Compendium on No Cost and Low Cost Technologies

Summary of Documented Technologies

(No. of technologies)

		UASB		UHSB		UASR		UASD		Overall		Total
		Sel	Excl	Sel	Excl	Sel	Excl	Sel	Excl	Sel	Excl	
1.0	Crop production technologies (PRD)	21	2	11	90	3	37	12	1	47	130	177
2.0	Crop protection technologies (PRT)	7	22		42	2	42	7	4	16	110	126
3.0	Farm mechanisation technologies (MEQ)	35		40	60	24	14	6	2	105	76	181
4.0	Post harvest technologies (PHT)	10	1	2	26	15	5	1		28	32	60
	TOTAL	73	25	53	218	44	98	26	7	196	348	544

UASB	University of Agricultural Sciences, Bangalore
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UHSB	University of Horticultural Sciences, Bagalkot
------	--

UASR	University of Agricultural Sciences, Raichur
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UASD	University of Agricultural Sciences, Dharwad
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Sel.	Selected technologies
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Excl.	Excluded technologies
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ANNEXURE - 2

Selected Technology categories

		No.of technologies	
ANNEXURE-2.1	Crop Production Technologies		47
	2.1.1	UASB	21
	2.1.2	UHSB	11
	2.1.3	UASR	3
	2.1.4	UASD	12
ANNEXURE-2.2	Crop Protection Technologies		16
	2.2.1	UASB	7
	2.2.2	UHSB	0
	2.2.3	UASR	2
	2.2.4	UASD	7
ANNEXURE-2.3	Farm Mechanisation Technologies		105
	2.3.1	UASB	35
	2.3.2	UHSB	40
	2.3.3	UASR	24
	2.3.4	UASD	6
ANNEXURE-2.4	Post Harvest Technologies		28
	2.4.1	UASB	10
	2.4.2	UHSB	2
	2.4.3	UASR	15
	2.4.4	UASD	1

ANNEXURE - 2.1

Crop Production Technologies

ANNEXURE - 2.1.1

Selected Crop Production Technologies - UASB

Tech Sl.No	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ.	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Generally applicable technologies										
▪ Land preparation										
1	UASB 1	1	1	Contour cultivation	Bng	4.0	✓	PRD	80	P1
2	UASB 2	2	2	Fall / summer ploughing	Bng		✓	PRD	72	P1
▪ Soil/moisture conservation/enrichment										
3	UASB 3	3	3	Contour bunds, live bunds	Bng		✓	PRD	72	P2
4	UASB 4	4	4	Moisture conservation furrow/dead furrow	Bng	4.5	✓	PRD	84	P1
5	UASB 5	5	5	Deep trencher for soil moisture conservation	Bng		✓	PRD	72	P2
6	UASB 6	6	12	Application of tank silt	Bng		✓	PRD	56	P2
▪ Seed treatment										
7	UASB 7	7	8	Seed hardening	Bng		✓	PRD	60	P1
8	UASB 8	8	9	Seed treatment with bio-fertilizers	Bng	32.3	✓	PRD	68	P2
▪ Nutrient management										
9	UASB 9	9	10	Soil test based fertilizer recommendation	Bng	5.1	✓	PRD	64	P2
10	UASB 10	10	11	Crop residue incorporation	Bng		✓	PRD	64	P1
11	UASB 11	11	13	Split application of nitrogenous fertilizers	Bng	12.7	✓	PRD	60	P1
12	UASB 12	12	17	Potassium spray during drought	Bng	15.7	✓	PRD	60	P2
▪ Irrigation/fertigation										
13	UASB 13	13	6	Farm pond & lining	Bng		✓	PRD	56	P3
14	UASB 14	14	7	Borewell recharge pits	Bng		✓	PRD	60	P3
15	UASB 15	15	16	Fertigation under drip irrigation ¹	Bng	2.5	✓	PRD	60	P1
▪ Intercultivation										
16	UASB 16	16	23	Herbicides in weed management	Bng	6	✓	PRD	56	P2
▪ Use of machinery/equipment										
17	UASB 17	17	14	Seed cum fertilizer drill	Bng		✓	PRD	60	P2
▪ Cropping system										
18	UASB 18	18	15	Double cropping with green manures	Bng	2.1	✓	PRD	62	P2
19	UASB 19	19	19	Contingency crops and varieties – Selection of crops and varieties according to the sowing window ²	Bng		✓	PRD	60	P1
20	UASB 20	20	20	Intercropping under drylands	Bng	13.8	✓	PRD	56	P3
21	UASB 21	21	22	Crop rotation	Bng		✓	PRD	60	P1

Note:

1 Assuming drip system is available

2 Timely sowing is no cost

Selected Crop production Technologies - UHSB

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Generally applicable technologies										
▪ Soil/moisture conservation/enrichment										
24	UHSB 1	22	6	Soil Solarization for weed control in vegetables and high-value crops	Bgk			PRD	64	P3
▪ Nutrient management										
25	UHSB 2	23	1	Phosphate Solubilizers Fungi (Trichoderma sp. and Penicillium sp.)	Bgk			PRD	56	P2
26	UHSB 3	24	7	Furrow application of lime for amelioration of acid soils	Bgk			PRD	60	P1
27	UHSB 4	25	54	Azospirillum	Bgk			PRD	50	P2
◆ Crop specific technologies - Specific to individual crops										
▪ Coconut										
28	UHSB 5	26	36	Coconut Variety: Kalpa Dhenu	Bgk			PRD	52	P3
29	UHSB 6	27	37	Coconut Variety: Kalpa Mitra	Bgk			PRD	52	P3
▪ Banana										
30	UHSB 7	28	8	Banana Shakthi (Micronutrient Mixture for Banana)	Bgk	2.7		PRD	68	P3
▪ Grapes										
31	UHSB 8	29	9	Drip Irrigation schedule for grapes vines raised on Dogridge rootstock	Bgk			PRD	60	P4
32	UHSB 9	30	10	Fertigation Schedule for Thompson Seedless vines raised on Dogridge rootstock	Bgk	21.8		PRD	52	P4
◆ Technologies for crop groups										
33	UHSB 10	31	5	Nutrient Management for Organic Maize-Potato-Onion System	Bgk			PRD	58	P3
34	UHSB 11	32	100	Low cost rainwater harvesting structure (Doba) for fruit orchard establishment in uplands.	Bgk			PRD	52	P4

Selected Crop production Technologies - UASR

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Crop specific technologies - Specific to individual crops										
▪ Foxtail millet (Navane)										
125	UASR 1	33	29	ಸುಧಾರಿತ ನವಣೆ ತಳಿಯಾದ ಹೆಚ್ ಎಮ್ ಟಿ 100-1	Rch			PRD	58	P2
▪ Tur										
126	UASR 2	34	1	ಅಧಿಕ ಇಳುವರಿ ಕೊಡುವ ರೋಗ ಮುಕ್ತ ಹೊಸ ತೋಗರಿ ತಳಿ - TS-3R	Rch			PRD	54	P2
127	UASR 3	35	2	ತೋಗರಿಯ ತಳಿ: GRG-811	Rch			PRD	54	P2

ANNEXURE - 2.1.4

Selected Crop production Technologies - UASD

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Generally applicable technologies										
▪ Use of machinery/equipment										
165	UASD 1	36	2	Mechanized sowing	Dwd			PRD	54	P2
166	UASD 2	37	3	Mechanized sowing	Dwd			PRD	60	P2
◆ Crop specific technologies - Specific to individual crops										
▪ Paddy										
167	UASD 3	38	6	Mechanized transplanting and drill sowing in paddy	Dwd	1.6	✓	PRD	64	P2
▪ Maize										
168	UASD 4	39	5	Timely irrigation at critical stages of the crop in maize	Dwd	2.2	✓	PRD	58	P1
169	UASD 5	40	8	Mechanized sowing using tractor drawn seed-cum-fertilizer drill in maize crop	Dwd	1.7		PRD	60	P3
▪ Tur										
170	UASD 6	41	1	Mechanized sowing with tractor drawn seed-cum-fertilizer drill for chickpea	Dwd	1.8		PRD	62	P2
171	UASD 7	42	1	Dry sowing of pigeon pea seeds before arrival of monsoon / in anticipation of arrival of monsoon	Dwd	4.5		PRD	78	P1
▪ Groundnut										
172	UASD 8	43	4	Not to practice intercultivation at 45 DAS onwards in groundnut	Dwd	4.7	✓	PRD	76	P1
173	UASD 9	44	11	Mechanized sowing using tractor drawn seed-cum-fertilizer drill (Groundnut)	Dwd	2		PRD	54	P4
▪ Safflower										
174	UASD 10	45	10	Mechanized sowing-cum-fertilizer application operation in safflower	Dwd	2		PRD	56	P3
▪ Cotton										
175	UASD 11	46	6	Bt cotton - Foliar spray of micronutrient combo	Dwd	7.2		PRD	64	P5
176	UASD 12	47	7	Bt cotton - Foliar spray for leaf reddening	Dwd	6		PRD	62	P5

ANNEXURE -2.2

Crop Protection Technologies

Selected Crop Protection Technologies - UASB

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Generally applicable technologies										
178	UASB 24	48	12	Management of Giant African snail	Bng		✓	PRT	60	P2
◆ Crop specific technologies - Specific to individual crops										
▪ Paddy										
179	UASB 25	49	2	Bio management of Sheath blight of Paddy	Bng	1.4	✓	PRT	52	P2
▪ Coconut										
180	UASB 26	50	29	Integrated management of ganoderma in coconut	Bng	1.6	✓	PRT	60	P2
▪ Ginger										
181	UASB 27	51	7	Management of Rhizome rot in Ginger	Bng	42.9	✓	PRT	60	P2
▪ Tomato										
182	UASB 28	52	1	To develop leaf curl virus resistant, high yielding tomato variety with consumer preference	Bng		✓	PRT	54	P2
▪ Pole beans										
183	UASB 29	53	8	Integrated management of Yellow Mosaic virus disease in Pole bean	Bng	4.4	✓	PRT	68	P2
▪ Potato										
184	UASB 30	54	3	Integrated management of late blight in potato	Bng	3.4	✓	PRT	52	P2

ANNEXURE - 2.2.3

Selected Crop Protection Technologies - UASR

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Generally applicable technologies										
249	UASR 41	55	42	ಪ್ರಮುಖ ಬೆಳೆಗಳಲ್ಲಿ ಕೀಟಗಳ ನಿರ್ವಹಣೆಗೆ ಇ-ಸ್ಯಾಪ್ ತಂತ್ರಜ್ಞಾನ	Rch			PRT	64	P1
◆ Crop specific technologies - Specific to individual crops										
▪ Brinjal										
250	UASR 42	56	27	ಬದನೆ ಬೆಳೆಯಲ್ಲಿ ರಸ ಹೀರುವ ಮತ್ತು ಕುಡಿ ಹಾಗೂ ಕಾಯಿ ಕೊರೆಯುವ ಹುಳುಗಳ ನಿಯಂತ್ರಣ	Rch		✓	PRT	60	P3

ANNEXURE - 2.2.4

Selected Crop Protection Technologies - UASD

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Crop specific technologies - Specific to individual crops										
▪ Paddy										
293	UASD 14	57	3	Chemical weed control in paddy	Dwd	3		PRT	68	P5
▪ Maize										
294	UASD 15	58	3	Chemical weed control in maize	Dwd	4.7	✓	PRT	64	P2
295	UASD 16	59	2	Mechanized first inter-cultivation in maize at around 30 DAS	Dwd			PRT	68	P3
▪ Bengal gram										
296	UASD 17	60	5	Plant protection chemicals application (Chickpea)	Dwd	2.4	✓	PRT	62	P3
▪ Groundnut										
297	UASD 18	61	2	Chemical weed control in groundnut	Dwd	5.4	✓	PRT	80	P3
▪ Cotton										
298	UASD 19	62	1	Wider row spacing for mechanized weeding	Dwd	6.5		PRT	64	P3
▪ Chilli										
299	UASD 20	63	4	Chemical weed control in chilli	Dwd	4.5		PRT	66	P5

ANNEXURE - 2.3

Farm Mechanisation Technologies

Selected Farm Mechanization Technologies - UASB

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆	Generally applicable technologies									
▪	Soil preparation and soil working									
304	UASB 53	64	1	K.M .Plough	Bng		✓	MEQ	80	P2
305	UASB 54	65	2	Bar point plough	Bng		✓	MEQ	72	P4
306	UASB 55	66	3	Bund former	Bng		✓	MEQ	76	P2
307	UASB 56	67	13	Rotavator	Bng		✓	MEQ	68	P4
308	UASB 57	68	14	M.B.Plough	Bng		✓	MEQ	68	P4
309	UASB 58	69	15	Disc plough	Bng		✓	MEQ	60	P4
310	UASB 59	70	16	Blade harrow	Bng		✓	MEQ	60	P4
311	UASB 60	71	17	Half set disc harrow	Bng	1.5	✓	MEQ	64	P4
▪	Planting/sowing									
312	UASB 61	72	5	Reversible ridger	Bng		✓	MEQ	64	P4
313	UASB 62	73	8	Multifurrow opener	Bng	1.5	✓	MEQ	72	P2
314	UASB 63	74	21	Tractor operated hole digger	Bng	1.9	✓	MEQ	72	P4
315	UASB 64	75	22	Tractor operator furrow opener	Bng		✓	MEQ	60	P4
316	UASB 65	76	32	Tractors operated bund former	Bng		✓	MEQ	60	P4
▪	Intercultivation									
317	UASB 66	77	10	Human operated weeder	Bng		✓	MEQ	68	P2
318	UASB 67	78	11	Cycle weeder	Bng	3.2	✓	MEQ	80	P2
319	UASB 68	79	12	Cultivator	Bng		✓	MEQ	68	P4
320	UASB 69	80	20	Tractor operated weed control and earthing up implement	Bng		✓	MEQ	60	P4
321	UASB 70	81	26	Self propelled weeder	Bng	2.3	✓	MEQ	60	P3
322	UASB 71	82	33	Green manure incorporator	Bng		✓	MEQ	52	P4
▪	Plant protection									
323	UASB 72	83	31	Tractors operated sprayers	Bng		✓	MEQ	68	P4
324	UASB 73	84	34	Parth hand sprayer	Bng		✓	MEQ	72	P2
▪	Harvesting									
325	UASB 74	85	25	Combine harvester	Bng	12.3	✓	MEQ	72	P4
326	UASB 75	86	35	Naveen Sickle	Bng		✓	MEQ	76	P2
▪	Post harvest and value addition									
327	UASB 76	87	27	Multi crop thresher	Bng	2.2	✓	MEQ	80	P2
▪	Irrigation									
◆	Crop specific technologies - Specific to individual crops									
▪	Paddy									
328	UASB 77	88	4	Puddler	Bng		✓	MEQ	80	P2
329	UASB 78	89	9	Drum seeder	Bng	2.7	✓	MEQ	80	P2
330	UASB 79	90	23	Paddy transplanter	Bng	1.8	✓	MEQ	72	P2
331	UASB 80	91	24	Paddy harvester	Bng	2	✓	MEQ	68	P2
▪	Ragi									
332	UASB 81	92	6	Ragi cum fertilizer seed drill	Bng		✓	MEQ	68	P2
333	UASB 82	93	18	Tractor drawn ragi seed cum fertilizer drill	Bng		✓	MEQ	52	P4
334	UASB 83	94	29	Power tiller operated ragi harvester	Bng	3.7	✓	MEQ	80	P2
▪	Groundnut									
335	UASB 84	95	7	Groundnut cum fertilizer seed drill	Bng		✓	MEQ	68	P2
336	UASB 85	96	19	Tractor drawn nine rows groundnut seed drill	Bng		✓	MEQ	60	P4
337	UASB 86	97	28	Groundnut plucker	Bng	2.9	✓	MEQ	64	P4
338	UASB 87	98	30	Groundnut harvester	Bng		✓	MEQ	68	P4

Selected Farm Mechanization Technologies - UHSB

Tech.No.	SAU.No.	Sel. No.	Unvi. Ref.No.	Technology	Unvi.	BCR	POP	Cat	Tech. Rating	Priority rating
◆ Generally applicable technologies										
▪ Soil preparation and soil working										
339	UHSB 144	99	7	Power Tiller with Rotary Attachment	Bgk	1.81		MEQ	60	P3
▪ Intercultivation										
340	UHSB 145	100	6	Animal Drawn Patela harrow	Bgk			MEQ	64	P2
▪ Post harvest and value addition										
341	UHSB 146	101	70	Fruit Grader (Manual)	Bgk			MEQ	56	P3
342	UHSB 147	102	84	Natural Convection Solar Dryer [Mini-multi rack solar dryer]	Bgk			MEQ	64	P2
343	UHSB 148	103	93	Solar Dryer	Bgk			MEQ	52	P4
▪ Irrigation										
344	UHSB 149	104	35	ಬ್ಯಾಟರಿ ಚಾಲಿತ ನ್ಯೂಮಾಟಿಕ್ ಸಿಕ್ಕೇಚರ್	Bgk			MEQ	58	P2
345	UHSB 150	105	50	Pricking machine for Petha preparation	Bgk			MEQ	64	P2
◆ Crop specific technologies - Specific to individual crops										
▪ Coconut										
346	UHSB 151	106	75	Tender Coconut Punch and Cutter	Bgk			MEQ	56	P3
347	UHSB 152	107	77	Coconut slicing machine	Bgk			MEQ	52	P4
348	UHSB 153	108	78	Coconut slicing machine	Bgk			MEQ	52	P4
349	UHSB 154	109	79	Coconut Testa Removing Machine	Bgk			MEQ	52	P4
▪ Arecanut										
350	UHSB 155	110	52	Manual Arecanut Dehusker	Bgk	1.45		MEQ	68	P2
▪ Tamarind										
351	UHSB 156	111	53	Tamarind Dehuller-Cum-Deseeder	Bgk			MEQ	60	P2
▪ Chilli										
352	UHSB 157	112	60	Barn Drying of Chillies	Bgk			MEQ	52	P4
▪ Ginger										
353	UHSB 158	113	5	Low-cost Ginger storage structure	Bgk			MEQ	52	P5
354	UHSB 159	114	61	Turmeric/Ginger Washer	Bgk	2.28		MEQ	52	P3
355	UHSB 160	115	97	Ginger peeler	Bgk	1.77		MEQ	56	P4
356	UHSB 161	116	98	Low-cost Ginger storage structure	Bgk			MEQ	52	P5
▪ Turmeric										
357	UHSB 162	117	49	Turmeric slicer	Bgk	1.92		MEQ	52	P5
358	UHSB 163	118	65	Improved Farm Level Turmeric Boiler	Bgk			MEQ	56	P3
359	UHSB 164	119	91	Peeler cum Polisher for Ginger and Turmeric	Bgk			MEQ	52	P4
▪ Garlic										
360	UHSB 165	120	90	Garlic Bulb Breaker	Bgk	2.06		MEQ	56	P4
361	UHSB 166	121	92	Garlic Clove Flaking Machine	Bgk	1.15		MEQ	56	P4
362	UHSB 167	122	94	Garlic grader	Bgk	2.12		MEQ	56	P4
▪ Aloe vera										
363	UHSB 168	123	1	Aloe Gel Extraction Machine	Bgk	24.0		MEQ	52	P5
364	UHSB 169	124	63	Hand Operated Low Cost Aloe-Vera Gel Extractor	Bgk	8.04		MEQ	60	P3

Tech.No.	SAU.No.	Sel. No.	Unvi. Ref.No.	Technology	Unvi.	BCR	POP	Cat	Tech. Rating	Priority rating
				Mango						
365	UHSB 170	125	40	Mango harvester	Bgk	3.38		MEQ	54	P2
366	UHSB 171	126	55	Mango Harvester	Bgk			MEQ	64	P2
				Sapota						
367	UHSB 172	127	56	Sapota Harvester	Bgk			MEQ	52	P2
				Pineapple						
368	UHSB 173	128	69	Pineapple Harvester	Bgk	1.18		MEQ	60	P3
				Fig						
369	UHSB 174	129	83	Pedal operated Fig Pressing Machine	Bgk	1.98		MEQ	66	P2
				Aonla						
370	UHSB 175	130	66	Aonla Pricking Machine (Manually operated)	Bgk	1.25		MEQ	52	P3
				Ber						
371	UHSB 176	131	72	Ber Grader	Bgk			MEQ	50	P3
				Walnut						
372	UHSB 177	132	87	Walnut dehuller	Bgk			MEQ	56	P3
				Apricot						
373	UHSB 178	133	82	Apricot stone grader	Bgk			MEQ	56	P2
374	UHSB 179	134	86	Dried Apricot grader	Bgk			MEQ	64	P2
				Green pea						
375	UHSB 180	135	71	Power Operated Pea Shelling Machine	Bgk			MEQ	56	P3
				Mushroom						
376	UHSB 181	136	64	Fluidized Bed Dryer for Mushroom	Bgk			MEQ	56	P3
				Honey						
377	UHSB 182	137	80	Honey processing unit	Bgk			MEQ	52	P4
				Starch						
378	UHSB 183	138	89	Mobile Starch Extraction Plant	Bgk			MEQ	64	P2

Selected Farm Mechanisation Technologies - UASR

Tech. Sl.No.	SAU. Sl.No.	Tech. Sel. No.	Unvi. Ref.No.	Technology	Univ.	BCR	POP	Cat	Tech. Rating	Tech. priority
◆ Generally applicable technologies										
▪ Soil preparation and soil working										
439	UASR 85	139	3	ಲೇಸರ್ ಲೆವೆಲರ್ ತಂತ್ರಜ್ಞಾನದಿಂದ ಭೂಮಿಯ ಸಮತಟ್ಟು ಮಾಡುವುದು:	Rch			MEQ	52	P4
▪ Planting/sowing										
440	UASR 86	140	27	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಏರುಮಡಿ ಮಾಡಿ ಬಿತ್ತುವ ಕೂರಿಗೆ	Rch			MEQ	54	P4
441	UASR 87	141	29	ಕೈಚಾಲಿತ ಕಾಳು ಊರುವ ಯಂತ್ರ:	Rch			MEQ	58	P2
442	UASR 88	142	30	ಕೈಚಾಲಿತ ಎರಡು ಸಾಲಿನ ಗೊಬ್ಬರ ಮತ್ತು ಬೀಜ ಬಿತ್ತುವ ಕೂರಿಗೆ:	Rch			MEQ	62	P2
▪ Intercultivation										
443	UASR 89	143	8	ಕೋನೋ ಟೈಪ್ ಕಳೆ ತೆಗೆಯುವ ಸಾಧನ	Rch			MEQ	50	P2
444	UASR 90	144	25	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ರೋಟರಿ ಮಾದರಿಯ ಕಳೆ ತೆಗೆಯುವ ಯಂತ್ರ	Rch			MEQ	50	P4
445	UASR 91	145	33	ಒಣಬೇಸಾಯದಲ್ಲಿ ಕಳೆ ತೆಗೆಯುವ ಹಲ್ಲಿನ ಉಪಕರಣ (ಪೆಗ್ ವೀಡರ್)	Rch			MEQ	68	P2
446	UASR 92	146	37	ಕೈ ಚಾಲಿತ ಚಕ್ರದ ಕಳೆ ತೆಗೆಯುವ ಉಪಕರಣ	Rch			MEQ	54	P2
▪ Plant protection										
447	UASR 93	147	18	ಸೌರ ಶಕ್ತಿಯನ್ನು ಬಳಸಿ ಸಿಂಪರಣಾ ಸಾಧನ	Rch			MEQ	54	P2
448	UASR 94	148	31	ಕೈ ಚಾಲಿತ ತಳ್ಳುವ ಔಷಧ ಸಿಂಪರಣೆ ಯಂತ್ರ	Rch			MEQ	60	P2
449	UASR 95	149	34	ನ್ಯಾಪ್ ಸ್ಯಾಕ್ ಸಿಂಪರಣೆ ಸ್ಪ್ರೇಯರ್	Rch			MEQ	56	P2
▪ Harvesting										
450	UASR 96	150	32	ಸುಧಾರಿತ ಕುಡುಗೋಲು:	Rch			MEQ	60	P2
▪ Post harvest and value addition										
451	UASR 97	151	9	ಸ್ವಯಂಚಾಲಿತ ಕಟಾವು ಮಾಡಿ ಸುಡು ಕಟ್ಟುವ ಯಂತ್ರ:	Rch	3.8		MEQ	64	P3
452	UASR 98	152	10	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಚೌಕಾಕಾರದ ಪೆಂಡಿ ಕಟ್ಟುವ ಯಂತ್ರ	Rch			MEQ	60	P3
453	UASR 99	153	36	ಪೈಡಲಚಾಲಿತ ರಿಕ್ವಾ ಮೇಲೆ ಅಳವಡಿಸಿದ ಬಹುಬೆಳೆ ಒಕ್ಕಣೆ ಯಂತ್ರ:	Rch			MEQ	60	P2
▪ Irrigation										
◆ Crop specific technologies - Specific to individual crops										
▪ Paddy										
454	UASR 100	154	5	ಭತ್ತದಲ್ಲಿ ಸಸಿಮಡಿಯಿಂದ ತಯಾರಿಸಿದ ಸಸಿಗಳನ್ನು ಸ್ವಯಂಚಾಲಿತ ಯಂತ್ರದಿಂದ ಭತ್ತ ನಾಟಿ ಮಾಡುವುದು	Rch			MEQ	54	P2
455	UASR 101	155	7	ಭತ್ತ ನಾಟಿ ಮಾಡುವ ಯಂತ್ರ(ಹಿಂದೆ ನಡೆಯುವ ಮಾದರಿ):	Rch		✓	MEQ	58	P2

ANNEXURE - 2.3.3

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Tech. Sl.No.	SAU. Sl.No.	Tech. Sel. No.	Univ. Ref.No.	Technology	Univ.	BCR	POP	Cat	Tech. Rating	Tech. priority
▪ Maize										
456	UASR 102	156	20	ಪೆಡಲ್ ಚಾಲಿತ ಮೆಕ್ಯೆಜೋಳದ ಒಕ್ಕಣೆ ಯಂತ್ರ:	Rch			MEQ	50	P2
457	UASR 103	157	21	ಕೈ ಚಾಲಿತ ಮೆಕ್ಯೆಜೋಳದ ಒಕ್ಕಣೆ ಯಂತ್ರ	Rch			MEQ	60	P2
▪ Groundnut										
458	UASR 104	158	12	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಶೇಂಗಾ ಕೀಳುವ ಯಂತ್ರ	Rch	2.76		MEQ	56	P4
459	UASR 105	159	14	ಶೇಂಗಾ/ ಔಡಲ ಕಾಯಿ ಒಡೆಯುವ ಸಾಧನ	Rch			MEQ	50	P3
460	UASR 106	160	15	ಶೇಂಗ ಕಾಯಿಯನ್ನು ಬೇಪಡಿಸುವ ಸಾಧನ	Rch			MEQ	54	P3
▪ Sunflower										
461	UASR 107	161	4	ಸೂರ್ಯಕಾಂತಿ ಒಕ್ಕುವ ಬಾಕು:	Rch			MEQ	50	P3
462	UASR 108	162	35	ಸೂರ್ಯಕಾಂತಿ ಒಕ್ಕುವ ಬಾಕು:	Rch			MEQ	50	P3

ANNEXURE - 2.3.4

Selected Farm Mechanisation Technologies - UASD

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Crop specific technologies - Specific to individual crops										
▪ Paddy										
477	UASD 25	163	3	Mechanized harvesting in paddy	Dwd	1.5		MEQ	58	P2
▪ Maize										
478	UASD 26	164	1	Application of organic manures 3 weeks before planting in maize crop	Dwd	2.4	✓	MEQ	60	P2
479	UASD 27	165	2	Mechanized harvesting in maize	Dwd	1.8		MEQ	58	P2
▪ Tur										
480	UASD 28	166	4	Mechanized harvesting in pigeon pea	Dwd	1.5		MEQ	78	P2
▪ Blackgram										
481	UASD 29	167		Mechanized harvesting of black gram using threshers	Dwd	2		MEQ	64	P3
▪ Safflower										
482	UASD 30	168	5	Mechanized harvesting in safflower	Dwd	2		MEQ	68	P2

ANNEXURE - 2.4

Post Harvest Technologies

ANNEXURE - 2.4.1

Selected Post Harvest Technologies - UASB

Tech. Sl.No.	SAU. Sl.No.	Tech. Sel. No.	Univ. Ref. No.	Technology	Univ.	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Crop processing and value addition										
▪ Groundnut										
485	UASB 88	169	9	3-in-1 MINI GROUNDNUT DECORTICATOR-CUM-SUNFLOWER THRESHER & MAIZE SHELLER	Bng	2	✓	PHT	80	P3
486	UASB 89	170	11	GROUNDNUT DECORTICATOR	Bng	2		PHT	60	P3
▪ Sunflower										
487	UASB 90	171	4	2-in-1 SUNFLOWER THRESHER-CUM-MAIZE SHELLER	Bng		✓	PHT	72	P3
▪ Coconut										
488	UASB 91	172	5	FOOT/ PEDAL OPERATED COCONUT DEHUSKER	Bng	1.3	✓	PHT	76	P3
489	UASB 92	173	10	COCONUT TREE CLIMBER	Bng		✓	PHT	76	P3
▪ Arecanut										
490	UASB 93	174	2	MANUAL ARECANUT DEHUSKER	Bng			PHT	72	P3
▪ Tamarind										
491	UASB 94	175	3	TAMARIND DEHULLER-CUM- DESEEDER	Bng	3		PHT	72	P3
▪ Pepper										
492	UASB 95	176	1	WHITE PEPPER PROCESSING MACHINE	Bng	1.5		PHT	80	P3
▪ Mango										
493	UASB 96	177	6	MANGO HARVESTER	Bng			PHT	64	P3
▪ Sapota										
494	UASB 97	178	7	SAPOTA HARVESTER	Bng			PHT	64	P3

ANNEXURE - 2.4.2

Selected Post Harvest Technologies - UHSB

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆	Crop processing and value addition									
▪	Onion									
496	UHSB 244	179	26	Bulk Onion Curing Unit.	Bgk			PHT	52	P3
▪	Packaging, Preservation and Storage									
497	UHSB 245	180	11	Brining Preservation of vegetables.	Bgk			PHT	50	P4

Selected Post Harvest Technologies - UASR

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Crop processing and value addition										
▪ Foxtail millet (Navane)										
524	UASR 123	181	3	ನವಣೆ ಅಕ್ಕಿ ಮಾಡುವ ಯಂತ್ರ	Rch			PHT	60	P3
525	UASR 124	182	13	ನವಣೆ ಅಕ್ಕಿ ಶೇಖರಣಾ ಪದ್ಧತಿ	Rch			PHT	68	P3
▪ Groundnut										
526	UASR 125	183	1	ಶೇಂಗಾಕಾಯಿ ಒಡೆಯುವ ಯಂತ್ರ	Rch		✓	PHT	68	P3
527	UASR 126	184	16	ಪೆಡಲ್ ಮತ್ತು ಮೋಟಾರ್ ಚಾಲಿತ ಶೇಂಗಾಕಾಯಿ ಒಡೆಯುವ ಯಂತ್ರ	Rch			PHT	52	P3
▪ Onion										
528	UASR 127	185	8	ಒಣಗಿಸಿದ ಈರುಳ್ಳಿ ತಯಾರಿಸುವ ತಂತ್ರಜ್ಞಾನ	Rch			PHT	64	P3
◆ Packaging, Preservation and Storage										
529	UASR 128	186	4	ದೊಡ್ಡ ಪ್ರಮಾಣದ ವಿವಿಧ ಶಕ್ತಿ ಮೂಲಗಳಿಂದ ಒಣಗಿಸುವ ಘಟಕ (ಮಲ್ಟಿ ಮೋಡ್ ಡ್ರೈಯರ್)	Rch			PHT	56	P4
530	UASR 129	187	5	ಇಂಗಾಲದ ಡೈಆಕ್ಸೈಡ್ ಅನಿಲ ತುಂಬಿ ಧಾನ್ಯಗಳನ್ನು ಪ್ಯಾಕ್ ಮಾಡುವ ಸಾಧನ	Rch			PHT	50	P4
531	UASR 130	188	7	ಪೆಡಲ್ ಮತ್ತು ಮೋಟಾರ್ ಚಾಲಿತ ಮಂಜುಗಡ್ಡೆ ಪುಡಿ ಮಾಡುವ ಯಂತ್ರ	Rch			PHT	50	P4
532	UASR 131	189	14	ಒಣ ಅಂಜೂರ ತಯಾರಿಸುವ ತಂತ್ರಜ್ಞಾನ	Rch			PHT	58	P4
◆ Food processing										
533	UASR 132	190	10	ಪಪ್ಪಾಯಿ ಜಾಮ್ ತಯಾರಿಸುವ ವಿಧಾನ	Rch			PHT	54	P5
534	UASR 133	191	11	ಮೀನಿನ ಮಾಂಸ ಬೇರ್ಪಡಿಸುವ ಯಂತ್ರ (ಫಿಶ್ ಡಿ-ಬೋನರ್)	Rch			PHT	58	P5
535	UASR 134	192	12	ಲೋಳೆಸರದ ಎಲೆಗಳ ಪುಡಿ	Rch			PHT	50	P5
536	UASR 135	193	17	ಲೋಳೆಸರದ ತಿರುಳಿನ ಪುಡಿ	Rch			PHT	54	P5
537	UASR 136	194	18	ಲೋಳೆಸರ ಮತ್ತು ಬೆಟ್ಟದ ನೆಲ್ಲಿಕಾಯಿಯ ಪಾನಿಯ	Rch			PHT	54	P5
538	UASR 137	195	19	ಲೋಳೆಸರ ಮತ್ತು ಮೋಸಂಬಿ ಪಾನಿಯ	Rch			PHT	54	P5

ANNEXURE - 2.4.4

Selected Post Harvest Technologies - UASD

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
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◆ Crop processing and value addition

▪	Chilli									
544	UASD 33	196	9	Grading and machine drying after harvesting in red chilli	Dwd	3		PHT	58	P3

ANNEXURE - 3.0

Generally applicable and crop specific technologies

ANNEXURE - 3.1

Breakup of generally applicable and crop specific technologies

(No. of technologies)

		UASB	UHSB	UASR	UASD	Total
➤	Generally applicable technologies	46	11	16	2	75
➤	Crop specific technologies - Specific to individual crops	17	38	13	23	91
➤	Technologies for crop groups	-	2	-	-	2
➤	Crop processing and value addition	10	1	5	1	17
➤	Packaging, Preservation & Storage	-	1	4	-	5
➤	Food processing	-	-	6	-	6
	Total	73	53	44	26	196
	% of Total	37%	27%	22%	13%	100%

ANNEXURE - 3.2

Breakup of generally applicable technologies

(No. of technologies)

	Generally applicable technologies	UASB	UHSB	UASR	UASD	Total
Crop production & Protection	Land preparation	3	-	1	-	4
	Soil/moisture conservation/enrichment	4	1	-	-	5
	Seed treatment	2	-	-	-	2
	Nutrient management	4	3	-	-	7
	Irrigation/fertigation	3	-	-	-	3
	Intercultivation	1	-	-	-	1
	Use of machinery/equipment	1	-	-	2	3
	Cropping system	4	-	-	-	4
Farm mechanisation	Soil preparation and soil working	8	1	1	-	10
	Planting/sowing	5	-	3	-	8
	Intercultivation	6	1	4	-	11
	Plant protection	2	-	3	-	5
	Harvesting	2	-	1	-	3
	Post harvest and value addition	1	3	3	-	7
	Irrigation	-	2	-	-	2
	Total	46	11	16	2	75

ANNEXURE - 3.3

Categorywise generally applicable and crop specific technologies

-
- 3.3.1** Crop Production Technologies
 - 3.3.2** Crop Protection Technologies
 - 3.3.3** Farm Mechanisation Technologies
 - 3.3.4** Post Harvest Technologies
-

ANNEXURE - 3.3.1

Categorywise generally applicable and crop specific technologies**Crop Production Technologies**

(No. of technologies)

	UASB	UHSB	UASR	UASD	Total
■ Generally applicable technologies					
▪ Land preparation	2				2
▪ Soil/moisture conservation/enrichment	4	1			5
▪ Seed treatment	2				2
▪ Nutrient management	4	3			7
▪ Irrigation/fertigation	3				3
▪ Intercultivation	1				1
▪ Use of machinery/equipment	1			2	3
▪ Cropping system	4				4
	21	4		2	27
■ Crop specific technologies - Specific to individual crops					
▪ Paddy				1	1
▪ Maize				2	2
▪ Foxtail millet (Navane)			1		1
▪ Tur			2	2	4
▪ Groundnut				2	2
▪ Safflower				1	1
▪ Cotton				2	2
▪ Coconut		2			2
▪ Banana		1			1
▪ Grapes		2			2
		5	3	10	18
■ Technologies for crop groups		2			2
Total	21	11	3	12	47
% of Total	45%	23%	6%	26%	100%

ANNEXURE - 3.3.2

Categorywise generally applicable and crop specific technologies

Crop Protection Technologies

(No.of technologies)

PRT		UASB	UHSB	UASR	UASD	Total
■	Generally applicable technologies	1		1		2
■ Crop specific technologies - Specific to individual crops						
▪	Paddy	1			1	2
▪	Maize				2	2
▪	Bengal gram				1	1
▪	Groundnut				1	1
▪	Cotton				1	1
▪	Chill				1	1
▪	Coconut	1				1
▪	Ginger	1				1
▪	Tomato	1				1
▪	Brinjal			1		1
▪	Pole beans	1				1
▪	Potato	1				1
		6		1	7	14
Total		7	0	2	7	16
% of Total		44%	0%	13%	44%	100%

Categorywise generally applicable and crop specific technologies Farm Mechanisation Technologies

		(No.of technologies)				
MEQ		UASB	UHSB	UASR	UASD	Total
■ Generally applicable technologies						
▪	Soil preparation and soil working	8	1	1		10
▪	Planting/sowing	5		3		8
▪	Intercultivation	6	1	4		11
▪	Plant protection	2		3		5
▪	Harvesting	2		1		3
▪	Post harvest and value addition	1	3	3		7
▪	Irrigation		2			2
		24	7	15		46
■ Crop specific technologies - Specific to individual crops						
▪	Paddy	4		2	1	7
▪	Maize			2	2	4
▪	Ragi	3				3
▪	Tur				1	1
▪	Blackgram				1	1
▪	Groundnut	4		3		7
▪	Sunflower			2		2
▪	Safflower				1	1
▪	Coconut		4			4
▪	Arecanut		1			1
▪	Tamarind		1			1
▪	Chilli		1			1
▪	Ginger		4			4
▪	Turmeric		3			3
▪	Garlic		3			3
▪	Aloe vera		2			2
▪	Mango		2			2
▪	Sapota		1			1
▪	Pineapple		1			1
▪	Fig		1			1
▪	Aonla		1			1
▪	Ber		1			1
▪	Walnut		1			1
▪	Apricot		2			2
▪	Green pea		1			1
▪	Mushroom		1			1
▪	Honey		1			1
▪	Starch		1			1
		11	33	9	6	59
Total		35	40	24	6	105
% of Total		33%	38%	23%	6%	100%

ANNEXURE - 3.3.4

Categorywise generally applicable and crop specific technologies Post Harvest Technologies

(No. of technologies)					
	UASB	UHSB	UASR	UASD	Total
■ Crop processing and value addition					
▪ Foxtail millet (Navane)			2		2
▪ Groundnut	2		2		4
▪ Sunflower	1				1
▪ Coconut	2				2
▪ Arecanut	1				1
▪ Tamarind	1				1
▪ Pepper	1				1
▪ Chilli				1	1
▪ Mango	1				1
▪ Sapota	1				1
▪ Onion		1	1		2
	10	1	5	1	17
▪ Packaging, Preservation & Storage		1	4		5
▪ Food processing			6		6
Total	10	2	15	1	28
% of Total	36%	7%	54%	4%	100%

ANNEXURE - 4.0

Crop specific technologies

ANNEXURE - 4.1

Crop list of selected technologies

(No.of technologies)

Crop	Category				Total
	PRD	PRT	MEQ	PHT	
➤ Groundnut	2	1	7	4	14
➤ Paddy	1	2	7		10
➤ Coconut	2	1	4	2	9
➤ Maize	2	2	4		8
➤ Tur	4		1		5
➤ Ginger		1	4		5
➤ Ragi			3		3
➤ Foxtail millet	1			2	3
➤ Sunflower			2	1	3
➤ Cotton	2	1			3
➤ Chilli		1	1	1	3
➤ Turmeric			3		3
➤ Garlic			3		3
➤ Mango			2	1	3
➤ Safflower	1		1		2
➤ Arecanut			1	1	2
➤ Tamarid			1	1	2
➤ Aloe vera			2		2
➤ Grapes	2				2
➤ Sapota			1	1	2
➤ Apricot			2		2
➤ Onion				2	2
➤ Black Gram			1		1
➤ Bengal Gram		1			1
➤ Pepper				1	1
➤ Banana	1				1
➤ Pineapple			1		1
➤ Fig			1		1
➤ Aonla			1		1
➤ Ber			1		1
➤ Walnut			1		1
➤ Tomato		1			1
➤ Brinjal		1			1
➤ Polebeans		1			1
➤ Green pea			1		1
➤ Potato		1			1
➤ Mushroom			1		1
➤ Honey			1		1
➤ Starch			1		1
Total	18	14	59	17	108

Details on selected crop specific technologies

Tech. Sl.No.	SAU.Sl. No.	Tech.Sel.No.	Unvi. ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
A Cereals										
A1 Paddy										
167	UASD 3	38	6	Mechanized transplanting and drill sowing in paddy	Dwd	1.6	✓	PRD	64	P2
179	UASB 25	49	2	Bio management of Sheath blight of Paddy	Bng	1.4	✓	PRT	52	P2
293	UASD 14	57	3	Chemical weed control in paddy	Dwd	3		PRT	68	P5
328	UASB 77	88	4	Puddler	Bng		✓	MEQ	80	P2
533	UASR 132	190	9	Drum seeder	Bng	2.7	✓	MEQ	80	P2
330	UASB 79	90	23	Paddy transplanter	Bng	1.8	✓	MEQ	72	P2
331	UASB 80	91	24	Paddy harvester	Bng	2	✓	MEQ	68	P2
454	UASR 100	154	5	ಭತ್ತದಲ್ಲಿ ಸಸಿಮಡಿಯಿಂದ ತಯಾರಿಸಿದ ಸಸಿಗಳನ್ನು ಸ್ವಯಂಚಾಲಿತ ಯಂತ್ರದಿಂದ ಭತ್ತ ನಾಟಿ ಮಾಡುವುದು	Rch			MEQ	54	P2
455	UASR 101	155	7	ಭತ್ತ ನಾಟಿ ಮಾಡುವ ಯಂತ್ರ(ಹಿಂದೆ ನಡೆಯುವ ಮಾದರಿ):	Rch		✓	MEQ	58	P2
477	UASD 25	163	3	Mechanized harvesting in paddy	Dwd	1.5		MEQ	58	P2
A3 Maize										
168	UASD 4	39	5	Timely irrigation at critical stages of the crop in maize	Dwd	2.2	✓	PRD	58	P1
169	UASD 5	40	8	Mechanized sowing using tractor drawn seed-cum-fertilizer drill in maize crop	Dwd	1.7		PRD	60	P3
294	UASD 15	58	3	Chemical weed control in maize	Dwd	4.7	✓	PRT	64	P2
295	UASD 16	59	2	Mechanized first inter-cultivation in maize at around 30 DAS	Dwd			PRT	68	P3
456	UASR 102	156	20	ಪೆಡಲ್ ಚಾಲಿತ ಮೆಕ್ಯಾಚೋಳದ ಒಕ್ಕಣೆ ಯಂತ್ರ:	Rch			MEQ	50	P2
457	UASR 103	157	21	ಕೈ ಚಾಲಿತ ಮೆಕ್ಯಾಚೋಳದ ಒಕ್ಕಣೆ ಯಂತ್ರ	Rch			MEQ	60	P2
478	UASD 26	164	1	Application of organic manures 3 weeks before planting in maize	Dwd	2.4	✓	MEQ	60	P2
479	UASD 27	165	2	Mechanized harvesting in maize	Dwd	1.8		MEQ	58	P2
B Millets										
B1 Ragi										
332	UASB 81	92	6	Ragi cum fertilizer seed drill	Bng		✓	MEQ	68	P2
333	UASB 82	93	18	Tractor drawn ragi seed cum fertilizer drill	Bng		✓	MEQ	52	P4
536	UASR 135	193	29	Power tiller operated ragi harvester	Bng	3.7	✓	MEQ	80	P2
B3 Foxtail millet (Navane)										
125	UASR 1	33	29	ಸುಧಾರಿತ ನವಣೆ ತಳಿಯಾದ ಹೆಚ್ ಎಮ್ ಟಿ 100-1	Rch			PRD	58	P2
524	UASR 123	181	3	ನವಣೆ ಅಕ್ಕಿ ಮಾಡುವ ಯಂತ್ರ	Rch			PHT	60	P3
525	UASR 124	182	13	ನವಣೆ ಅಕ್ಕಿ ಶೇಖರಣಾ ಪದ್ಧತಿ	Rch			PHT	68	P3

Details on selected crop specific technologies

Tech. Sl.No.	SAU.SI. No.	Tech.Sel .No.	Unvi. ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
C Pulses										
C1 Tur										
126	UASR 2	34	1	ಅಧಿಕ ಇಳುವರಿ ಕೊಡುವ ರೋಗ ಮುಕ್ತ ಹೊಸ ತೋಗರಿ ತಳಿ - TS-3R	Rch			PRD	54	P2
127	UASR 3	35	2	ತೋಗರಿಯ ತಳಿ: GRG-811	Rch			PRD	54	P2
170	UASD 6	41	1	Mechanized sowing with tractor drawn seed-cum-fertilizer drill for chickpea	Dwd	1.8		PRD	62	P2
171	UASD 7	42	1	Dry Sowing of pigeon pea seeds before arrival of monsoon/ in anticipation of arrival of monsoon	Dwd	4.5		PRD	78	P1
480	UASD 28	166	4	Mechanized harvesting in pigeon pea	Dwd	1.5		MEQ	78	P2
Black Gram										
481	UASD 29	166		Mechanized harvesting of black gram using threshers	Dwd	2		MEQ	64	P3
Bengal Gram										
296	UASD 17	60	5	Plant protection chemicals application(chickpea)	Dwd	2.4	✓	PRT	62	P3
D Oil seeds										
D1 Groundnut										
172	UASD 8	43	4	Not to practice intercultivation at 45 DAS onwards in groundnut	Dwd	4.7	✓	PRD	76	P1
173	UASD 9	44	11	Mechanized sowing using tractor drawn seed-cum-fertilizer drill (Groundnut)	Dwd	2		PRD	54	P4
297	UASD 18	61	2	Chemical weed control in groundnut	Dwd	5.4	✓	PRT	80	P3
335	UASB 84	95	7	Groundnut cum fertilizer seeddrill	Bng		✓	MEQ	68	P2
336	UASB 85	96	19	Tractor drawn nine rows groundnut seed drill	Bng		✓	MEQ	60	P4
337	UASB 86	97	28	Groundnut plucker	Bng	2.9	✓	MEQ	64	P4
338	UASB 87	98	30	Groundnut harvester	Bng		✓	MEQ	68	P4
458	UASR 104	158	12	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಶೇಂಗಾ ಕೀಳುವ ಯಂತ್ರ	Rch	2.76		MEQ	56	P4
459	UASR 105	159	14	ಶೇಂಗಾ/ ಔಡಲ ಕಾಯಿ ಒಡೆಯುವ	Rch			MEQ	50	P3
460	UASR 106	160	15	ಶೇಂಗ ಕಾಯಿಯನ್ನು ಬೇಪಡಿಸುವ ಸಾಧನ	Rch			MEQ	54	P3
485	UASB 88	169	9	3-in-1 MINI GROUNDNUT DECORTICATOR-CUM-SUNFLOWER THRESHER & MAIZE SHELLER	Bng	2	✓	PHT	80	P3
486	UASB 89	170	11	GROUNDNUT DECORTICATOR	Bng	2		PHT	60	P3
526	UASR 125	183	1	ಶೇಂಗಾಕಾಯಿ ಒಡೆಯುವ ಯಂತ್ರ	Rch		✓	PHT	68	P3
527	UASR 126	184	16	ಪೆಡಲ್ ಮತ್ತು ಮೋಟಾರ್ ಚಾಲಿತ ಶೇಂಗಾಕಾಯಿ ಒಡೆಯುವ ಯಂತ್ರ	Rch			PHT	52	P3
D2 Sunflower										
461	UASR 107	161	4	ಸೂರ್ಯಕಾಂತಿ ಒಕ್ಕುವ ಬಾಕು:	Rch			MEQ	50	P3
462	UASR 108	162	35	ಸೂರ್ಯಕಾಂತಿ ಒಕ್ಕುವ ಬಾಕು:	Rch			MEQ	50	P3
487	UASB 90	171	4	2-in-1 SUNFLOWER THRESHER-CUM-MAIZE SHELLER	Bng		✓	PHT	72	P3

Details on selected crop specific technologies

Tech. Sl.No.	SAU.SI. No.	Tech.Sel .No.	Unvi. ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
D4 Safflower										
174	UASD 10	45	10	Mechanized sowing-cum-fertilizer application operation in safflower	Dwd	2		PRD	56	P3
482	UASD 30	168	5	Mechanized harvesting in safflower	Dwd	2		MEQ	68	P2
E Commercial crops										
E1 Cotton										
175	UASD 11	46	6	Bt cotton - Foliar spray of micronutrient combo	Dwd	7.2		PRD	64	P5
176	UASD 12	47	7	Bt cotton - Foliar spray for leaf reddening	Dwd	6		PRD	62	P5
298	UASD 19	62	1	Wider row spacing for mechanized weeding	Dwd	6.5		PRT	64	P3
F Plantation crops										
F1 Coconut										
28	UHSB 5	26	36	Coconut Variety: Kalpa Dhenu	Bgk			PRD	52	P3
29	UHSB 6	27	37	Coconut Variety: Kalpa Mitra	Bgk			PRD	52	P3
180	UASB 26	50	29	Integrated management of ganoderma in coconut	Bng	1.6	✓	PRT	60	P2
346	UHSB 151	106	75	Tender Coconut Punch and Cutter	Bgk			MEQ	56	P3
347	UHSB 152	107	77	Coconut slicing machine	Bgk			MEQ	52	P4
348	UHSB 153	108	78	Coconut slicing machine	Bgk			MEQ	52	P4
349	UHSB 154	109	79	Coconut Testa Removing Machine	Bgk			MEQ	52	P4
488	UASB 91	172	5	FOOT/ PEDAL OPERATED COCONUT DEHUSKER	Bng	1.3	✓	PHT	76	P3
489	UASB 92	173	10	Coconut tree climber	Bng		✓	PHT	76	P3
F2 Arecanut										
350	UHSB 155	110	52	Manual Arecanut Dehusker	Bgk	1.45		MEQ	68	P2
490	UASB 93	174	2	MANUAL ARECANUT DEHUSKER	Bng			PHT	72	P3
G Tree crops										
G1 Tamarind										
351	UHSB 156	111	53	Tamarind Dehuller-Cum-Deseeder	Bgk			MEQ	60	P2
491	UASB 94	175	3	TAMARIND DEHULLER-CUM-DESEEDER	Bng	3		PHT	72	P3
H Spices										
H1 Chilli										
299	UASD 20	63	4	Chemical weed control in chilli	Dwd	4.5		PRT	66	P5
352	UHSB 157	112	60	Barn Drying of Chillies	Bgk			MEQ	52	P4
544	UASD 33	196	9	Grading and machine drying after harvesting in red chilli	Dwd	3		PHT	58	P3
H2 Pepper										
492	UASB 95	176	1	WHITE PEPPER PROCESSING MACHINE	Bng	1.5		PHT	80	P3
H3 Ginger										
181	UASB 27	51	7	Management of Rhizome rot in Ginger	Bng	42.9	ü	PRT	60	P2
353	UHSB 158	113	5	Low-cost Ginger storage structure	Bgk			MEQ	52	P5
354	UHSB 159	114	61	Turmeric/Ginger Washer	Bgk	2.28		MEQ	52	P3
355	UHSB 160	115	97	Ginger peeler	Bgk	1.77		MEQ	56	P4
356	UHSB 161	116	98	Low-cost Ginger storage structure	Bgk			MEQ	52	P5

Details on selected crop specific technologies

Tech. Sl.No.	SAU.SI. No.	Tech.Sel .No.	Unvi. ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
H4 Turmeric										
357	UHSB 162	117	49	Turmeric slicer	Bgk			MEQ	52	P5
358	UHSB 163	118	65	Improved Farm Level Turmeric Boiler	Bgk			MEQ	56	P3
359	UHSB 164	119	91	Peeler cum Polisher for Ginger and Turmeric	Bgk			MEQ	52	P4
H6 Garlic										
360	UHSB 165	120	90	Garlic Bulb Breaker	Bgk	2.06		MEQ	56	P4
361	UHSB 166	121	92	Garlic Clove Flaking Machine	Bgk	1.15		MEQ	56	P4
362	UHSB 167	122	94	Garlic grader	Bgk	2.12		MEQ	56	P4
I M & Aro										
I1 Aloe vera										
363	UHSB 168	123	1	Aloe Gel Extraction Machine	Bgk	24.0		MEQ	52	P5
364	UHSB 169	124	63	Hand Operated Low Cost Aloe-Vera Gel Extractor	Bgk	8.04		MEQ	60	P3
K Fruits										
K1 Banana										
30	UHSB 7	28	8	Banana Shakthi (Micronutrient Mixture for Banana)	Bgk	2.7		PRD	68	P3
K2 Mango										
365	UHSB 170	125	40	Mango harvester	Bgk	3.38		MEQ	54	P2
366	UHSB 171	126	55	Mango Harvester	Bgk			MEQ	64	P2
493	UASB 96	177	6	MANGO HARVESTER	Bng			PHT	64	P3
K4 Grapes										
31	UHSB 8	29	9	Drip Irrigation schedule for grapes vines raised on Dogridge rootstock	Bgk			PRD	60	P4
32	UHSB 9	30	10	Fertigation Schedule for Thompson Seedless vines raised on Dogridge rootstock	Bgk	21.8		PRD	52	P4
K5 Sapota										
367	UHSB 172	127	56	Sapota Harvester	Bgk			MEQ	52	P2
494	UASB 97	178	7	SAPOTA HARVESTER	Bng			PHT	64	P3
K10 Pineapple										
368	UHSB 173	128	69	Pineapple Harvester	Bgk	1.18		MEQ	60	P3
K12 Fig										
369	UHSB 174	129	83	Pedal operated Fig Pressing Machine	Bgk	1.98		MEQ	66	P2
K14 Aonla										
370	UHSB 175	130	66	Aonla Pricking Machine (Manually operated)	Bgk	1.25		MEQ	52	P3
K15 Ber										
371	UHSB 176	131	72	Ber Grader	Bgk			MEQ	50	P3
K21 Walnut										
372	UHSB 177	132	87	Walnut dehuller	Bgk			MEQ	56	P3
K22 Apricot										
373	UHSB 178	133	82	Apricot stone grader	Bgk			MEQ	56	P2
374	UHSB 179	134	86	Dried Apricot grader	Bgk			MEQ	64	P2

Details on selected crop specific technologies

L		Vegetables								
L1		Tomato								
182	UASB 28	52	1	To develop leaf curl virus resistant, high yielding tomato variety with consumer preference	Bng		✓	PRT	54	P2
L2		Onion								
496	UHSB 244	179	26	Bulk Onion Curing Unit.	Bgk			PHT	52	P3
528	UASR 127	185	8	ಒಣಗಿಸಿದ ಈರುಳ್ಳಿ ತಯಾರಿಸುವ ತಂತ್ರಜ್ಞಾನ	Rch			PHT	64	P3
L3		Brinjal								
250	UASR 42	56	27	ಬದನೆ ಬೆಳೆಯಲ್ಲಿ ರಸ ಹೀರುವ ಮತ್ತು ಕುಡಿ ಹಾಗೂ ಕಾಯಿ ಕೊರೆಯುವ ಹುಳುಗಳ ನಿಯಂತ್ರಣ	Rch		✓	PRT	60	P3
L9		Pole beans								
532	UASR 131	189	8	Integrated management of Yellow Mosaic virus disease in Pole bean	Bng	4.4	✓	PRT	68	P2
L11		Green pea								
375	UHSB 180	135	71	Power Operated Pea Shelling Machine	Bgk			MEQ	56	P3
N		Tubers								
N1		Potato								
184	UASB 30	54	3	Integrated management of late blight in potato	Bng	3.4	✓	PRT	52	P2
P		Others								
P5		Mushroom								
376	UHSB 181	136	64	Fluidized Bed Dryer for Mushroom	Bgk			MEQ	56	P3
P6		Honey								
377	UHSB 182	137	80	Honey processing unit	Bgk			MEQ	52	P4
P7		Starch								
378	UHSB 183	138	89	Mobile Starch Extraction Plant	Bgk			MEQ	64	P2

ANNEXURE - 5.0

Repetitions in selected technologies

■ Technology repetition with the universities

Tech Sl.No.	SAU Sl.No.	Sel. No.	Univ. Ref. No.	Technology	Univ	Cat	UASB	UHSB	UASR	UASD
◆ Generally applicable technologies										
▪ Use of machinery/equipment										
165	UASD 1	36	2	Mechanized sowing	Dwd	PRD				✓
166	UASD 2	37	3	Mechanized sowing	Dwd	PRD				✓
◆ Crop specific technologies - Specific to individual crops										
▪ Coconut										
347	UHSB 152	107	77	Coconut slicing machine	Bgk	MEQ				✓
348	UHSB 153	108	78	Coconut slicing machine	Bgk	MEQ				✓
▪ Ginger										
353	UHSB 158	113	5	Low-cost Ginger storage structure	Bgk	MEQ				✓
356	UHSB 161	116	98	Low-cost Ginger storage structure	Bgk	MEQ				✓
▪ Mango										
365	UHSB 170	125	40	Mango harvester	Bgk	MEQ				✓
366	UHSB 171	126	55	Mango Harvester	Bgk	MEQ				✓
◆ Crop specific technologies - Specific to individual crops										
▪ Sunflower										
461	UASR 107	161	4	ಸೂರ್ಯಕಾಂತಿ ಒಕ್ಕುವ ಬಾಕು	Rch	MEQ				✓
462	UASR 108	162	35	ಸೂರ್ಯಕಾಂತಿ ಒಕ್ಕುವ ಬಾಕು	Rch	MEQ				✓

■ Technology repetition between the universities

490	UASB 93	174	2	Manual Arecanut Dehusker		PHT	✓			
491	UASB 94	175	3	Tamarind dehusker cum deseed		PHT	✓			
493	UASB 96	177	6	Mango harvester		PHT	✓			
494	UASB 97	178	7	Sapota Harvester		PHT	✓			
350	UHSB 155	110	52	Manual Arecanut Dehusker		MEQ		✓		
351	UHSB 156	111	53	Tamarind dehusker cum deseed		MEQ		✓		
367	UHSB 172	127	56	Sapota Harvester		MEQ		✓		
366	UHSB 171	126	55	Mango Harvester		MEQ		✓		

ANNEXURE - 6.0

Partial budgeting of technologies

ANNEXURE - 6.1

Summary of Partial Budgeting of Technologies

(No. of technologies)

		UASB		UHSB		UASR		UASD		Total	
		Sel	Excl	Sel	Excl*	Sel	Excl	Sel	Excl	Sel	Excl
1.0	Crop production technologies	10	-	2	3	-	-	10	1	22	4
2.0	Crop protection technologies	5	8	0	15			6	1	11	24
3.0	Farm mechanisation technologies	12		15	12	2	1	6	2	35	15
4.0	Post harvest technologies	7	1					1		8	1
	TOTAL	34	9	17	30	2	1	23	4	76	44

PB - Partial budgeting

* There are five PBs worked out for different intercrops

ANNEXURE-6.2

Partial Budgeted BCR groupings in Selected Technologies

(No.of technologies)

BCR	Crop production					Crop protection					Farm Mecanisation					Post harvest					TOTAL				
	UASB	UHSB	UASR	UASD	Total	UASB	UHSB	UASR	UASD	Total	UASB	UHSB	UASR	UASD	Total	UASB	UHSB	UASR	UASD	Total	UASB	UHSB	UASR	UASD	Total
0 to 2				3	3	2			-	2	4	8		3	15	3			0	3	9	8	0	6	23
2 to 5	4	1		5	10	2			4	6	7	5	2	3	17	4			1	5	17	6	2	13	38
5 to 10	2			2	4				2	2		1			1					0	2	1	0	4	7
10 and more	4	1			5	1				1	1	1			2					0	6	2	0	0	8
Total	10	2	0	10	22	5	0	0	6	11	12	15	2	6	35	7	0	0	1	8	34	17	2	23	76

ANNEXURE - 7.0

Technologies for brochure & video clippings

ANNEXURE - 7.1

Allocation of technologies for brochure

(No.of technologies)

	Technologies	Selected No. of Technologies				
		UASB	UHSB	UASR	UASD	Total
➤	Crop Production technologies	18	4	1	7	30
➤	Crop Protection technologies	4		1	5	10
➤	Farm Mechanization technologies	16	24	15	5	60
➤	Post Harvest technologies	10		4	1	15
	Total	48	28	21	18	115
		42%	24%	18%	16%	100%

ANNEXURE - 7.2

Allocation of technologies for video clippings

(No.of technologies)

	Technologies	Selected No. of Technologies				
		UASB	UHSB	UASR	UASD	Total
➤	Crop Production technologies	2	1	1	1	5
➤	Crop Protection technologies	2		1	1	4
➤	Farm Mechanization technologies	9	6	4	3	22
➤	Post Harvest technologies	2		1	1	4
		15	7	7	6	35

ANNEXURE - 7.3

Selected list of technologies for brochure and video clippings

7.3.1	Crop Production Technologies
7.3.2	Crop Protection Technologies
7.3.3	Farm Mechanisation Technologies
7.3.4	Post Harvest Technologies

Selected list of technologies for brochure and video clippings

Crop Production Technologies

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority	Kan. vers.	Eng. vers.
4	UASB 4	4	4	Moisture conservation furrow/dead	Bng	4.5	✓	PRD	84	P1	✓	
1	UASB 1	1	1	Contour cultivation	Bng	4.0	✓	PRD	80	P1	✓	
2	UASB 2	2	2	Fall / summer ploughing	Bng		✓	PRD	72	P1	✓	
10	UASB 10	10	11	Crop residue incorporation	Bng		✓	PRD	64	P1	✓	
7	UASB 7	7	8	Seed hardening	Bng		✓	PRD	60	P1	✓	
11	UASB 11	11	13	Split application of nitrogenous	Bng	13	✓	PRD	60	P1	✓	
15	UASB 15	15	16	Fertigation under drip irrigation	Bng	2.5	✓	PRD	60	P1	✓	
19	UASB 19	19	19	Contingency crops and varieties – Selection of crops and varieties according to the sowing window	Bng		✓	PRD	60	P1	✓	
21	UASB 21	21	22	Crop rotation	Bng		✓	PRD	60	P1	✓	
26	UHSB 3	24	7	Furrow application of lime for amelioration of acid soils	Bgk			PRD	60	P1		✓
168	UASD 4	39	5	Timely irrigation at critical stages of the crop in maize	Dwd	2.2	✓	PRD	58	P1		✓
171	UASD 7	42	1	Dry sowing of pigeon pea seeds before arrival of monsoon / in anticipation of arrival of monsoon	Dwd	4.5		PRD	78	P1		✓
172	UASD 8	43	4	Not to practice intercultivation at 45 DAS onwards in groundnut	Dwd	4.7	✓	PRD	76	P1		✓
3	UASB 3	3	3	Contour bunds, live bunds	Bng		✓	PRD	72	P2	✓	
5	UASB 5	5	5	Deep trencher for soil moisture	Bng		✓	PRD	72	P2	✓	
8	UASB 8	8	9	Seed treatment with bio-fertilizers	Bng	32	✓	PRD	68	P2	✓	
9	UASB 9	9	10	Soil test based fertilizer	Bng	5.1	✓	PRD	64	P2	✓	
167	UASD 3	38	6	Mechanized transplanting and drill	Dwd	1.6	✓	PRD	64	P2		✓
18	UASB 18	18	15	Double cropping with green manures	Bng	2.1	✓	PRD	62	P2	✓	
170	UASD 6	41	1	Mechanized sowing with tractor	Dwd	1.8		PRD	62	P2		✓
12	UASB 12	12	17	Potassium spray during drought	Bng	16	✓	PRD	60	P2	✓	
17	UASB 17	17	14	Seed cum fertilizer drill	Bng		✓	PRD	60	P2	✓	
166	UASD 2	37	3	Mechanized sowing	Dwd			PRD	60	P2		✓
125	UASR 1	33	29	ಸುಧಾರಿತ ನವಣೆ ತಳಿಯಾದ ಹೆಚ್ ಎಮ್ ಟಿ 100-1	Rch			PRD	58	P2	✓	
6	UASB 6	6	12	Application of tank silt	Bng		✓	PRD	56	P2	✓	
30	UHSB 7	28	8	Banana Shakthi (Micronutrient	Bgk	2.7		PRD	68	P3		✓
24	UHSB 1	22	6	Soil Solarization for weed control in	Bgk			PRD	64	P3		✓
14	UASB 14	14	7	Borewell recharge pits	Bng		✓	PRD	60	P3	✓	
169	UASD 5	40	8	Mechanized sowing using tractor	Dwd	1.7		PRD	60	P3		✓
33	UHSB 10	31	5	Nutrient Management for Organic	Bgk			PRD	58	P3		✓
30											19	11

ANNEXURE - 7.3.2

Selected list of technologies for brochure and video clippings
Crop Protection Technologies

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority	Kan. vers.	Eng. vers.
249	UASR 41	55	42	ಪ್ರಮುಖ ಬೆಳೆಗಳಲ್ಲಿ ಕೀಟಗಳ ನಿರ್ವಹಣೆಗೆ ಇ-ಸ್ಯಾಪ್ ತಂತ್ರಜ್ಞಾನ	Rch			PRT	64	P1	✓	
183	UASB 29	53	8	Integrated management of Yellow Mosaic virus disease in Pole bean	Bng	4.4	✓	PRT	68	P2	✓	
180	UASB 26	50	29	Integrated management of ganoderma in coconut	Bng	1.6	✓	PRT	60	P2	✓	
181	UASB 27	51	7	Management of Rhizome rot in Ginger	Bng	42.9	✓	PRT	60	P2	✓	
294	UASD 15	58	3	Chemical weed control in maize	Dwd	4.7	✓	PRT	64	P2		✓
178	UASB 24	48	12	Management of Giant African snail	Bng		✓	PRT	60	P2	✓	
297	UASD 18	61	2	Chemical weed control in groundnut	Dwd	5.4	✓	PRT	80	P3		✓
295	UASD 16	59	2	Mechanized first inter-cultivation in maize at around 30 DAS	Dwd			PRT	68	P3		✓
298	UASD 19	62	1	Wider row spacing for mechanized weeding	Dwd	6.5		PRT	64	P3		✓
296	UASD 17	60	5	Plant protection chemicals application (Chickpea)	Dwd	2.4	✓	PRT	62	P3		✓
Total										10	5	5

Selected list of technologies for brochure and video clippings

Farm Mechanisation Technologies

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority	Kan. vers.	Eng. vers.
304	UASB 53	64	1	K.M .Plough	Bng		✓	MEQ	80	P2	✓	
306	UASB 55	66	3	Bund former	Bng		✓	MEQ	76	P2	✓	
313	UASB 62	73	8	Multifurrow opener	Bng	1.5	✓	MEQ	72	P2	✓	
317	UASB 66	77	10	Human operated weeder	Bng		✓	MEQ	68	P2	✓	
318	UASB 67	78	11	Cycle weeder	Bng	3.2	✓	MEQ	80	P2	✓	
324	UASB 73	84	34	Parth hand sprayer	Bng		✓	MEQ	72	P2	✓	
326	UASB 75	86	35	Naveen Sickle	Bng		✓	MEQ	76	P2	✓	
327	UASB 76	87	27	Multi crop thresher	Bng	2.2	✓	MEQ	80	P2	✓	
328	UASB 77	88	4	Puddler	Bng		✓	MEQ	80	P2	✓	
329	UASB 78	89	9	Drum seeder	Bng	2.7	✓	MEQ	80	P2	✓	
330	UASB 79	90	23	Paddy transplanter	Bng	1.8	✓	MEQ	72	P2	✓	
331	UASB 80	91	24	Paddy harvester	Bng	2	✓	MEQ	68	P2	✓	
332	UASB 81	92	6	Ragi cum fertilizer seed drill	Bng		✓	MEQ	68	P2	✓	
334	UASB 83	94	29	Power tiller operated ragi harvester	Bng	3.7	✓	MEQ	80	P2	✓	
335	UASB 84	95	7	Groundnut cum fertilizer seed drill	Bng		✓	MEQ	68	P2	✓	
340	UHSB 145	100	6	Animal Drawn Patela harrow	Bgk			MEQ	64	P2		✓
342	UHSB 147	102	84	Natural Convection Solar Dryer [Mini-multi rack solar dryer]	Bgk			MEQ	64	P2		✓
344	UHSB 149	104	35	ಬ್ಯಾಟರಿ ಚಾಲಿತ ನ್ಯೂಮಾಟಿಕ್ ಸಿಕ್ಲೆಚರ್	Bgk			MEQ	58	P2	✓	
345	UHSB 150	105	50	Pricking machine for Petha preparation	Bgk			MEQ	64	P2		✓
350	UHSB 155	110	52	Manual Arecanut Dehusker	Bgk	1.45		MEQ	68	P2		✓
351	UHSB 156	111	53	Tamarind Dehuller-Cum-Deseeder	Bgk			MEQ	60	P2		✓
365	UHSB 170	125	40	Mango harvester	Bgk	3.38		MEQ	54	P2	✓	
366	UHSB 171	126	55	Mango Harvester	Bgk			MEQ	64	P2		✓
367	UHSB 172	127	56	Sapota Harvester	Bgk			MEQ	52	P2		✓
369	UHSB 174	129	83	Pedal operated Fig Pressing Machine	Bgk	1.98		MEQ	66	P2		✓
373	UHSB 178	133	82	Apricot stone grader	Bgk			MEQ	56	P2		✓
374	UHSB 179	134	86	Dried Apricot grader	Bgk			MEQ	64	P2		✓
378	UHSB 183	138	89	Mobile Starch Extraction Plant	Bgk			MEQ	64	P2		✓
441	UASR 87	141	29	ಕೈಚಾಲಿತ ಕಾಳು ಊರುವ ಯಂತ್ರ:	Rch			MEQ	58	P2	✓	
442	UASR 88	142	30	ಕೈಚಾಲಿತ ಎರಡು ಸಾಲಿನ ಗೊಬ್ಬರ ಮತ್ತು ಬೀಜ ಬಿತ್ತುವ ಕೂರಿಗೆ:	Rch			MEQ	62	P2	✓	
443	UASR 89	143	8	ಕೋನೋ ಟ್ರೈಪ್ ಕಳೆ ತೆಗೆಯುವ ಸಾಧನ	Rch			MEQ	50	P2	✓	
445	UASR 91	145	33	ಒಣಬೇಸಾಯದಲ್ಲಿ ಕಳೆ ತೆಗೆಯುವ ಹಲ್ಲಿನ ಉಪಕರಣ (ಪೆಗ್ ವೀಡರ)	Rch			MEQ	68	P2	✓	

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority	Kan. vers.	Eng. vers.
446	UASR 92	146	37	ಕೈ ಚಾಲಿತ ಚಕ್ರದ ಕಳೆ ತೆಗೆಯುವ ಉಪಕರಣ	Rch			MEQ	54	P2	✓	
447	UASR 93	147	18	ಸೌರ ಶಕ್ತಿಯನ್ನು ಬಳಸಿ ಸಿಂಪರಣಾ ಸಾಧನ	Rch			MEQ	54	P2	✓	
448	UASR 94	148	31	ಕೈ ಚಾಲಿತ ತಳ್ಳುವ ಔಷಧ ಸಿಂಪರಣೆ ಯಂತ್ರ	Rch			MEQ	60	P2	✓	
449	UASR 95	149	34	ನ್ಯಾಪ್ ಸ್ಯಾಕ್ ಸಿಂಪರಣೆ ಸ್ಟ್ರೀಯರ್	Rch			MEQ	56	P2	✓	
450	UASR 96	150	32	ಸುಧಾರಿತ ಕುಡುಗೋಲು	Rch			MEQ	60	P2	✓	
453	UASR 99	153	36	ವೈದ್ಯಲಚಾಲಿತ ರಿಕ್ವಾ ಮೇಲೆ ಅಳವಡಿಸಿದ ಬಹುಬೆಳೆ ಒಕ್ಕಣೆ ಯಂತ್ರ:	Rch			MEQ	60	P2	✓	
454	UASR 100	154	5	ಭತ್ತದಲ್ಲಿ ಸಸಿಮಡಿಯಿಂದ ತಯಾರಿಸಿದ ಸಸಿಗಳನ್ನು ಸ್ವಯಂಚಾಲಿತ ಯಂತ್ರದಿಂದ ಬೆತ್ತ ನಾಟಿ ಮಾಡುವುದು	Rch			MEQ	54	P2	✓	
455	UASR 101	155	7	ಭತ್ತ ನಾಟಿ ಮಾಡುವ ಯಂತ್ರ(ಹಿಂದೆ ನಡೆಯುವ ಮಾದರಿ):	Rch		✓	MEQ	58	P2	✓	
456	UASR 102	156	20	ಪೆಡಲ್ ಚಾಲಿತ ಮೆಕ್ಯೆಜೋಳದ ಒಕ್ಕಣೆ ಯಂತ್ರ	Rch			MEQ	50	P2	✓	
457	UASR 103	157	21	ಕೈ ಚಾಲಿತ ಮೆಕ್ಯೆಜೋಳದ ಒಕ್ಕಣೆ ಯಂತ್ರ	Rch			MEQ	60	P2	✓	
477	UASD 25	163	3	Mechanized harvesting in paddy	Dwd	1.5		MEQ	58	P2		✓
478	UASD 26	164	1	Application of organic manures 3 weeks before planting in maize crop	Dwd	2.4	✓	MEQ	60	P2		✓
479	UASD 27	165	2	Mechanized harvesting in maize	Dwd	1.8		MEQ	58	P2		✓
480	UASD 28	166	4	Mechanized harvesting in pigeon pea	Dwd	1.5		MEQ	78	P2		✓
482	UASD 30	168	5	Mechanized harvesting in safflower	Dwd	2		MEQ	68	P2		✓
321	UASB 70	81	26	Self propelled weeder	Bng	2.3	✓	MEQ	60	P3	✓	
339	UHSB 144	99	7	Power Tiller with Rotary Attachment	Bgk	1.81		MEQ	60	P3		✓
341	UHSB 146	101	70	Fruit Grader (Manual)	Bgk			MEQ	56	P3		✓
346	UHSB 151	106	75	Tender Coconut Punch and Cutter	Bgk			MEQ	56	P3		✓
354	UHSB 159	114	61	Turmeric/Ginger Washer	Bgk	2.28		MEQ	52	P3		✓
358	UHSB 163	118	65	Improved Farm Level Turmeric Boiler	Bgk			MEQ	56	P3		✓
364	UHSB 169	124	63	Hand Operated Low Cost Aloe-Vera Gel Extractor	Bgk	8.04		MEQ	60	P3		✓
368	UHSB 173	128	69	Pineapple Harvester	Bgk	1.18		MEQ	60	P3		✓
370	UHSB 175	130	66	Aonla Pricking Machine (Manually operated)	Bgk	1.25		MEQ	52	P3		✓
371	UHSB 176	131	72	Ber Grader	Bgk			MEQ	50	P3		✓
375	UHSB 180	135	71	Power Operated Pea Shelling Machine	Bgk			MEQ	56	P3		✓
376	UHSB 181	136	64	Fluidized Bed Dryer for Mushroom	Bgk			MEQ	56	P3		✓
451	UASR 97	151	9	ಸ್ವಯಂಚಾಲಿತ ಕಟಾವು ಮಾಡಿ ಸುಡು ಕಟ್ಟುವ ಯಂತ್ರ:	Rch	3.8		MEQ	64	P3	✓	
				Total						60	33	27

Selected list of technologies for brochure and video clippings
Post Harvest Technologies

Tech. Sl.No.	SAU. Sl.No.	Tech. Sel. No.	Univ. Ref. No.	Technology	Univ.	BCR	POP	Cat	Tech. Rating	Tech. Priority	Kan. vers.	Eng. vers.
485	UASB 88	169	9	3-in-1 MINI GROUNDNUT DECORTICATOR-CUM-SUNFLOWER THRESHER & MAIZE SHELLER	Bng	2	✓	PHT	80	P3	✓	
492	UASB 95	176	1	WHITE PEPPER PROCESSING MACHINE	Bng	1.5		PHT	80	P3	✓	
488	UASB 91	172	5	FOOT/ PEDAL OPERATED COCONUT DEHUSKER	Bng	1.3	✓	PHT	76	P3	✓	
489	UASB 92	173	10	COCONUT TREE CLIMBER	Bng		✓	PHT	76	P3	✓	
487	UASB 90	171	4	2-in-1 SUNFLOWER THRESHER-CUM-MAIZE SHELLER	Bng		✓	PHT	72	P3	✓	
490	UASB 93	174	2	MANUAL ARECANUT DEHUSKER	Bng			PHT	72	P3	✓	
491	UASB 94	175	3	TAMARIND DEHULLER-CUM-DESEEDER	Bng	3		PHT	72	P3	✓	
525	UASR 124	182	13	ನವಣೆ ಅಕ್ಕಿ ಶೇಖರಣಾ ಪದ್ಧತಿ	Rch			PHT	68	P3	✓	
526	UASR 125	183	1	ಶೇಂಗಾಕಾಯಿ ಒಡೆಯುವ ಯಂತ್ರ	Rch		✓	PHT	68	P3	✓	
493	UASB 96	177	6	MANGO HARVESTER	Bng			PHT	64	P3	✓	
494	UASB 97	178	7	SAPOTA HARVESTER	Bng			PHT	64	P3	✓	
528	UASR 127	185	8	ಒಣಗಿಸಿದ ಈರುಳ್ಳಿ ತಯಾರಿಸುವ ತಂತ್ರಜ್ಞಾನ	Rch			PHT	64	P3	✓	
486	UASB 89	170	11	GROUNDNUT DECORTICATOR	Bng	2		PHT	60	P3	✓	
524	UASR 123	181	3	ನವಣೆ ಅಕ್ಕಿ ಮಾಡುವ ಯಂತ್ರ	Rch			PHT	60	P3	✓	
544	UASD 33	196	9	Grading and machine drying after harvesting in red chilli	Dwd	3		PHT	58	P3		✓
				Total						15	14	1

ANNEXURE - 8.0

Model brochure designs

ANNEXURE - 9.0

Documentation process formats

-
- 9.1 Check list for compliance of action points
 - 9.2 Technology data format
 - 9.3 Stakeholders feedback format
 - 9.4 Spread sheet for partial budgeting
 - 9.5 Technology rating format
-

Systematic documentation and creating a road map for dissemination of cost/labour saving agri. & horticulture mechanization and low cost/no cost technologies

Check list for compliance of action points

Action points	Consultant's observations	Deliberations & Consensus of UAS team
1. KAPC will enter into an agreement with the Directors of Extensions of all the five universities		
2. Project team should be multidisciplinary consisting of extension, agronomy, engineering and agri. economics and others		
3. Along with Principle investigator , there should be at least two Co-PIs , among them one should be from agri. Economics		
4. The project tenure will be for six months only, and efforts should be limited to proven technologies already available with the Universities and also with the other ICAR institutes.		

Action points	Consultant's observations	Deliberations & Consensus of UAS team
5. All the universities should send the information on different technologies to KAPC . KAPC will convene another technical meeting to prioritize the technologies on a broader framework		
6. Need for some sort of SWOT analysis on each of the technologies and to document the same for the benefit of end users		
7. Each university should hold one technical workshop involving all the departments and scientists from other concerned 'CAR institutes to pool the available technologies		
8. There should be two stakeholder workshops involving farmers, one in the initial stage to get inputs on proposed assignment and second before finalization of the report.		
9. All five universities should finalize the roadmap for the dissemination in consultation with the consultants and experts identified by KAPC	•	

Action points	Consultant's observations	Deliberations & Consensus of UAS team
<p>10. On inclusion of information farm mechanization & low cost technologies along with economic indicators in POP, KAPC will write to the secretary for further steps in that regard. It was felt that a separate chapter can be included in POP on these aspects.</p>		
<p>11. It is also decided to advice State Department of Agriculture to place machineries & equipments developed by universities at Custom Hiring Centres</p>		
<p>12. On inclusion of post harvest technologies option was kept open to either to include them under the present exercise or to think of a separate assignment.</p>		
<p>13. All universities will work out a detailed road map with timeline for accomplishing the objectives of the task in consultation with the consultant identified by KAPC.</p>		
<p>14. KAPC will develop a memorandum of understanding with details tasks to be accomplished with time line which needs to be agreed upon and signed by each university</p>		

DEVELOPMENT OF AN ACTION PLAN FOR IMPLEMENTATION OF LOW COST TECHNOLOGIES DEVELOPED BY SAUs IN KARNATAKA

Documentation format for low cost technologies

- 1. Title of technology:**
(As originally framed in the official document of the university)

- 2. Category classification:**
(Preparatory and pre planting aspects, crop production, crop protection, Harvesting and post harvest technologies)

- 3. Year of release :**
(Mention year if it is in the last five years or as > 5 yrs, > 10yrs, > 15 yrs)

- 4. Technology source/acknowledgements:**
(Follow the university norm of mentioning the name of Univ / Dept or acknowledging the contributors as the case may be)

- 5. Technology description:**
(Describe in one or two small paragraphs the most essential aspects of the technology)

- 6. Recommended practices/process:**
(Explain the technology in terms of step by step instructions to practitioners)

- 7. Intended outcome and expected results:**
(On adoption of technology, what can be achieved and what are the benefits?)

- 8. Specific advantages:**
(What is unique about the technology and expected advantages?)

9. Limitations if any:

(What are the prerequisites to realise the full benefits?)

10. Quantification of cost reduction and other benefits for all technologies:

10.1 Quantification of cost reduction and other benefits specific to farm machinery

- i. Investment analysis
- ii. Is it suitable for custom hiring or actual purchase
- iii. Others, if any:

11. Dissemination efforts:

12. Adoption levels:

13. Inclusion in POP:

14. Suitability for video or other latest modes of reach out to farmers:

Note :

- ▶ The inputs for Cost quantification, benefits and all aspects related to economics should be provided by Agriculture Economist in the team.
- ▶ Similarly, the inputs on dissemination, adoption, inclusion in POP and modes of reach out are to be taken care of by Extension specialists

ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಬೆಂಗಳೂರು ಹಾಗೂ ಕರ್ನಾಟಕ ಸರ್ಕಾರ, ಕರ್ನಾಟಕ ಕೃಷಿ ಬೆಲೆ ಆಯೋಗ

“ಉತ್ಪಾದನಾ ವೆಚ್ಚ ತಗ್ಗಿಸುವ ಸಲುವಾಗಿ ಈಗಾಗಲೇ ಅಭಿವೃದ್ಧಿ ಪಡಿಸಿರುವ ತಾಂತ್ರಿಕತೆಗಳ ದಾಖಲೀಕರಣ ಹಾಗೂ ರೈತರಿಗೆ ವರ್ಗಾವಣೆ ಯೋಜನೆಯಡಿ” –
ಭಾಗೀದಾರರ ಕಾರ್ಯಾಗಾರ

ಕಾರ್ಯಾಗಾರದಲ್ಲಿ ಚರ್ಚಿಸಿದ ತಂತ್ರಜ್ಞಾನಗಳ ಬಗ್ಗೆ ರೈತರ / ಭಾಗೀದಾರರ ವಿಶ್ಲೇಷಣೆ ಮತ್ತು ಅಭಿಪ್ರಾಯ

-
- 1.0 ಬೆಳೆ ಉತ್ಪಾದನಾ ತಾಂತ್ರಿಕತೆಗಳು
 - 2.0 ಬೆಳೆ ಸಂರಕ್ಷಣಾ ತಾಂತ್ರಿಕತೆಗಳು
 - 3.0 ಕೃಷಿ ಯಾಂತ್ರೀಕರಣ ತಂತ್ರಜ್ಞಾನಗಳು
 - 4.0 ದಾಖಲೀಕರಿಸಲು ಸೂಕ್ತವಾದ ಸ್ಥಳೀಯ ಪ್ರಚಲಿತ ತಂತ್ರಜ್ಞಾನಗಳು
 - 5.0 ಕಾರ್ಯಾಗಾರದಲ್ಲಿ ಚರ್ಚಿಸಿದ ಇತರ ತಂತ್ರಜ್ಞಾನಗಳು
-

**Development of an action plan for implementation of low cost technologies developed by SAUs in
Karnataka**

**Spread sheet for Partial Budgeting
Crop production technologies**

1.0 Technology					
2.0 Situation analysis					
2.1	Situation - I (before / without adoption)				
2.2	situation - II (after / with adoption)				
(Amt.in Rs.)					
		Unit	Qty	Rate	Amount
3.0 Computation of costs (Debit)					
3.1	Additional/increase in costs				
	3.1.1	LS			
	3.1.2	Labour for harvesting, threshing, winnowing etc.	MD		
3.2	Reduced/decrease in returns				
4.0 Computation of benefits (Credit)					
4.1	Reduced/decrease in costs				
	4.1.1	Cost on weeding	MD		
4.2	Additional/increase in returns				
	4.2.1	Increase in grain yield	Q		
	4.2.2	Increase in straw yield	Q		
5.0 Analysis					
5.1	Total costs/debit (3.1+3.2)				
5.2	Total benefit /credit (4.1 + 4.2)				
5.3	Net returns (5.2 - 5.1)				
5.4	BC ratio (5.2/5.1)				
6.0 Justifications for costs and benefits					
	▶				
	▶				
	▶				
	▶				
7.0 Source/authenticity of information used in computation					
		Specify details for ✓ items			
	▶ Research findings				
	▶ University rates				
	▶ Feedback from farmers				
	▶ Market rates				
8.0 Comments/Remarks					
	▶				
Points to note:					
3.1 The costs incurred as a result of producing/growing a new commodity/crop or adopting a new practice					
3.2 The returns that are foregone as a result of not producing the crop/commodity or not adopting the practice					
4.1 The costs that will not be incurred as a result of giving up the current commodity or practice for a new one					
4.2 The returns received as a result of growing a new commodity or adopting a new practice					

Development of an action plan for implementation of low cost technologies developed by SAUs in Karnataka

Spread sheet for Partial Budgeting Crop protection technologies

1.0 Technology					
2.0 Situation analysis					
2.1 Situation - I (before / without adoption)					
2.2 situation - II (after / with adoption)					
		(Amt.in Rs.)			
		Unit	Qty	Rate	Amount
3.0 Computation of costs (Debit)					
3.1 Additional/increase in costs					
3.1.1					
3.1.2	Additional labour & other costs to handle increased yield	tons			
3.2 Reduced/decrease in returns					
4.0 Computation of benefits (Credit)					
4.1 Reduced/decrease in costs					
4.1.1	Not adopting conventional PP package				
4.2 Additional/increase in returns					
4.2.1	Increase in yield	tons			
4.2.2					
5.0 Analysis					
5.1 Total costs/debit (3.1+3.2)					
5.2 Total benefit/credit (4.1 + 4.2)					
5.3 Net returns (5.2 - 5.1)					
5.4 BC ratio (5.2/5.1)					
6.0 Justifications for costs and benefits					
▶					
▶					
▶					
▶					
7.0 Source/authenticity of information used in computation					
		Specify details for ✓ items			
▶ Research findings					
▶ University rates					
▶ Feedback from farmers					
▶ Market rates					
8.0 Comments/Remarks					
▶					

Points to note:

- 3.1 The costs incurred as a result of producing/growing a new commodity/crop or adopting a new practice
- 3.2 The returns that are foregone as a result of not producing the crop/commodity or not adopting the practice
- 4.1 The costs that will not be incurred as a result of giving up the current commodity or practice for a new one
- 4.2 The returns received as a result of growing a new commodity or adopting a new practice

Development of an action plan for implementation of low cost technologies developed by SAUs in Karnataka

Spread sheet for Partial Budgeting Farm mechanisation technology

1.0 Technology					
2.0 Situation analysis					
2.1	Situation - I (before / without adoption)				
2.2	situation - II (after / with adoption)				
		(Amt.in Rs.)			
		Unit	Qty	Rate	Amount
3.0 Computation of costs (Debit)					
3.1 Additional/increase in costs					
	3.1.1	Day			
	3.1.2 Labour	MD			
3.2 Reduced/decrease in returns					
4.0 Computation of benefits (Credit)					
4.1 Reduced/decrease in costs					
	4.1.1 Labour	MD			
4.2 Additional/increase in returns					
5.0 Analysis					
5.1 Total costs/debit (3.1+3.2)					
5.2 Total benefit/credit (4.1 + 4.2)					
5.3 Net returns (5.2 - 5.1)					
5.4 BC ratio (5.2/5.1)					
6.0 Justifications for costs and benefits					
		▶			
		▶			
7.0 Source/authenticity of information used in computation		Specify details for ✓ items			
▶ Custom hiring charges					
▶ University rates					
▶ Feedback from farmers					
8.0 Comments/Remarks					
		▶ All the workings are made for a unit area of one acre			

Points to note:

- 3.1 The costs incurred as a result of producing/growing a new commodity/crop or adopting a new practice
- 3.2 The returns that are foregone as a result of not producing the crop/commodity or not adopting the practice
- 4.1 The costs that will not be incurred as a result of giving up the current commodity or practice for a new one
- 4.2 The returns received as a result of growing a new commodity or adopting a new practice

Development of an action plan for implementation of low cost technologies developed by SAUs in Karnataka

Spread sheet for Partial Budgeting Post Harvest Technologies

1.0 Technology					
2.0 Situation analysis					
2.1	Situation - I (before / without adoption)				
2.2	situation - II (after / with adoption)				
		(Amt.in Rs.)			
		Unit	Qty	Rate	Amount
3.0 Computation of costs (Debit)					
3.1 Additional/increase in costs					
	3.1.1	Day			
	3.1.2 Labour	MD			
3.2 Reduced/decrease in returns					
4.0 Computation of benefits (Credit)					
4.1 Reduced/decrease in costs					
	4.1.1 Labour	MD			
4.2 Additional/increase in returns					
5.0 Analysis					
5.1 Total costs/debit (3.1+3.2)					
5.2 Total benefit/credit (4.1 + 4.2)					
5.3 Net returns (5.2 - 5.1)					
5.4 BC ratio (5.2/5.1)					
6.0 Justifications for costs and benefits					
▶					
▶					
7.0 Source/authenticity of information used in computation		Specify details for ✓ items			
▶ Custom hiring charges					
▶ University rates					
▶ Feedback from farmers					
8.0 Comments/Remarks					
▶ All the workings are made for a unit area of one acre					

Points to note:

- 3.1 The costs incurred as a result of producing/growing a new commodity/crop or adopting a new practice
- 3.2 The returns that are foregone as a result of not producing the crop/commodity or not adopting the practice
- 4.1 The costs that will not be incurred as a result of giving up the current commodity or practice for a new one
- 4.2 The returns received as a result of growing a new commodity or adopting a new practice

Technology rating format

Criteria	Max	Information				
Year of release	0.5	Given	Not given			
		0.5	0			
Technology source/acknowledgements	1	Given	Not given			
		1	0			
Technology description	4	Sufficient to be put on a brochure	Sufficient to understand the technology	Not sufficient		
		4	2	0		
Recommended practices/process	3	Sufficient to be followed by an unskill person	Sufficient to be followed by a specialist	Not sufficient		
		3	1.5	0		
Intended outcome and expected results	3	Given and clear	Given clear but not sufficient	Given but not clear & not sufficient	Not given	
		3	2	1	0	
Specific advantages	2	Given and relevant	Given but not totally accurate	Not given/Not relevant		
		2	1	0		
Limitations if any	0.5	Given	Not given			
		0.5	0			
Quantification of cost reduction and other benefits for all technologies	3	Given and clear	Given but not clear or not sufficient	Not given		
		3	1	0		
Inclusion in POP	2	Yes	No			
		2	0			
Partial budgeting	1	Given	Not given			
		1	0			
Prioritization	5	P1	P2	P3	P4	P5
		5	4	3	2	1
	25					

Compendium on No Cost and Low Cost Technologies

developed by SAUs in Karnataka

APPENDIX

Volume		
A	Crop production technologies	I
B	Crop protection technologies	II
C	Farm mechanisation technologies	III
D	Post harvest technologies	IV
E	Partial budgeting for technologies	V
F	Project process and photo documentation	VI



ತಂತ್ರಜ್ಞಾನಗಳ ಸಮಗ್ರ ಕೈಪಿಡಿ

Appendix - A

ಬೆಳೆ ಉತ್ಪಾದನಾ ತಂತ್ರಜ್ಞಾನಗಳು



ಖರ್ಚಿಲ್ಲದ ಮತ್ತು ಕಡಿಮೆ ವೆಚ್ಚದ ತಂತ್ರಜ್ಞಾನಗಳನ್ನು ಪ್ರಚಲಿತ ಪಡಿಸುವ ದಿಕ್ಕಿನಲ್ಲಿ
ಕರ್ನಾಟಕ ಕೃಷಿ ಬೆಲೆ ಆಯೋಗದ ಒಂದು ವಿಶಿಷ್ಟ ಪ್ರಯತ್ನ

ದಾಖಲೀಕರಣ ಯೋಜನಾ ಸಲಹೆಗಾರರು:

ಆಗ್ರಿಇನ್‌ಸೈಟ್ಸ್ ಕನ್ಸಲ್ಟನ್ಸಿ ಸರ್ವೀಸಸ್ ಪ್ರೈವೇಟ್ ಲಿಮಿಟೆಡ್,

ನಂ.71, 5ನೇ ಮುಖ್ಯ ರಸ್ತೆ, 2ನೇ 'ಎ' ಅಡ್ಡ ರಸ್ತೆ, ಎಜಿ ಕಾಲೋನಿ, ಅನಂದ ನಗರ, ಬೆಂಗಳೂರು.-560024.

ದೂರವಾಣಿ: 9449028395, 7259703394.

Email : agrinsights@gmail.com Website: www.agrinsights.co.in



Crop production Technologies-UAS, Bangalore

INDEX

	Technologies	Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■	Generally applicable technologies	21	1-21	2	22-23	23
	➤ Land preparation	2	1-2			
	➤ Soil/moisture conservation/enrichment	4	3-6			
	➤ Seed treatment	2	7-8			
	➤ Nutrient management	4	9-12			
	➤ Irrigation/fertigation	3	13-15			
	➤ Intercultivation	1	16			
	➤ Use of machinery/equipment	1	17			
	➤ Cropping system	4	18-21	2	22-23	
■	Crop specific Technologies	-		-		-
	➤ No.of technologies					
	➤ No.of crops covered					

Selected Crop production Technologies - UASB

Tech Sl.No	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Generally applicable technologies										
▪ Land preparation										
1	UASB 1	1	1	Contour cultivation	Bng	4.0	✓	PRD	80	P1
2	UASB 2	2	2	Fall / summer ploughing	Bng		✓	PRD	72	P1
▪ Soil/moisture conservation/enrichment										
3	UASB 3	3	3	Contour bunds, live bunds	Bng		✓	PRD	72	P2
4	UASB 4	4	4	Moisture conservation furrow/dead furrow	Bng	4.5	✓	PRD	84	P1
5	UASB 5	5	5	Deep trencher for soil moisture conservation	Bng		✓	PRD	72	P2
6	UASB 6	6	12	Application of tank silt	Bng		✓	PRD	56	P2
▪ Seed treatment										
7	UASB 7	7	8	Seed hardening	Bng		✓	PRD	60	P1
8	UASB 8	8	9	Seed treatment with bio-fertilizers	Bng	32.3	✓	PRD	68	P2
▪ Nutrient management										
9	UASB 9	9	10	Soil test based fertilizer recommendation	Bng	5.1	✓	PRD	64	P2
10	UASB 10	10	11	Crop residue incorporation	Bng		✓	PRD	64	P1
11	UASB 11	11	13	Split application of nitrogenous fertilizers	Bng	12.7	✓	PRD	60	P1
12	UASB 12	12	17	Potassium spray during drought	Bng	15.7	✓	PRD	60	P2
▪ Irrigation/fertigation										
13	UASB 13	13	6	Farm pond & lining	Bng		✓	PRD	56	P3
14	UASB 14	14	7	Borewell recharge pits	Bng		✓	PRD	60	P3
15	UASB 15	15	16	Fertigation under drip irrigation ¹	Bng	2.5	✓	PRD	60	P1
▪ Intercultivation										
16	UASB 16	16	23	Herbicides in weed management	Bng	6	✓	PRD	56	P2
▪ Use of machinery/equipment										
17	UASB 17	17	14	Seed cum fertilizer drill	Bng		✓	PRD	60	P2
▪ Cropping system										
18	UASB 18	18	15	Double cropping with green manures	Bng	2.1	✓	PRD	62	P2
19	UASB 19	19	19	Contingency crops and varieties – Selection of crops and varieties according to the sowing window ²	Bng		✓	PRD	60	P1
20	UASB 20	20	20	Intercropping under drylands	Bng	13.8	✓	PRD	56	P3
21	UASB 21	21	22	Crop rotation	Bng		✓	PRD	60	P1

Note:

- 1 Assuming drip system is available
- 2 Timely sowing is no cost

Excluded Crop Production Technologies - UASB

Tech Sl.No.	SAU Sl.No.	Tech. Excl.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Tech. Priority
-------------	------------	----------------	----------------	------------	------	-----	-----	----------------

◆ **Generally applicable technologies**

▪ Cropping system								
22	UASB 22	1	18	Precision crop establishment and integrated crop management practices ¹	Bng		✓	
23	UASB 23	2	21	Alternate land use ²	Bng		✓	

Note:

- 1 More specific information required
- 2 Excluded for prioritisation - not specific

Crop production Technologies- UHS, Bagalkot

INDEX

	Technologies	Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■	Generally applicable technologies	4		8		12
	➤ Land preparation					
	➤ Soil/moisture conservation/enrichment	1	24			
	➤ Seed treatment					
	➤ Nutrient management	3	25-27	6	35-40	
	➤ Irrigation/fertigation			2	41-42	
	➤ Intercultivation					
	➤ Use of machinery/equipment					
	➤ Cropping system					
<hr/>						
■	Crop specific Technologies	5	28-32	79	43-121	84
	➤ No.of technologies	5		79		
	➤ No.of crops covered	3		33		
■	Technologies for crop group	2	33-34	3	122-124	5

Selected Crop production Technologies - UHSB

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Generally applicable technologies										
▪ Soil/moisture conservation/enrichment										
24	UHSB 1	22	6	Soil Solarization for weed control in vegetables and high-value crops	Bgk			PRD	64	P3
▪ Nutrient management										
25	UHSB 2	23	1	Phosphate Solubilizers Fungi (Trichoderma sp. and Penicillium sp.)	Bgk			PRD	56	P2
26	UHSB 3	24	7	Furrow application of lime for amelioration of acid soils	Bgk			PRD	60	P1
27	UHSB 4	25	54	Azospirillum	Bgk			PRD	50	P2
◆ Crop specific technologies - Specific to individual crops										
▪ Coconut										
28	UHSB 5	26	36	Coconut Variety: Kalpa Dhenu	Bgk			PRD	52	P3
29	UHSB 6	27	37	Coconut Variety: Kalpa Mitra	Bgk			PRD	52	P3
▪ Banana										
30	UHSB 7	28	8	Banana Shakthi (Micronutrient Mixture for Banana)	Bgk	2.7		PRD	68	P3
▪ Grapes										
31	UHSB 8	29	9	Drip Irrigation schedule for grapes vines raised on Dogridge rootstock	Bgk			PRD	60	P4
32	UHSB 9	30	10	Fertigation Schedule for Thompson Seedless vines raised on Dogridge rootstock	Bgk	21.8		PRD	52	P4
◆ Technologies for crop groups										
33	UHSB 10	31	5	Nutrient Management for Organic Maize-Potato-Onion System	Bgk			PRD	58	P3
34	UHSB 11	32	100	Low cost rainwater harvesting structure (Doba) for fruit orchard establishment in uplands.	Bgk			PRD	52	P4

Excluded Crop production Technologies - UHSB

Tech Sl.No.	SAU Sl.No.	Tech. Excl.No.	Univ. Ref. No.	Technology	Uni.	BCR	POP	Tech. Priority
◆ Generally applicable technologies								
▪ Nutrient management								
35	UHSB-12	3	2	Vermicomposting Technology for Recycling of organic wastes	Bgk			P2
36	UHSB-13	4	3	Compost Inoculant Production Technology.	Bgk			P2
37	UHSB-14	5	4	In-situ green manuring for sustainable productivity in Western Ghat	Bgk			P2
38	UHSB-15	6	55	Phosphate Solubilizing Biofertilizer (PSB)	Bgk			P2
39	UHSB-16	7	56	Vesicular Arbuscular Mycorrhiza (VAM)	Bgk			P2
40	UHSB-17	8	101	Neem Coated Urea	Bgk			P2
▪ Irrigation/fertigation								
41	UHSB-18	9	11	A novel technique for application of irrigation water below surface from surface drip irrigation system for improving water use efficiency ¹	Bgk			
42	UHSB-19	10	53	Pusa Hydrogel Technology ²	Bgk			P5
◆ Crop specific technologies - Specific to individual crops								
▪ Coconut								
43	UHSB-20	11	33	Coconut Variety: Chowghat Orange Dwarf	Bgk			P3
44	UHSB-21	12	34	Coconut Variety: Kera Chandra	Bgk			P3
45	UHSB-22	13	35	Coconut Variety: Chandra Kalpa	Bgk			P3
46	UHSB-23	14	38	Coconut Variety: Kalpa Prathiba	Bgk			P3
47	UHSB-24	15	39	Coconut Variety: Kalpa Raksha	Bgk			P3
48	UHSB-25	16	40	Coconut Variety: Kalpa Sree	Bgk			P3
49	UHSB-26	17	41	Coconut Hybrid: Chandra Sankara	Bgk			P3
50	UHSB-27	18	42	Coconut Hybrid: Kera Sankara	Bgk			P3
51	UHSB-28	19	43	Coconut Hybrid: Kalpa Samrudhi	Bgk			P3
52	UHSB-29	20	44	Coconut Variety: IND 045S	Bgk			P3
53	UHSB-30	21	45	Coconut Variety: IND 048S	Bgk			P3
54	UHSB-31	22	81	Intercropping in Coconut garden ²	Bgk	5.0		
55	UHSB-32	23	92	Fertigation of coconut ²	Bgk			
▪ Arecanut								
56	UHSB-33	24	21	Arecanut Variety: Mangala	Bgk			P3
57	UHSB-34	25	22	Arecanut Variety: Sumangala	Bgk			P3
58	UHSB-35	26	23	Arecanut Variety: Sreemangala	Bgk			P3
59	UHSB-36	27	24	Arecanut Variety: Mohitnagar	Bgk			P3
60	UHSB-37	28	25	Arecanut Hybrid: VTLAH - 2	Bgk			P4
61	UHSB-38	29	26	Arecanut Variety: Shriwardhan	Bgk			P3
62	UHSB-39	30	27	Arecanut Variety: Nalbari	Bgk			P3
▪ Cashew								
63	UHSB-40	31	18	Cashew Variety: NRCC Selection 2	Bgk			P3
64	UHSB-41	32	19	Cashew Variety: Bhaskara	Bgk			P3
65	UHSB-42	33	58	Cashew variety: Vengurla-3	Bgk			P3
66	UHSB-43	34	64	Intercropping in cashew ²	Bgk			
67	UHSB-44	35	79	Performance of Cashew varieties ²	Bgk			

Excluded Crop production Technologies - UHSB

Tech Sl.No.	SAU Sl.No.	Tech. Excl.No.	Univ. Ref. No.	Technology	Uni.	BCR	POP	Tech. Priority
▪ Cocoa								
68	UHSB-45	36	28	Cocoa Variety: VTLCC1	Bgk			P3
69	UHSB-46	37	29	Cocoa Hybrid: VTLCH1	Bgk			P4
70	UHSB-47	38	30	Cocoa Hybrid: VTLCH2	Bgk			P4
71	UHSB-48	39	31	Cocoa Hybrid: VTLCH3	Bgk			P4
72	UHSB-49	40	32	Cocoa Hybrid: VTLCH4	Bgk			P4
▪ Oil palm								
73	UHSB-50	41	20	Oil palm Variety: Dwarf Tenera	Bgk			P3
74	UHSB-51	42	82	Suitable vegetable crops for intercropping in young Oil palm gardens	Bgk			P3
75	UHSB-52	43	91	Studies on fertigation in oil palm through micro irrigation	Bgk			P2
▪ Sesbania (Agase)								
▪ Erythrina								
76	UHSB-53	44	60	The gallfly resistant Erythrina sps ²	Bgk			
▪ Chilli								
77	UHSB-54	45	89	Nursery management in Chilli ²	Bgk			
78	UHSB-55	46	98	Response of Chilli to different levels of nutrients and jeevamruta application ²	Bgk			
▪ Garlic								
79	UHSB-56	47	84	Performance of Garlic under organic condition ²	Bgk			
▪ Coriander								
80	UHSB-57	48	83	Spacing and nutrient levels for seed yield in Coriander ²	Bgk			
▪ Coleus								
81	UHSB-58	49	86	Supplementation of inorganic sources through organics to Coleus ²	Bgk			
82	UHSB-59	50	59	Coleus ²	Bgk			
83	UHSB-60	51	93	Planting method and INM in medicinal coleus ²	Bgk			
▪ Kalmegh								
84	UHSB-61	52	85	Spacing on dry herbage yield of Kalmegh ²	Bgk			
▪ Mucuna								
85	UHSB-62	53	80	Mucuna genotypes for growth, yield and quality parameter ²	Bgk			
▪ Methi								
86	UHSB-63	54	70	Effect of spacing and fertilizer doses on seed yield of Fenugreek ²	Bgk			
87	UHSB-64	55	74	Effect of organic, integrated and inorganic practices on the yield of Methi ²	Bgk			

Excluded Crop production Technologies - UHSB

Tech Sl.No.	SAU Sl.No.	Tech. Excl.No.	Univ. Ref. No.	Technology	Uni.	BCR	POP	Tech. Priority
	Palak							
88	UHSB-65	56	73	Effect of organic, integrated and inorganic practices on the yield of Palak ²	Bgk			
	Banana							
	Mango							
89	UHSB-66	57	12	Mango Variety: Ambika	Bgk			P3
90	UHSB-67	58	13	Mango Variety: Arunika	Bgk			P3
	Papaya							
91	UHSB-68	59	17	Papaya Variety: Arka Prabhath	Bgk			P3
	Grapes							
	Guava							
92	UHSB-69	60	14	Guava Variety: Lalit	Bgk			P3
93	UHSB-70	61	15	Guava Variety: Shweta	Bgk			P3
94	UHSB-71	62	16	Guava Hybrid: Arka Kiran	Bgk			P3
95	UHSB-72	63	65	High density planting in guava cv. Sardar	Bgk			P4
96	UHSB-73	64	66	Standardization of optimum level of pruning in guava cv. Sardar	Bgk			P2
	Mosambi							
	Fig							
	Syzygium (Jamun)							
97	UHSB-74	65	57	In-situ soft wood grafting technique in Jamun	Bgk			P2
	Tomato							
98	UHSB-75	66	50	Tomato : Arka Abhijit - high yielding F1 hybrid with resistance to bacterial wilt for fresh market.	Bgk			P3
99	UHSB-76	67	51	Tomato : Arka Ananya, High yielding F1 hybrid with combined resistance to ToLCV and Bacterial wilt.	Bgk			P4
100	UHSB-77	68	62	Effect of planting geometry on yield and quality of tomato under shade house ²	Bgk	7.41		
	Onion							
101	UHSB-78	69	61	Bulb size on growth and seed yield of Onion cv. Arka kalyan ²	Bgk			
102	UHSB-79	70	67	Varietal potential in onion ²	Bgk			
	Brinjal							
103	UHSB-80	71	49	Brinjal (F1): Arka Anand	Bgk			P3
104	UHSB-81	72	52	Brinjal : Arka Anand, F1 hybrid resistant to bacterial wilt.	Bgk			P3
	Cucumber							
105	UHSB-82	73	72	Effect of organic, integrated and inorganic practices on the yield of Cucumber	Bgk			
	Radish							
106	UHSB-83	74	75	Effect of organic, integrated and inorganic practices on the yield of Radish ²	Bgk			

Excluded Crop production Technologies - UHSB

Tech Sl.No.	SAU Sl.No.	Tech. Excl.No.	Univ. Ref. No.	Technology	Uni.	BCR	POP	Tech. Priority
▪ Drumstick								
107	UHSB-84	75	76	High density planting system of Drumstick ²	Bgk			
▪ Cauliflower								
108	UHSB-85	76	48	Cauliflower Variety: Arka Spoorthi	Bgk			P3
▪ Bottle gourd								
109	UHSB-86	77	97	Integrated nutrient management in Bottle gourd ²	Bgk			
▪ Rose								
110	UHSB-87	78	77	Performance of rose genotypes under naturally ventilated polyhouse	Bgk			
▪ Gerbera								
111	UHSB-88	79	78	Performance of Gerbera genotypes under naturally ventilated polyhouse ²	Bgk			
112	UHSB-89	80	90	Collection and evaluation of gerbera under naturally ventilated poly house ²	Bgk			
113	UHSB-90	81	95	Evaluation of gerbera cultivars under different growing conditions ²	Bgk			
▪ Anthurium								
114	UHSB-91	82	68	Anthurium varieties under shade house condition ²	Bgk			
▪ Gladiolus								
115	UHSB-92	83	69	Crop improvement in gladiolus ²	Bgk			
116	UHSB-93	84	96	Crop improvement in gladiolus ²	Bgk			
▪ China aster								
117	UHSB-94	85	63	Nutritional studies in China aster Cv. Kamini ²	Bgk			
▪ Gaillardia								
▪ Potato								
118	UHSB-95	86	71	Potential yielding Potato varieties ²	Bgk			
▪ Sweet Potato								
119	UHSB-96	87	46	Sweet Potato Variety: CARI Swarna ²	Bgk			
120	UHSB-97	88	47	Sweet Potato Variety: CARI Aparna	Bgk			P3
121	UHSB-98	89	87	Potato Variety Kufri Gaurav ²	Bgk	2.52		
◆ Technologies for crop groups								
122	UHSB-99	90	88	Standardization of propagation techniques in fruit crops ²	Bgk			
123	UHSB-100	91	94	Standardization of propagation techniques in fruit crops ²	Bgk			
124	UHSB-101	92	99	AM fungi for rooting in Jamun, Mango, Papaya and Lime seedling and fig cutting.	Bgk			P2

Note: 1 Excluded for prioritization
2 Needs more information

Crop production Technologies- UAS, Raichur

INDEX

	Technologies	Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■ Generally applicable technologies				2	128-129	2
➤	Land preparation					
➤	Soil/moisture conservation/enrichment					
➤	Seed treatment					
➤	Nutrient management					
➤	Irrigation/fertigation					
➤	Intercultivation					
➤	Use of machinery/equipment					
➤	Cropping system			2		
■ Crop specific Technologies		3	125-127	35	130-164	38
➤	No.of technologies	3		35		
➤	No.of crops covered	2		16		

Selected Crop production Technologies - UASR

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
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◆ Crop specific technologies - Specific to individual crops

■ Foxtail millet (Navane)										
125	UASR 1	33	29	ಸುಧಾರಿತ ನವಣೆ ತಳಿಯಾದ ಹೆಚ್ ಎಮ್ ಟಿ 100-1	Rch			PRD	58	P2
■ Tur										
126	UASR 2	34	1	ಅಧಿಕ ಇಳುವರಿ ಕೊಡುವ ರೋಗ ಮುಕ್ತ ಹೊಸ ತೋಗರಿ ತಳಿ - TS-3R	Rch			PRD	54	P2
127	UASR 3	35	2	ತೋಗರಿಯ ತಳಿ: GRG-811	Rch			PRD	54	P2

Excluded Crop Production Technologies - UASR

Tech Sl.No.	SAU Sl.No.	Tech. Excl.No.	Univ. Ref. No.	Technology	Uni.	BCR	POP	Tech. Priority
◆ Generally applicable technologies								
▪ Cropping system								
128	UASR 4	93	39	ನಿಖರ ಕೃಷಿ ಅಳವಡಿಸುವುದರಿಂದ ಕಡಿಮೆ ಖರ್ಚಿನಲ್ಲಿ ಹೆಚ್ಚಿನ ಇಳುವರಿಯನ್ನು ಪಡೆಯಬಹುದು	Rch		✓	P4
129	UASR 5	94	40	ಸಮಗ್ರ ಕೃಷಿ ಪದ್ಧತಿ	Rch			P5
◆ Crop specific technologies - Specific to individual crops								
▪ Paddy								
130	UASR 6	95	14	ಭತ್ತದ ತಳಿ: IET-19251	Rch			P2
131	UASR 7	96	15	ಭತ್ತ ಜಿ.ಜಿ.ವಿ-05-01 : ಗಂಗಾವತಿ ಸೋನ	Rch			P2
132	UASR 8	97	16	ಸಾವಯವ ಪದ್ಧತಿಯಲ್ಲಿ ಭತ್ತದ ಬೀಜೋಪಚಾರ ¹	Rch			P2
133	UASR 9	98	17	ಭತ್ತದ ತಳಿ- ಸಿರಿ 1253 ¹	Rch			P2
134	UASR 10	99	18	ಭತ್ತದಲ್ಲಿ ಕೂರಿಗೆ ಬೇಸಾಯ ¹	Rch			P2
▪ Maize								
135	UASR 11	100	30	ಹಿಂಗಾರಿ ಜೋಳ ಬೇಸಾಯ ¹	Rch			P1
▪ Foxtail millet (Navane)								
▪ Tur								
136	UASR 12	101	3	ತೊಗರಿ: ಟಿ.ಎಸ್.-3 ಆರ್ 2010 ¹	Rch			P2
137	UASR 13	102	4	ತೊಗರಿಯಲ್ಲಿ ನಾಟಿ ಪದ್ಧತಿ	Rch			P3
138	UASR 14	103	5	ತೊಗರಿ ಬೀಜಕ್ಕೆ ಲೇಪನ ಮಾಡುವುದು (ನಿರ್ಗಂಜಿಗೊಳಿಸುವುದು) ¹	Rch			P2
139	UASR 15	104	6	ಸಂರಕ್ಷಿತ ಕೃಷಿಯಲ್ಲಿ ತೊಗರಿ ¹	Rch			P1
140	UASR 16	105	7	ತೊಗರಿ ಬೆಳೆಯಲ್ಲಿ ತೇವಾಂಶ ಕಾಪಾಡುವುದು ¹	Rch			P2
141	UASR 17	106	8	ತೊಗರಿ ಬೆಳೆಯಲ್ಲಿ ಬೇರಿನ ಗಂಟುಗಳು ಮತ್ತು ಇಳುವರಿ ಮೇಲೆ ಪಿಎಸ್‌ಬಿ ತಳಿಗಳ ಪ್ರಭಾವ	Rch			P2
142	UASR 18	107	9	ತೊಗರಿಯಲ್ಲಿ ಬೆಳವಣಿಗೆ ನಿಯಂತ್ರಕದ (ಪಲ್ಸ್ ಮ್ಯಾಜಿಕ್) ಬಳಕೆ ¹	Rch			P2
143	UASR 19	108	10	ವ್ಯಾಮ್ (ವಿಎಎಂ) ಯಿಂದ ತೊಗರಿಯಲ್ಲಿ ಪೊಟ್ಟಾಷ್ ನಿರ್ವಹಣೆ ¹	Rch			P2
▪ Bengal gram								
144	UASR 20	109	22	ಕಡಲೆ ಉತ್ಪಾದನೆ ¹	Rch			
145	UASR 21	110	23	ಕಡಲೆ ಬೀಜಕ್ಕೆ ಲೇಪನ ಮಾಡುವುದು (ನಿರ್ಗಂಜಿಗೊಳಿಸುವುದು) ¹	Rch			
146	UASR 22	111	24	ಕಡಲೆಯಲ್ಲಿ ಬೀಜ ಮೃದುಗೊಳಿಸುವಿಕೆ ಮತ್ತು ಪಿ.ಜಿ.ಆರ್ ಸಿಂಪರಣೆ ¹	Rch			

Excluded Crop Production Technologies - UASR

Tech Sl.No.	SAU Sl.No.	Tech. Excl.No.	Univ. Ref. No.	Technology	Uni.	BCR	POP	Tech. Priority
Green gram								
147	UASR 23	112	25	ಹೆಸರು-ಬಿ ಜಿ. ಎಸ್-9 ¹	Rch			
148	UASR 24	113	26	ಹೆಸರು ಬೇಸಾಯ ¹	Rch		✓	
149	UASR 25	114	27	ಹೆಸರು ತಳಿ : ಬಿ. ಜಿ. ಎಸ್-9(ಸೋಮನಾಥ) ¹	Rch			
Groundnut								
150	UASR 26	115	33	ಶೇಂಗಾ ಬೀಜಕ್ಕೆ ಲೇಪನ ಮಾಡುವುದು (ನಿರ್ಗುಂಜಿಗೊಳಿಸುವುದು) ¹	Rch			
Sunflower								
151	UASR 27	116	11	ಸೂರ್ಯಕಾಂತಿ ಹೈಬ್ರಿಡ್ ಆರ್ ಎಸ್ ಎಫ್ ಹೆಚ್-130	Rch			P4
152	UASR 28	117	12	ಹೊಸ ಸೂರ್ಯಕಾಂತಿ ಸುಧಾರಿತ ತಳಿ ಆರ್.ಎಸ್.ಎಫ್.ವಿ-901	Rch			P3
153	UASR 29	118	13	ಸೂರ್ಯಕಾಂತಿ ಹೈಬ್ರಿಡ್: RSFH-1887	Rch			P4
Sesame								
154	UASR 30	119	28	ಎಳ್ಳಿನ ಹೊಸತಳಿ ಡಿ ಎಸ್ ಎಸ್ 9	Rch			P2
Cotton								
155	UASR 31	120	19	ಹತ್ತಿ ತಳಿ: SCS-793	Rch			P3
156	UASR 32	121	20	ಹತ್ತಿ ¹	Rch			
157	UASR 33	122	21	ಹತ್ತಿ ಬೀಜಕ್ಕೆ ಲೇಪನ ಮಾಡುವುದು (ನಿರ್ಗುಂಜಿಗೊಳಿಸುವುದು) ¹	Rch			
Soyabean								
158	UASR 34	123	36	ಸೋಯಾಅವರೆ ತಳಿ ಡಿಎಸ್‌ಬಿ-21(ಅಳವಡಿಕೆ) ¹	Rch			
Mulberry								
159	UASR 35	124	32	ಹಿಮ್ಮನೇರಳೆ ಬೇಸಾಯ ¹	Rch			
Sesbania (Agase)								
160	UASR 36	125	37	ಅಗಸೆ ತಳಿ: ಎನ್. ಎಲ್.-115 ¹	Rch			
Mosambi								
161	UASR 37	126	35	ಮೋಸಂಬಿ ಹಣ್ಣುಗಳಿಗೆ ಕೊಯ್ಲೋತ್ತರ ಉಪಚಾರ ¹	Rch			
Fig								
162	UASR 38	127	38	ಅಂಜೂರು ಹಣ್ಣುಗಳಿಗೆ ಕೊಯ್ಲೋತ್ತರ ತಂತ್ರಜ್ಞಾನ ಪಕ್ಕತೆ ಮತ್ತು ಪಕ್ಕತೆಯ ಗುಣಧರ್ಮಗಳು ¹	Rch			
Tomato								
163	UASR 39	128	31	ಟೊಮ್ಯಾಟೋ : ಪಿ.ಟಿ.ಆರ್.-6	Rch			P3
Gaillardia								
164	UASR 40	129	34	ಗೈಲಾರ್ಡಿಯಾ ¹	Rch			

Note: 1 Needs more information

Crop production Technologies- UAS, Dharwad

INDEX

	Technologies	Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■ Generally applicable technologies		2	165-166			2
	➤ Land preparation					
	➤ Soil/moisture conservation/enrichment					
	➤ Seed treatment					
	➤ Nutrient management					
	➤ Irrigation/fertigation					
	➤ Intercultivation					
	➤ Use of machinery/equipment	2	165-166			
	➤ Cropping system					
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■ Crop specific Technologies		10	167-176	177	1	187
	➤ No.of technologies	10			1	
	➤ No.of crops covered	6			1	

Selected Crop production Technologies - UASD

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Generally applicable technologies										
▪ Use of machinery/equipment										
165	UASD 1	36	2	Mechanized sowing	Dwd			PRD	54	P2
166	UASD 2	37	3	Mechanized sowing	Dwd			PRD	60	P2
◆ Crop specific technologies - Specific to individual crops										
▪ Paddy										
167	UASD 3	38	6	Mechanized transplanting and drill sowing in paddy	Dwd	1.6	✓	PRD	64	P2
▪ Maize										
168	UASD 4	39	5	Timely irrigation at critical stages of the crop in maize	Dwd	2.2	✓	PRD	58	P1
169	UASD 5	40	8	Mechanized sowing using tractor drawn seed-cum-fertilizer drill in maize crop	Dwd	1.7		PRD	60	P3
▪ Tur										
170	UASD 6	41	1	Mechanized sowing with tractor drawn seed-cum-fertilizer drill for chickpea	Dwd	1.8		PRD	62	P2
171	UASD 7	42	1	Dry sowing of pigeon pea seeds before arrival of monsoon / in anticipation of arrival of monsoon	Dwd	4.5		PRD	78	P1
▪ Groundnut										
172	UASD 8	43	4	Not to practice intercultivation at 45 DAS onwards in groundnut	Dwd	4.7	✓	PRD	76	P1
173	UASD 9	44	11	Mechanized sowing using tractor drawn seed-cum-fertilizer drill (Groundnut)	Dwd	2		PRD	54	P4
▪ Safflower										
174	UASD 10	45	10	Mechanized sowing-cum-fertilizer application operation in safflower	Dwd	2		PRD	56	P3
▪ Cotton										
175	UASD 11	46	6	Bt cotton - Foliar spray of micronutrient combo	Dwd	7.2		PRD	64	P5
176	UASD 12	47	7	Bt cotton - Foliar spray for leaf reddening	Dwd	6		PRD	62	P5

Excluded Crop Production Technologies - UASD

Tech Sl.No.	SAU Sl.No.	Tech. Excl.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Tech. Priority
	▪	Tur						
177	UASD 13	130		Mechanized sowing in pigeon pea with wider spacing for easy crop management	Dwd	3		P3



ತಂತ್ರಜ್ಞಾನಗಳ ಸಮಗ್ರ ಕೈಪಿಡಿ

Appendix - B

ಬೆಳೆ ಸಂರಕ್ಷಣಾ ತಂತ್ರಜ್ಞಾನಗಳು



ಖರ್ಚಿಲ್ಲದ ಮತ್ತು ಕಡಿಮೆ ವೆಚ್ಚದ ತಂತ್ರಜ್ಞಾನಗಳನ್ನು ಪ್ರಚಲಿತ ಪಡಿಸುವ ದಿಕ್ಕಿನಲ್ಲಿ ಕರ್ನಾಟಕ ಕೃಷಿ ಬೆಲೆ ಆಯೋಗದ ಒಂದು ವಿಶಿಷ್ಟ ಪ್ರಯತ್ನ

ದಾಖಲೀಕರಣ ಯೋಜನಾ ಸಲಹೆಗಾರರು:

ಆಗ್ರಿಇನ್‌ಸೈಟ್ಸ್ ಕನ್ಸಲ್ಟನ್ಸಿ ಸರ್ವಿಸಸ್ ಪ್ರೈವೇಟ್ ಲಿಮಿಟೆಡ್,

ನಂ.71, 5ನೇ ಮುಖ್ಯ ರಸ್ತೆ, 2ನೇ 'ಎ' ಅಡ್ಡ ರಸ್ತೆ, ಎಜಿ ಕಾಲೋನಿ, ಆನಂದ ನಗರ, ಬೆಂಗಳೂರು.-560024.

ದೂರವಾಣಿ: 9449028395, 7259703394.

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Crop protection Technologies-UAS, Bangalore

INDEX

Technologies		Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■ Generally applicable technologies		1	178	-	-	1
■ Crop specific Technologies		6	179-184	22	185-206	28
▶	No.of technologies	6		22		
▶	No.of crops covered	6		11		

Selected Crop Protection Technologies - UASB

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Generally applicable technologies										
178	UASB 24	48	12	Management of Giant African snail	Bng		✓	PRT	60	P2
◆ Crop specific technologies - Specific to individual crops										
▪ Paddy										
179	UASB 25	49	2	Bio management of Sheath blight of Paddy	Bng	1.4	✓	PRT	52	P2
▪ Coconut										
180	UASB 26	50	29	Integrated management of ganoderma in coconut	Bng	1.6	✓	PRT	60	P2
▪ Ginger										
181	UASB 27	51	7	Management of Rhizome rot in Ginger	Bng	42.9	✓	PRT	60	P2
▪ Tomato										
182	UASB 28	52	1	To develop leaf curl virus resistant, high yielding tomato variety with consumer preference	Bng		✓	PRT	54	P2
▪ Pole beans										
183	UASB 29	53	8	Integrated management of Yellow Mosaic virus disease in Pole bean	Bng	4.4	✓	PRT	68	P2
▪ Potato										
184	UASB 30	54	3	Integrated management of late blight in potato	Bng	3.4	✓	PRT	52	P2

Excluded Crop Protection Technologies - UASB

Tech.No.	SAU.No.	Excl. No.	Unvi. Ref.No.	Technology	Uni.	BCR	POP	Tech. Priority
◆ Crop specific technologies - Specific to individual crops								
▪ Paddy								
185	UASB 31	131	23	Management of sheath blight of paddy ¹	Bng		✓	
186	UASB 32	132	24	Management of seed borne diseases of paddy in nursery ¹	Bng		✓	
187	UASB 33	133	25	Management of leaf and brown spot disease in paddy ¹	Bng		✓	
▪ Tur								
188	UASB 34	134	5	evaluation of new insecticides for the management of pod borers in pigeon pea ¹	Bng	1.8	✓	
189	UASB 35	135	6	seed treatment for management of wilt disease of pigeon pea ¹	Bng		✓	
190	UASB 36	136	21	Disease control of sterility mosaic in red grams ¹	Bng	3.2	✓	
▪ Bengal gram								
191	UASB 37	137	22	Management of root rot in bengal gram ¹	Bng	80.0	✓	
▪ Groundnut								
192	UASB 38	138	9	Efficacy of new insecticides molecules for the management of groundnut pod borer ¹	Bng		✓	
193	UASB 39	139	10	Efficacy of new insecticides as fabric treatment for the management of cross infestation of insect pests of stored seeds ¹	Bng		✓	
194	UASB 40	140	17	Variety (Chintamani - 2) release for yield, disease and drought tolerance / resistance ¹	Bng		✓	
195	UASB 41	141	19	Groundnuts: KCG-6: High yield, leaf spot and rust resistant ¹	Bng		✓	
196	UASB 42	142	20	Groundnut: GKVK-5: High yield, leaf spot and rust resistant	Bng		✓	P2
197	UASB 43	143	27	Management of stem rot disease in the groundnut ¹	Bng		✓	
198	UASB 44	144	28	Management of leaf spots in groundnut ¹	Bng		✓	
▪ Sunflower								
199	UASB 45	145	16	Management of Capitulum borer, Helicoverpa armigera in Sunflower ¹	Bng		✓	
▪ Soyabean								
200	UASB 46	146	18	Development of soybean variety POOJA for high yielding along with resistance to pest and diseases ¹	Bng		✓	
▪ Mulberry								
201	UASB 47	147	11	Eco-friendly IPM module for Mulberry leaf roller, Diaphania pulverulentalis (Hampson) ¹	Bng	1.5	✓	

Excluded Crop Protection Technologies - UASB

Tech.No.	SAU.No.	Excl. No.	Unvi. Ref.No.	Technology	Uni.	BCR	POP	Tech. Priority
◆ Crop specific technologies - Specific to individual crops								
▪ Tomato								
202	UASB 48	148	14	Chemical control of two spotted spider mite, Tetranychus urticae infesting tomato crop using newer acaricidal molecules ¹	Bng		✓	
▪ Brinjal								
203	UASB 49	149	4	evaluation of newer acaricides against Red spider mites infesting Brinjal ¹	Bng	12.8	✓	
▪ Ladies finger								
204	UASB 50	150	15	Chemical control of two spotted spider mite, Tetranychus urticae infesting okra using newer acaricidal molecules ¹	Bng		✓	
▪ Pumpkin								
205	UASB 51	151	13	Management of root knot nematode infecting pumpkin through use of organic amendments	Bng	25.7	✓	P2
206	UASB 52	152	26	Integrated management of downy mildew in cucurbit ¹	Bng	12.6	✓	

Note: 1 Need more information

Crop protection Technologies-UHS, Bagalkot

INDEX

	Technologies	Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■	Generally applicable technologies			8	207-214	8
■	Crop specific Technologies			34	215-248	34
	➤ No.of technologies			34		
	➤ No.of crops covered			19		

Excluded Crop Protection Technologies - UHSB

Tech.No.	SAU.No.	Excl. No.	Unvi. Ref.No.	Technology	Uni.	BCR	POP	Tech Priority
◆ Generally applicable technologies								
207	UHSB 102	153	2	Microbial Bio control Agents	Bgk			P2
208	UHSB 103	154	3	Pheromone Traps for Mango and Cucurbits	Bgk			P2
209	UHSB 104	155	4	Neem & Pongamia Soaps	Bgk			P2
210	UHSB 105	156	8	Microbial Biocontrol Agents	Bgk			P2
211	UHSB 106	157	9	Eco-Friendly Waste Water Treatment	Bgk			P2
212	UHSB 107	158	11	Pesticidal Oxime Esters	Bgk			P2
213	UHSB 108	159	12	Carrier based biofertilizers Azotobacter	Bgk			P2
214	UHSB 109	160	19	The application of Methomyl ¹	Bgk			
◆ Crop specific technologies - Specific to individual crops								
▪ Paddy								
215	UHSB 110	161	21	Nicking of Indian lique rice Abrus precatorious seed without damaging the embryo to enhance germination percentage ¹ .	Bgk	14		
▪ Arecanut								
216	UHSB 111	162	24	Inflorescence blight of Arecanut ¹	Bgk			
▪ Tamarind								
217	UHSB 112	163	16	Dipping tamarind seeds Cow urine ¹	Bgk			
▪ Chilli								
218	UHSB 113	164	13	Control of damping off in chilli ¹	Bgk	219		
219	UHSB 114	165	14	Control of powdery mildew and fruit rot in chilli ¹	Bgk	8.6		
220	UHSB 115	166	26	Management of fruit rot and powdery mildew of Chilli ¹	Bgk	17		
221	UHSB 116	167	29	Bio-efficacy of Panchagavya to Chilli thrips and mites ¹	Bgk			
▪ Pepper								
222	UHSB 117	168	41	Management of nursery diseases of Black pepper under green house condition ¹	Bgk			
▪ Garlic								
223	UHSB 118	169	34	Garlic thrips management ¹	Bgk	5.5		

Tech.No.	SAU.No.	Excl. No.	Unvi. Ref.No.	Technology	Uni.	BCR	POP	Tech Sl.No.
▪ Banana								
224	UHSB 119	170	5	Liquid Formulation of Beauveria Bassiana for Banana Corm Weevil and Stem Weevil	Bgk			P2
225	UHSB 120	171	6	Nemacinus (Paecilomyces Lilacinus), Nemacens (Pseudomonas Fluorescens) (Bio Pesticides For Banana Nematodes)	Bgk			P2
226	UHSB 121	172	7	Nucleic Acid Based Diagnostics for Banana Viruses ²	Bgk			
227	UHSB 122	173	20	Technology for weed management in Banana	Bgk			P2
228	UHSB 123	174	27	Studies on epidemiology of sigatoka leaf spot disease of Banana ¹	Bgk	49		
229	UHSB 124	175	31	Management of burrowing nematode in Banana ¹	Bgk	9.9		
230	UHSB 125	176	38	Biorationals for the management of burrowing nematode of banana cv. Rajapuri ¹	Bgk			
231	UHSB 126	177	39	Screening of Banana germplasm against nematodes ¹	Bgk			
232	UHSB 127	178	40	Management of sigatoka leaf spot in Banana ¹	Bgk	17		
233	UHSB 128	179	42	Management of Post harvest disease of Banana ¹	Bgk			
▪ Sapota								
234	UHSB 129	180	1	Management of Seed Borer in Sapota ¹	Bgk	24		
235	UHSB 130	181	22	Standardization of stage wise requirement of nutrients for sapota ¹	Bgk			
▪ Guava								
236	UHSB 131	182	15	Dipping guava seeds in Cow urine ¹	Bgk			
▪ Pomegranate								
237	UHSB 132	183	28	Survival ability of Xanthomonas axonopodis pv. punicae causing bacterial blight of Pomegranate ¹	Bgk			
▪ Watermelon								
238	UHSB 133	184	35	Bioefficacy of Cyazypyr 10 OD against insect pests of Watermelon ¹	Bgk	4.8		
▪ Carissa (Karonda)								
239	UHSB 134	185	18	Dipping karonda seeds in Cow urine ¹	Bgk			

Tech.No.	SAU.No.	Excl. No.	Unvi. Ref.No.	Technology	Uni.	BCR	POP	Tech Sl.No.
	▪	Wood apple						
240	UHSB 135	186	17	Dipping wood apple seeds in Cow urine ¹	Bgk			
	▪	Tomato						
241	UHSB 136	187	23	Management of early and late blight of tomato ¹	Bgk	15		
	▪	Onion						
242	UHSB 137	188	30	Bio-efficacy of Panchagavya to Onion thrips ₁	Bgk	5.2		
243	UHSB 138	189	33	Onion thrips management ¹	Bgk	2.2		
	▪	Cucumber						
244	UHSB 139	190	10	ELISA -Kit for Detection of Cucumber Mosaic Virus ¹	Bgk			
	▪	Ridge gourd						
245	UHSB 140	191	37	Bioefficacy of Cyazypyr 10 OD against insect pests of Ridge gourd ¹	Bgk	20		
	▪	Bitter gourd						
246	UHSB 141	192	32	Response of Bitter gourd to boric acid ¹	Bgk			
247	UHSB 142	193	36	Bioefficacy of Cyazypyr 10 OD against insect pests of Bitter gourd ¹	Bgk	24		
	▪	Potato						
248	UHSB 143	194	25	Management of late blight of Potato ¹	Bgk		✓	

Note: 1 Needs more information
2 Excluded for prioritisation (not for farmers)

Crop protection Technologies-UAS, Raichur

INDEX

	Technologies	Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■	Generally applicable technologies	1	249			1
■	Crop specific Technologies	1	250	42	251-292	43
	➤ No.of technologies	1		42		
	➤ No.of crops covered	1		17		

Selected Crop Protection Technologies - UASR

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Generally applicable technologies										
249	UASR 41	55	42	ಪ್ರಮುಖ ಬೆಳೆಗಳಲ್ಲಿ ಕೀಟಗಳ ನಿರ್ವಹಣೆಗೆ ಇನ್ಸೆಕ್ಟಿವ್ ತಂತ್ರಜ್ಞಾನ	Rch			PRT	64	P1
◆ Crop specific technologies - Specific to individual crops										
▪ Brinjal										
250	UASR 42	56	27	ಬದನೆ ಬೆಳೆಯಲ್ಲಿ ರಸ ಹೀರುವ ಮತ್ತು ಕುಡಿ ಹಾಗೂ ಕಾಯಿ ಕೊರೆಯುವ ಹುಳುಗಳ ನಿಯಂತ್ರಣ	Rch		✓	PRT	60	P3

Excluded Crop Protection Technologies - UASR

Tech.No.	SAU.No.	Excl. No.	Sl. No.	Unvi. Ref.No.	Proc. No.	Technology	Uni.	BCR	POP	Tech. Priority
◆ Crop specific technologies - Specific to individual crops										
▪ Paddy										
251	UASR 43	195	247	6	188	ಭತ್ತದಲ್ಲಿ ಜೈವಿಕ ತೀವ್ರ ಪದ್ಧತಿಗಳ ಅಳವಡಿಕೆಯಲ್ಲಿ ಮುಖ್ಯ ರೋಗಗಳ ನಿರ್ವಹಣೆ	Rch			P2
252	UASR 44	196	248	7	189	ನಾಟಿ ಭತ್ತದಲ್ಲಿ ಕಳೆ ನಿರ್ವಹಣೆ ¹	Rch			
253	UASR 45	197	249	8	190	ಭತ್ತದಲ್ಲಿ ಬೆಂಕಿ ರೋಗ ನಿರ್ವಹಣೆ ¹	Rch		✓	
▪ Maize										
254	UASR 46	198	256	15	191	ಜೋಳದಲ್ಲಿ ಕಾಂಡ ಕೊರೆಯುವ ಹುಳುವಿನ ನಿರ್ವಹಣೆ ¹	Rch		✓	
255	UASR 47	199	257	16	192	ಜೋಳದ ಬೆಳೆಯಲ್ಲಿ ಸಸ್ಯ ಸಂರಕ್ಷಣಾ ಕ್ರಮಗಳು ¹	Rch		✓	
256	UASR 48	200	277	36	193	ಗೋವಿನ ಜೋಳದಲ್ಲಿ ಕಳೆಗಳ ನಿರ್ವಹಣೆ ¹	Rch			
257	UASR 49	201	278	37	194	ಗೋವಿನ ಜೋಳದಲ್ಲಿ ಕಾಂಡ ಕೊರೆಯುವ ಹುಳುವಿನ ನಿರ್ವಹಣೆ ¹	Rch		✓	
258	UASR 50	202	279	38	195	ಗೋವಿನ ಜೋಳದಲ್ಲಿ ಅಗಲವಾದ ಎಲೆಗಳ ಕಳೆಗಳ ನಿರ್ವಹಣೆ ¹	Rch			
259	UASR 51	203	280	39	196	ನೀರಾವರಿ ಗೋವಿನಜೋಳದಲ್ಲಿ ಎಲೆ ಚುಕ್ಕೆ ರೋಗ ¹	Rch			
260	UASR 52	204	281	40	197	ಗೋವಿನಜೋಳ-ಕಡಲೆ ಬೆಳೆ ಪದ್ಧತಿಯಲ್ಲಿ ರಾಸಾಯನಿಕ ಗೊಬ್ಬರಗಳ ನಿರ್ವಹಣೆ ¹	Rch			
261	UASR 53	205	282	41	198	ಗೋವಿನಜೋಳ ಫೂಸೇರಿಯಂ ಬುಡ ಕೊಳೆ ರೋಗ ¹	Rch		✓	
▪ Tur										
262	UASR 54	206	242	1	203	ತೊಗರಿಯಲ್ಲಿ ಕಾಯಿಕೊರಕದ ನಿರ್ವಹಣೆ ¹	Rch		✓	
263	UASR 55	207	243	2	204	ತೊಗರಿ ಬೆಳೆಯಲ್ಲಿ ಕಾಯಿ ಕೊರಕ ಹುಳುವಿನ ನಿಯಂತ್ರಣ ¹	Rch		✓	
264	UASR 56	208	244	3	205	ತೊಗರಿ ಸಸ್ಯ ಸಂರಕ್ಷಣಾ ಕ್ರಮಗಳು : ಚುಕ್ಕೆ ಕಾಯಿ ಕೊರಕ / ಬಲೆ ಕಟ್ಟುವ ಕೀಟ ಂ	Rch		✓	
265	UASR 57	209	245	4	206	ತೊಗರಿ ಸಸ್ಯ ಸಂರಕ್ಷಣಾ ಕ್ರಮಗಳು ¹	Rch		✓	
266	UASR 58	210	246	5	207	ತೊಗರಿ ಬೆಳೆಯಲ್ಲಿ ರಾಸಾಯನಿಕ ಕಳೆನಾಶಕಗಳ ಬಳಕೆ ಂ	Rch			
▪ Bengal gram										
267	UASR 59	211	251	10	209	ಕಡಲೆಯಲ್ಲಿ ಕಾಯಿಕೊರಕ ಹುಳುವಿನ ನಿರ್ವಹಣೆ ¹	Rch			
268	UASR 60	212	252	11	210	ಕಡಲೆ ಬೆಳೆಯಲ್ಲಿ ನೆಟಿ ರೋಗ/ ಸಿಡಿ ರೋಗ/ ಸೊರಗು ರೋಗ ಮತ್ತು ಬೇರು ಕೋಳಿ ರೋಗಗಳ ನಿಯಂತ್ರಣ ಂ	Rch		✓	
269	UASR 61	213	253	12	211	ಕಡಲೆಯಲ್ಲಿ ಕಳೆ ನಿರ್ವಹಣೆ ¹	Rch			
▪ Green gram										
270	UASR 62	214	254	13	213	ಹೆಸರಿನಲ್ಲಿ ಹೆಕ್ಟಾಕ್ಲೋನಾಜೋಲ್ ಽ ಇ.ಸಿ ಮತ್ತು ಕಾರ್ಬಂಡೈಜಿಮ್ ಽಂ ಡಬ್ಲ್ಯೂ.ಪಿ ಶಿಲೀಂಧ್ರನಾಶಕದಿಂದ ಬೀಜೋಪಚಾರ ಬಳಕೆಯಿಂದ ಚಿಬ್ಬುರೋಗ ಮತ್ತು ಬೂದಿರೋಗ ನಿರ್ವಹಣೆ ¹	Rch		✓	
▪ Groundnut										
271	UASR 63	215	261	20	221	ಶೇಂಗಾ ಬೆಳೆಯಲ್ಲಿ ಸಮಗ್ರ ನಿರ್ವಹಣಾ ಕ್ರಮಗಳು	Rch			P3
272	UASR 64	216	262	21	222	ಶೇಂಗಾ ಬೆಳೆಯಲ್ಲಿ ಶಿಲೀಂಧ್ರದ ಕತ್ತು ಕೊಳೆ ರೋಗ ¹	Rch		✓	
273	UASR 65	217	263	22	223	ಶೇಂಗಾದಲ್ಲಿ ಕಳೆ ನಿರ್ವಹಣೆ ¹	Rch			
274	UASR 66	218	264	23	224	ಶೇಂಗಾದಲ್ಲಿ ರೋಗಗಳ ಜೈವಿಕ ನಿರ್ವಹಣೆ ಮತ್ತು ಕಾಂಡ ಕೊಳೆತ ರೋಗ ನಿರ್ವಹಣೆ ¹	Rch			
275	UASR 67	219	265	24	225	ಶೇಂಗಾ ಬೆಳೆಯಲ್ಲಿ ಸಮಗ್ರ ಕೀಟ ನಿರ್ವಹಣೆ ¹	Rch		✓	

Excluded Crop Protection Technologies - UASR

Tech.No.	SAU.No.	Excl. No.	Sl. No.	Unvi. Ref.No.	Proc. No.	Technology	Uni.	BCR	POP	Tech. Priority
◆ Crop specific technologies - Specific to individual crops										
▪ Sesame										
276	UASR 68	220	255	14	228	ಎಳ್ಳಿನಲ್ಲಿ ಅಲ್ಪರನೇರಿಯ ಅಂಗಮಾರಿ ರೋಗ ನಿರ್ವಹಣೆ ¹	Rch			
▪ Cotton										
277	UASR 69	221	250	9	229	ಹತ್ತಿ ಬೆಳೆಯ ಕಂದು ಎಲೆ ಚುಕ್ಕೆ ರೋಗ ನಿರ್ವಹಣಾ ಕ್ರಮಗಳು ¹	Rch			
▪ Mulberry										
278	UASR 70	222	260	19	233	ನೀರಾವರಿ ಹಿಪ್ಪು ನೇರಳೆ ಬೇಸಾಯ ಅಧ್ಯಯನ ಅಡಿಯಲ್ಲಿ ¹	Rch		✓	
▪ Sesbania										
279	UASR 71	223	267	26	237	ಅಗಸೆಯಲ್ಲಿ ಬೂದಿರೋಗ ನಿರ್ವಹಣೆ ¹	Rch		✓	
▪ Chilli										
280	UASR 72	224	269	28	242	ಮೆಣಸಿನಕಾಯಿಯಲ್ಲಿ ಅಫ್ಲಾಟಾಕ್ಸಿನ್ ವಿಷದ ಸೋಂಕು ¹	Rch		✓	
281	UASR 73	225	270	29	243	ಮೆಣಸಿನಕಾಯಿ ಬೆಳೆಯಲ್ಲಿ ಮೈಟ್ ನುಸಿ ಹಾಗೂ ಬೂದಿ ರೋಗಗಳ ನಿಯಂತ್ರಣ ¹	Rch			
282	UASR 74	226	271	30	244	ಮೆಣಸಿನಕಾಯಿ ಬೆಳೆಯಲ್ಲಿ ಡ್ರಿಪ್ಪು ನುಸಿಯ ನಿರ್ವಹಣೆ ¹	Rch			
283	UASR 75	227	272	31	245	ಮೆಣಸಿನಕಾಯಿ ಬೆಳೆಯಲ್ಲಿ ಎಲೆ ಮತ್ತು ಕಾಯಿ ತಿನ್ನುವ ಕೀಟದ (ಸ್ಟೋಡೋಪ್ಟೆರಾ) ನಿಯಂತ್ರಣ ¹	Rch		✓	
284	UASR 76	228	273	32	246	ಮೆಣಸಿನಕಾಯಿ ಬೆಳೆಯಲ್ಲಿ ಕಾಯಿ ಕೊರೆಯುವ ಹುಳುಗಳ ಹತೋಟಿ: ¹	Rch		✓	
▪ Banana										
285	UASR 77	229	284	43	260	ಬಾಳೆಯಲ್ಲಿ ದುಂಡಾಣುವಿನ ಬುಡ ಕೊಳೆ ರೋಗದ ನಿರ್ವಹಣೆಗೆ ¹	Rch			
▪ Mosambi										
286	UASR 78	230	266	25	265	ಮೋಸಂಬಿ ಬೆಳೆಗಳಲ್ಲಿ ಅಗಲವಾದ ಎಲೆ ಕಳೆಗಳ ನಿರ್ವಹಣೆ ¹	Rch			
▪ Tomato										
287	UASR 79	231	258	17	272	ಟೋಮ್ಯಾಟೋ ಬೆಳೆಯಲ್ಲಿ ಅಂಗಮಾರಿ ರೋಗ ನಿರ್ವಹಣೆ ¹	Rch			
288	UASR 80	232	259	18	273	ಟೋಮ್ಯಾಟೋ ಬೆಳೆಯಲ್ಲಿ ಅನುಸರಿಸಬೇಕಾದ ಸಮಗ್ರ ಸಸ್ಯ ಸಂರಕ್ಷಣಾ ನಿರ್ವಹಣೆ ಕ್ರಮಗಳು	Rch			P3
▪ Onion										
289	UASR 81	233	275	34	276	ನಾಟಿ ಈರುಳ್ಳಿಯಲ್ಲಿ ಕಳೆ ನಿರ್ವಹಣೆ ¹	Rch			
▪ Rose										
290	UASR 82	234	285	44	287	ಗುಲಾಬಿಯಲ್ಲಿ ಬೂದಿರೋಗ ನಿರ್ವಹಣೆ ¹	Rch		✓	
▪ Potato										
291	UASR 83	235	274	33	290	ಉಳ್ಳಾಗಡ್ಡಿಯಲ್ಲಿ ನೇರಳೆ ಎಲೆ ಮುಚ್ಚಿ ರೋಗ ನಿರ್ವಹಣೆ ¹	Rch			
292	UASR 84	236	276	35	291	ಉಳ್ಳಾಗಡ್ಡಿಯಲ್ಲಿ ಸಸ್ಯ ಸಂರಕ್ಷಣಾ ಕ್ರಮಗಳು (ಕೀಟಗಳು / ರೋಗಗಳು) ¹	Rch			

Note: 1 Needs more information

Crop protection Technologies-UAS, Dharwad

INDEX

	Technologies	Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■	Generally applicable technologies			2	300-301	2
■	Crop specific Technologies	7	293-299	2	302-303	9
	➤ No.of technologies	7		2		
	➤ No.of crops covered	6		2		

Selected Crop Protection Technologies - UASD

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Crop specific technologies - Specific to individual crops										
▪ Paddy										
293	UASD 14	57	3	Chemical weed control in paddy	Dwd	3		PRT	68	P5
▪ Maize										
294	UASD 15	58	3	Chemical weed control in maize	Dwd	4.7	✓	PRT	64	P2
295	UASD 16	59	2	Mechanized first inter-cultivation in maize at around 30 DAS	Dwd			PRT	68	P3
▪ Bengal gram										
296	UASD 17	60	5	Plant protection chemicals application (Chickpea)	Dwd	2.4	✓	PRT	62	P3
▪ Groundnut										
297	UASD 18	61	2	Chemical weed control in groundnut	Dwd	5.4	✓	PRT	80	P3
▪ Cotton										
298	UASD 19	62	1	Wider row spacing for mechanized weeding	Dwd	6.5		PRT	64	P3
▪ Chilli										
299	UASD 20	63	4	Chemical weed control in chilli	Dwd	4.5		PRT	66	P5



ತಂತ್ರಜ್ಞಾನಗಳ ಸಮಗ್ರ ಕೈಪಿಡಿ

Appendix - C

ಕೃಷಿ ಯಾಂತ್ರೀಕರಣ ತಂತ್ರಜ್ಞಾನಗಳು



ಖರ್ಚಿಲ್ಲದ ಮತ್ತು ಕಡಿಮೆ ವೆಚ್ಚದ ತಂತ್ರಜ್ಞಾನಗಳನ್ನು ಪ್ರಚಲಿತ ಪಡಿಸುವ ದಿಕ್ಕಿನಲ್ಲಿ ಕರ್ನಾಟಕ ಕೃಷಿ ಬೆಲೆ ಆಯೋಗದ ಒಂದು ವಿಶಿಷ್ಟ ಪ್ರಯತ್ನ

ದಾಖಲೀಕರಣ ಯೋಜನಾ ಸಲಹೆಗಾರರು:

ಆಗ್ರಿಇನ್‌ಸೈಟ್ಸ್ ಕನ್ಸಲ್ಟನ್ಸಿ ಸರ್ವಿಸಸ್ ಪ್ರೈವೇಟ್ ಲಿಮಿಟೆಡ್,

ನಂ.71, 5ನೇ ಮುಖ್ಯ ರಸ್ತೆ, 2ನೇ 'ಎ' ಅಡ್ಡ ರಸ್ತೆ, ಎಜಿ ಕಾಲೋನಿ, ಆನಂದ ನಗರ, ಬೆಂಗಳೂರು.-560024.

ದೂರವಾಣಿ: 9449028395, 7259703394.

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Farm Mechanisation Technologies-UAS, Bangalore

INDEX

Technologies		Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■ Generally applicable technologies		24	304-327			24
➤	Soil/moisture conservation/enrichment	8	304-311			
➤	Planting/Sowing	5	312-316			
➤	Intercultivation	6	317-322			
➤	Plant Protection	2	323-324			
➤	Harvesting	2	325-326			
➤	Post Harvest and Value addition	1	327			
■ Crop specific Technologies		11	328-338			11
➤	No.of technologies	11				
➤	No.of crops covered	3				

Selected Farm Mechanization Technologies - UASB

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Generally applicable technologies										
▪ Soil preparation and soil working										
304	UASB 53	64	1	K.M .Plough	Bng		✓	MEQ	80	P2
305	UASB 54	65	2	Bar point plough	Bng		✓	MEQ	72	P4
306	UASB 55	66	3	Bund former	Bng		✓	MEQ	76	P2
307	UASB 56	67	13	Rotavator	Bng		✓	MEQ	68	P4
308	UASB 57	68	14	M.B.Plough	Bng		✓	MEQ	68	P4
309	UASB 58	69	15	Disc plough	Bng		✓	MEQ	60	P4
310	UASB 59	70	16	Blade harrow	Bng		✓	MEQ	60	P4
311	UASB 60	71	17	Half set disc harrow	Bng	1.5	✓	MEQ	64	P4
▪ Planting/sowing										
312	UASB 61	72	5	Reversible ridger	Bng		✓	MEQ	64	P4
313	UASB 62	73	8	Multifurrow opener	Bng	1.5	✓	MEQ	72	P2
314	UASB 63	74	21	Tractor operated hole digger	Bng	1.9	✓	MEQ	72	P4
315	UASB 64	75	22	Tractor operator furrow opener	Bng		✓	MEQ	60	P4
316	UASB 65	76	32	Tractors operated bund former	Bng		✓	MEQ	60	P4
▪ Intercultivation										
317	UASB 66	77	10	Human operated weeder	Bng		✓	MEQ	68	P2
318	UASB 67	78	11	Cycle weeder	Bng	3.2	✓	MEQ	80	P2
319	UASB 68	79	12	Cultivator	Bng		✓	MEQ	68	P4
320	UASB 69	80	20	Tractor operated weed control and earthing up implement	Bng		✓	MEQ	60	P4
321	UASB 70	81	26	Self propelled weeder	Bng	2.3	✓	MEQ	60	P3
322	UASB 71	82	33	Green manure incorporator	Bng		✓	MEQ	52	P4
▪ Plant protection										
323	UASB 72	83	31	Tractors operated sprayers	Bng		✓	MEQ	68	P4
324	UASB 73	84	34	Parth hand sprayer	Bng		✓	MEQ	72	P2
▪ Harvesting										
325	UASB 74	85	25	Combine harvester	Bng	12.3	✓	MEQ	72	P4
326	UASB 75	86	35	Naveen Sickle	Bng		✓	MEQ	76	P2
▪ Post harvest and value addition										
327	UASB 76	87	27	Multi crop thresher	Bng	2.2	✓	MEQ	80	P2
▪ Irrigation										
◆ Crop specific technologies - Specific to individual crops										
▪ Paddy										
328	UASB 77	88	4	Puddler	Bng		✓	MEQ	80	P2
329	UASB 78	89	9	Drum seeder	Bng	2.7	✓	MEQ	80	P2
330	UASB 79	90	23	Paddy transplanter	Bng	1.8	✓	MEQ	72	P2
331	UASB 80	91	24	Paddy harvester	Bng	2	✓	MEQ	68	P2
▪ Ragi										
332	UASB 81	92	6	Ragi cum fertilizer seed drill	Bng		✓	MEQ	68	P2
333	UASB 82	93	18	Tractor drawn ragi seed cum fertilizer drill	Bng		✓	MEQ	52	P4
334	UASB 83	94	29	Power tiller operated ragi harvester	Bng	3.7	✓	MEQ	80	P2
▪ Groundnut										
335	UASB 84	95	7	Groundnut cum fertilizer seed drill	Bng		✓	MEQ	68	P2
336	UASB 85	96	19	Tractor drawn nine rows groundnut seed drill	Bng		✓	MEQ	60	P4
337	UASB 86	97	28	Groundnut plucker	Bng	2.9	✓	MEQ	64	P4
338	UASB 87	98	30	Groundnut harvester	Bng		✓	MEQ	68	P4

Farm Mechanisation Technologies-UHS, Bagalkot

INDEX

Technologies		Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■ Generally applicable technologies		7	339-345	32	379-410	39
➤	Soil/moisture conservation/enrichment	1	339	9	379-387	
➤	Planting/Sowing			5	388-392	
➤	Intercultivation	1	340	6	393-398	
➤	Plant Protection			4	399-402	
➤	Harvesting					
➤	Post Harvest and Value addition	3	341-343	4	403-406	
➤	Irrigation	2	344-345	2	407-408	
➤	Other items			2	409-410	
■ Crop specific Technologies		33	346-378	28	411-438	61
➤	No.of technologies	33		28		
➤	No.of crops covered	20		11		

Selected Farm Mechanization Technologies - UHSB

Tech.No.	SAU.No.	Sel. No.	Unvi. Ref.No.	Technology	Unvi.	BCR	POP	Cat	Tech. Rating	Priority rating
◆ Generally applicable technologies										
▪ Soil preparation and soil working										
339	UHSB 144	99	7	Power Tiller with Rotary Attachment	Bgk	1.81		MEQ	60	P3
▪ Intercultivation										
340	UHSB 145	100	6	Animal Drawn Patela harrow	Bgk			MEQ	64	P2
▪ Post harvest and value addition										
341	UHSB 146	101	70	Fruit Grader (Manual)	Bgk			MEQ	56	P3
342	UHSB 147	102	84	Natural Convection Solar Dryer [Mini-multi rack solar dryer]	Bgk			MEQ	64	P2
343	UHSB 148	103	93	Solar Dryer	Bgk			MEQ	52	P4
▪ Irrigation										
344	UHSB 149	104	35	ಬ್ಯಾಟರಿ ಚಾಲಿತ ನ್ಯೂಮಾಟಿಕ್ ಸಿಕ್ಕೇಜರ್	Bgk			MEQ	58	P2
345	UHSB 150	105	50	Pricking machine for Petha preparation	Bgk			MEQ	64	P2
◆ Crop specific technologies - Specific to individual crops										
▪ Coconut										
346	UHSB 151	106	75	Tender Coconut Punch and Cutter	Bgk			MEQ	56	P3
347	UHSB 152	107	77	Coconut slicing machine	Bgk			MEQ	52	P4
348	UHSB 153	108	78	Coconut slicing machine	Bgk			MEQ	52	P4
349	UHSB 154	109	79	Coconut Testa Removing Machine	Bgk			MEQ	52	P4
▪ Arecanut										
350	UHSB 155	110	52	Manual Arecanut Dehusker	Bgk	1.45		MEQ	68	P2
▪ Tamarind										
351	UHSB 156	111	53	Tamarind Dehuller-Cum-Deseeder	Bgk			MEQ	60	P2
▪ Chilli										
352	UHSB 157	112	60	Barn Drying of Chillies	Bgk			MEQ	52	P4
▪ Ginger										
353	UHSB 158	113	5	Low-cost Ginger storage structure	Bgk			MEQ	52	P5
354	UHSB 159	114	61	Turmeric/Ginger Washer	Bgk	2.28		MEQ	52	P3
355	UHSB 160	115	97	Ginger peeler	Bgk	1.77		MEQ	56	P4
356	UHSB 161	116	98	Low-cost Ginger storage structure	Bgk			MEQ	52	P5
▪ Turmeric										
357	UHSB 162	117	49	Turmeric slicer	Bgk	1.92		MEQ	52	P5
358	UHSB 163	118	65	Improved Farm Level Turmeric Boiler	Bgk			MEQ	56	P3
359	UHSB 164	119	91	Peeler cum Polisher for Ginger and Turmeric	Bgk			MEQ	52	P4
▪ Garlic										
360	UHSB 165	120	90	Garlic Bulb Breaker	Bgk	2.06		MEQ	56	P4
361	UHSB 166	121	92	Garlic Clove Flaking Machine	Bgk	1.15		MEQ	56	P4
362	UHSB 167	122	94	Garlic grader	Bgk	2.12		MEQ	56	P4
▪ Aloe vera										
363	UHSB 168	123	1	Aloe Gel Extraction Machine	Bgk	24.0		MEQ	52	P5
364	UHSB 169	124	63	Hand Operated Low Cost Aloe-Vera Gel Extractor	Bgk	8.04		MEQ	60	P3

Tech.No.	SAU.No.	Sel. No.	Unvi. Ref.No.	Technology	Unvi.	BCR	POP	Cat	Tech. Rating	Priority rating
	Mango									
365	UHSB 170	125	40	Mango harvester	Bgk	3.38		MEQ	54	P2
366	UHSB 171	126	55	Mango Harvester	Bgk			MEQ	64	P2
	Sapota									
367	UHSB 172	127	56	Sapota Harvester	Bgk			MEQ	52	P2
	Pineapple									
368	UHSB 173	128	69	Pineapple Harvester	Bgk	1.18		MEQ	60	P3
	Fig									
369	UHSB 174	129	83	Pedal operated Fig Pressing Machine	Bgk	1.98		MEQ	66	P2
	Aonla									
370	UHSB 175	130	66	Aonla Pricking Machine (Manually operated)	Bgk	1.25		MEQ	52	P3
	Ber									
371	UHSB 176	131	72	Ber Grader	Bgk			MEQ	50	P3
	Walnut									
372	UHSB 177	132	87	Walnut dehuller	Bgk			MEQ	56	P3
	Apricot									
373	UHSB 178	133	82	Apricot stone grader	Bgk			MEQ	56	P2
374	UHSB 179	134	86	Dried Apricot grader	Bgk			MEQ	64	P2
	Green pea									
375	UHSB 180	135	71	Power Operated Pea Shelling Machine	Bgk			MEQ	56	P3
	Mushroom									
376	UHSB 181	136	64	Fluidized Bed Dryer for Mushroom	Bgk			MEQ	56	P3
	Honey									
377	UHSB 182	137	80	Honey processing unit	Bgk			MEQ	52	P4
	Starch									
378	UHSB 183	138	89	Mobile Starch Extraction Plant	Bgk			MEQ	64	P2

Excluded Farm Mechanization Technologies - UHSB

Tech Sl.No.	SAU Sl.No.	Tech. Excl.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Tech. Priority
◆ Generally applicable technologies								
▪ Soil preparation and soil working								
379	UHSB 184	241	8	Mould Board Plough	Bgk			P4
380	UHSB 185	242	9	Disc Plough ¹	Bgk			P4
381	UHSB 186	243	10	Tractor Operated Balram Plough ¹	Bgk			P4
382	UHSB 187	244	11	Tractor operated chisel plough ¹	Bgk			P4
383	UHSB 188	245	13	Blade Harrow ¹	Bgk			P4
384	UHSB 189	246	14	Rotavator ¹	Bgk			P4
385	UHSB 190	247	16	Tractor operated laser leveler	Bgk			P4
386	UHSB 191	248	17	Tractor operated ridger ¹	Bgk	1.5		P4
387	UHSB 192	249	20	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಫ್ರಂಟ್ ಲೆವೆಲ್ಲರ್ ಹಾಗೂ ಬ್ಯಾಕ್ ಹೊ	Bgk			P4
▪ Planting/sowing								
388	UHSB 193	250	18	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಪ್ಲಾಸ್ಟಿಕ್ ಹೊದಿಕೆ ಹಾಕುವ ಉಪಕರಣ ¹	Bgk			P4
389	UHSB 194	251	19	Tractor operated hole digger	Bgk			P4
390	UHSB 195	252	22	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ನಾಟಿ ಮಾಡುವ ಯಂತ್ರ	Bgk	1.56		P4
391	UHSB 196	253	27	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಗೊಬ್ಬರ ಹರಡುವ ಉಪಕರಣ ¹	Bgk			P4
392	UHSB 197	254	28	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಇನ್‌ಕ್ಲೈನ್‌ಡ್ ಪ್ಲೇಟಿ ಪ್ರಾಂಟರ್	Bgk			P4
▪ Intercultivation								
393	UHSB 198	255	12	Cultivators	Bgk			P4
394	UHSB 199	256	15	Disc Harrows	Bgk			P4
395	UHSB 200	257	29	ಕೈ ಚಾಲಿತ ಕಳೆ ತೆಗೆಯುವ ಸಾಧನ (ಪ್ಲೀಲ್ ಹೋ)	Bgk	2.14		P2
396	UHSB 201	258	30	ಬೈಸಿಕಲ್ ಕಳೆ ನಿಯಂತ್ರಕ ¹	Bgk			P2
397	UHSB 202	259	31	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಏರುಮಡಿ ಕಳೆ ನಿಯಂತ್ರಕ ¹	Bgk			P4
398	UHSB 203	260	32	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಬಹು ಸಾಲು ರೋಟರಿ ಕಳೆ ನಿಯಂತ್ರಕ ಉಪಕರಣ ¹	Bgk			P4
▪ Plant protection								
399	UHSB 204	261	23	ಪವಟಿಲ್ಲರ ಚಾಲಿತ ಏಕ್ಸಿಯಲ್ ಫ್ಲೋ ಪಂಪ್ ¹	Bgk			P4
400	UHSB 205	262	24	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಸೆಂಟ್ರಿಫ್ಯೂಗಲ್ ಪಂಪ್ ¹	Bgk			P4
401	UHSB 206	263	33	ಔಷಧಿ ಸಿಂಪರಣೆ ¹	Bgk			P2
402	UHSB 207	264	34	ಬ್ಯಾಟರಿ ಚಾಲಿತ ನ್ಯಾಪ್‌ಸ್ಯಾಕ್ ಸ್ಪ್ರೇಯರ್ ¹	Bgk			P2
▪ Harvesting								
▪ Post harvest and value addition								
403	UHSB 208	265	48	PDKV Fruit grader.	Bgk	1.33		P4
404	UHSB 209	266	58	Multipurpose Poly house Solar Dryer.	Bgk			P5
405	UHSB 210	267	62	Dehumidified Air Dryer.	Bgk			P5
406	UHSB 211	268	85	Forced Convection Solar Drying System	Bgk			P5
▪ Irrigation								
407	UHSB 212	269	25	ತುಂತುರ ಹನಿ ನೀರಾವರಿ ಪದ್ಧತಿ ಹಾಗೂ ಉಪಕರಣಗಳು	Bgk			P4
408	UHSB 213	270	26	Drip irrigation	Bgk			P4
▪ Other items								
409	UHSB 214	271	36	Hedge trimmer	Bgk			P3
410	UHSB 215	272	37	ಎಂಜಿನ್ ಚಾಲಿತ ಸರಪಳಿ ಗರಗಸ	Bgk			P3

Excluded Farm Mechanization Technologies - UHSB

Tech Sl.No.	SAU Sl.No.	Tech. Excl.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Tech. Priority
◆ Crop specific technologies - Specific to individual crops								
▪ Paddy								
411	UHSB 216	273	21	Drum seeder ¹	Bgk			P2
▪ Coconut								
412	UHSB 217	274	2	Safety device for coconut climbing machine ¹	Bgk			P2
413	UHSB 218	275	3	Snow Ball Tender Nut Machine	Bgk			P4
414	UHSB 219	276	4	Tender nut punch and cutter	Bgk	1.5		P3
415	UHSB 220	277	43	ತೆಂಗಿನ ಮರ ಹತ್ತುವ ಉಪಕರಣ	Bgk	1.6		P2
416	UHSB 221	278	45	ತೆಂಗಿನಕಾಯಿ ಸುಲಿಯುವುದು ¹	Bgk	1.5		P2
417	UHSB 222	279	46	ಯಾಂತ್ರಿಕ ತೆಂಗಿನಕಾಯಿ ಸುಲಿಯುವ ಉಪಕರಣ ¹	Bgk	1.28		P2
418	UHSB 223	280	54	Pedal Operated Coconut Dehusker	Bgk			P5
419	UHSB 224	281	74	Development of Shell Fired Copra Dryer	Bgk			P5
420	UHSB 225	282	76	Coconut De-Shelling Machine	Bgk			P5
▪ Arecanut								
421	UHSB 226	283	44	Cr PE ,AA° AAAAA°AzAA	Bgk			P4
422	UHSB 227	284	47	PKV Chilli Seed Extractor	Bgk	4.8		P4
▪ Pepper								
423	UHSB 228	285	51	White Pepper Machine	Bgk			P5
424	UHSB 229	286	88	Black Pepper Decorticator	Bgk			P4
▪ Ginger								
425	UHSB 230	287	99	Low-cost Ginger storage structure	Bgk			P5
426	UHSB 231	288	100	Low-cost Ginger storage structure	Bgk			P5
▪ Turmeric								
427	UHSB 232	289	38	ಪವರ್ ಟೆಲ್ಲರ ಚಾಲಿತ ಅರಿಶಿನ ಹಾರ್ವೆಸ್ಟರ್ ¹	Bgk	2.92		P3
428	UHSB 233	290	39	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಅರಿಶಿನ ಹಾರ್ವೆಸ್ಟರ್ ¹	Bgk	3.33		P4
429	UHSB 234	291	59	Mobile Steam Boiler for Turmeric.	Bgk			P5
430	UHSB 235	292	95	Turmeric polisher	Bgk			P4
▪ Cardamom								
431	UHSB 236	293	57	Cardamom Dryer.	Bgk			P4
▪ Garlic								
432	UHSB 237	294	96	Garlic/clove peeler	Bgk			P4
▪ Cumin								
433	UHSB 238	295	73	Cleaner-cum-Grader for Cumin.	Bgk			P4
434	UHSB 239	296	41	Sapota Harvester ¹	Bgk	4.0		P2
▪ Lime/lemon								
435	UHSB 240	297	42	ಲಿಂಬೆ ಕೊಯ್ಯುವ ಉಪಕರಣ ¹	Bgk	1.5		P2
436	UHSB 241	298	68	HAU Aonla pricking machine (power operated)	Bgk			P5
437	UHSB 242	299	81	Hand operated wild apricot decorticator	Bgk			P3
▪ Carrot								
438	UHSB 243	300	67	Continuous Carrot Washer (Bahabalpur)	Bgk			P5

Note:

1 Needs more information

Farm Mechanisation Technologies-UAS, Raichur

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Technologies		Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■ Generally applicable technologies		15	439-453	10	463-472	25
➤	Soil/moisture conservation/enrichment	1	439			
➤	Planting/Sowing	3	440-442			
➤	Intercultivation	4	443-446	1	463	
➤	Plant Protection	3	447-449	3	464-466	
➤	Harvesting	1	450			
➤	Post Harvest and Value addition	3	451-453	3	467-469	
➤	Irrigation					
➤	Other items			3	470-472	
<hr/>						
■ Crop specific Technologies		9	454-462	4	473-476	13
➤	No.of technologies	9		4		
➤	No.of crops covered	4		4		

Selected Farm Mechanisation Technologies - UASR

Tech. Sl.No.	SAU. Sl.No.	Tech. Sel. No.	Unvi. Ref.No.	Technology	Univ.	BCR	POP	Cat	Tech. Rating	Tech. priority
◆ Generally applicable technologies										
▪ Soil preparation and soil working										
439	UASR 85	139	3	ಲೇಸರ್ ಲೇವಲರ್ ತಂತ್ರಜ್ಞಾನದಿಂದ ಭೂಮಿಯ ಸಮತಟ್ಟು ಮಾಡುವುದು:	Rch			MEQ	52	P4
▪ Planting/sowing										
440	UASR 86	140	27	ಟ್ರಾಕ್ಟರ್ ಚಾಲಿತ ಏರುಮಡಿ ಮಾಡಿ ಬಿತ್ತುವ ಕೂರಿಗೆ	Rch			MEQ	54	P4
441	UASR 87	141	29	ಕೈಚಾಲಿತ ಕಾಳು ಊರುವ ಯಂತ್ರ:	Rch			MEQ	58	P2
442	UASR 88	142	30	ಕೈಚಾಲಿತ ಎರಡು ಸಾಲಿನ ಗೊಬ್ಬರ ಮತ್ತು ಬೀಜ ಬಿತ್ತುವ ಕೂರಿಗೆ:	Rch			MEQ	62	P2
▪ Intercultivation										
443	UASR 89	143	8	ಕೋನೋ ಟ್ರೈಪ್ ಕಳೆ ತೆಗೆಯುವ ಸಾಧನ	Rch			MEQ	50	P2
444	UASR 90	144	25	ಟ್ರಾಕ್ಟರ್ ಚಾಲಿತ ರೋಟರಿ ಮಾದರಿಯ ಕಳೆ ತೆಗೆಯುವ ಯಂತ್ರ	Rch			MEQ	50	P4
445	UASR 91	145	33	ಒಣಬೇಸಾಯದಲ್ಲಿ ಕಳೆ ತೆಗೆಯುವ ಹಲ್ಲಿನ ಉಪಕರಣ (ಪೆಗ್ ವೀಡರ್)	Rch			MEQ	68	P2
446	UASR 92	146	37	ಕೈ ಚಾಲಿತ ಚಕ್ರದ ಕಳೆ ತೆಗೆಯುವ ಉಪಕರಣ	Rch			MEQ	54	P2
▪ Plant protection										
447	UASR 93	147	18	ಸೌರ ಶಕ್ತಿಯನ್ನು ಬಳಸಿ ಸಿಂಪರಣಾ ಸಾಧನ	Rch			MEQ	54	P2
448	UASR 94	148	31	ಕೈ ಚಾಲಿತ ತಳ್ಳುವ ಔಷಧ ಸಿಂಪರಣೆ ಯಂತ್ರ	Rch			MEQ	60	P2
449	UASR 95	149	34	ನ್ಯಾಪ್ ಸ್ಯಾಕ್ ಸಿಂಪರಣೆ ಸ್ಟೇಯರ್	Rch			MEQ	56	P2
▪ Harvesting										
450	UASR 96	150	32	ಸುಧಾರಿತ ಕುಡುಗೋಲು:	Rch			MEQ	60	P2
▪ Post harvest and value addition										
451	UASR 97	151	9	ಸ್ವಯಂಚಾಲಿತ ಕಟಾವು ಮಾಡಿ ಸುಡು ಕಟ್ಟುವ ಯಂತ್ರ:	Rch	3.8		MEQ	64	P3
452	UASR 98	152	10	ಟ್ರಾಕ್ಟರ್ ಚಾಲಿತ ಚೌಕಾಕಾರದ ಪೆಂಡಿ ಕಟ್ಟುವ ಯಂತ್ರ	Rch			MEQ	60	P3
453	UASR 99	153	36	ಪೈಡಲಚಾಲಿತ ರಿಕ್ವಾ ಮೇಲೆ ಅಳವಡಿಸಿದ ಬಹುಬೆಳೆ ಒಕ್ಕಣೆ ಯಂತ್ರ:	Rch			MEQ	60	P2
▪ Irrigation										
◆ Crop specific technologies - Specific to individual crops										
▪ Paddy										
454	UASR 100	154	5	ಭತ್ತದಲ್ಲಿ ಸಸಿಮಡಿಯಿಂದ ತಯಾರಿಸಿದ ಸಸಿಗಳನ್ನು ಸ್ವಯಂಚಾಲಿತ ಯಂತ್ರದಿಂದ ಭತ್ತ ನಾಟಿ ಮಾಡುವುದು	Rch			MEQ	54	P2
455	UASR 101	155	7	ಭತ್ತ ನಾಟಿ ಮಾಡುವ ಯಂತ್ರ(ಹಿಂದೆ ನಡೆಯುವ ಮಾದರಿ):	Rch		✓	MEQ	58	P2

Selected Farm Mechanisation Technologies - UASR

Tech. Sl.No.	SAU. Sl.No.	Tech. Sel. No.	Unvi. Ref.No.	Technology	Univ.	BCR	POP	Cat	Tech. Rating	Tech. priority
Maize										
456	UASR 102	156	20	ಪೆಡಲ್ ಚಾಲಿತ ಮೆಕ್ಯೆಜೋಳದ ಒಕ್ಕಣೆ ಯಂತ್ರ:	Rch			MEQ	50	P2
457	UASR 103	157	21	ಕೈ ಚಾಲಿತ ಮೆಕ್ಯೆಜೋಳದ ಒಕ್ಕಣೆ ಯಂತ್ರ	Rch			MEQ	60	P2
Groundnut										
458	UASR 104	158	12	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಶೇಂಗಾ ಕೀಳುವ ಯಂತ್ರ	Rch	2.76		MEQ	56	P4
459	UASR 105	159	14	ಶೇಂಗಾ/ ಬೆಡಲ ಕಾಯಿ ಒಡೆಯುವ ಸಾಧನ	Rch			MEQ	50	P3
460	UASR 106	160	15	ಶೇಂಗ ಕಾಯಿಯನ್ನು ಬೇಪಡಿಸುವ ಸಾಧನ	Rch			MEQ	54	P3
Sunflower										
461	UASR 107	161	4	ಸೂರ್ಯಕಾಂತಿ ಒಕ್ಕುವ ಬಾಕು:	Rch			MEQ	50	P3
462	UASR 108	162	35	ಸೂರ್ಯಕಾಂತಿ ಒಕ್ಕುವ ಬಾಕು:	Rch			MEQ	50	P3

Excluded Farm Mechanization Technologies - UASR

Tech Sl.No.	SAU Sl.No.	Tech. Excl.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Tech. Priority
◆ Generally applicable technologies								
▪ Intercultivation								
463	UASR 109	301	23	ಸೈಕಲ್ ಚಾಲಿತ ಕಳೆ ತೆಗೆಯುವ ಯಂತ್ರ	Rch			P2
▪ Plant protection								
464	UASR 110	302	19	ಎತ್ತಿನಿಂದ ಎಳೆಯಲ್ಪಡುವ ಸೌರಶಕ್ತಿ ಚಾಲಿತ ಸಿಂಪರಣಾ ಯಂತ್ರ	Rch			P2
465	UASR 111	303	26	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಗಾಳಿ ಒತ್ತಡದ ಸಿಂಪರಣ ಯಂತ್ರ	Rch			P4
466	UASR 112	304	38	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಪೆಸ್ಟೋ ಬ್ಲಾಸ್ಟ್ ಸಿಂಪರಣ ಯಂತ್ರ:	Rch			P4
▪ Post harvest and value addition								
467	UASR 113	305	16	ಸೌರ ಶಾಖ ಪೆಟ್ಟಿಗೆ (ಸೋಲಾರ ಟನಲ್ ಮಾದರಿ):	Rch			P5
468	UASR 114	306	17	ಟನಲ್ ಮಾದರಿಯ ಸೌರ ಶಕ್ತಿಯ ಶಾಖ ಪೆಟ್ಟಿಗೆ	Rch			P5
469	UASR 115	307	24	ಸೈಕಲ್ ಪೆಡಲ್ ಚಾಲಿತ ಮಂಜುಗಡ್ಡೆ ಪುಡಿ ಮಾಡುವ ಯಂತ್ರ:	Rch			P3
▪ Other items								
470	UASR 116	308	1	ಎರಡೆತ್ತಿನ ಸುಧಾರಿತ ಚಕ್ರಡಿ	Rch			P3
471	UASR 117	309	2	ಒಂಟೆತ್ತಿನ ಸುಧಾರಿತ ಚಕ್ರಡಿ	Rch			P3
472	UASR 118	310	28	ಟ್ರ್ಯಾಕ್ಟರ್‌ನಲ್ಲಿ ಜೈವಿಕ ಇಂಧನ (ಬಯೋಡೀಸೆಲ್‌ನ) ಬಳಕೆ	Rch			P4
◆ Crop specific technologies - Specific to individual crops								
▪ Paddy								
473	UASR 119	311	6	ಭತ್ತ ನಾಟಿ ಮಾಡುವ ಯಂತ್ರ(ಕುಳಿತು ನಡೆಸುವ ಮಾದರಿ):	Rch	3.61		P2
▪ Maize								
474	UASR 120	312	22	ಮೆಕ್ಯಾಟೋಳವನ್ನು ರಾಶಿ ಯಂತ್ರ	Rch			P3
▪ Groundnut								
475	UASR 121	313	13	ಪೆಡಲ್ ಮತ್ತು ಮೋಟಾರ್ ಚಾಲಿತ ಶೇಂಗಾಕಾಯಿ ಒಡೆಯುವ ಯಂತ್ರ	Rch			P3
▪ Coconut								
476	UASR 122	314	11	ಟ್ರ್ಯಾಕ್ಟರ್ ಚಾಲಿತ ಹತ್ತಿ ಬೀಜ ಹಾಗೂ ಗೊಬ್ಬರ ಬಿತ್ತುವ ಯಂತ್ರ:	Rch			P4

Farm Mechanisation Technologies-UAS, Dharwad

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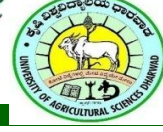
	Technologies	Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■	Generally applicable technologies	-	-	-	-	-
■	Crop specific Technologies	6	477-482	2	483-484	8
	➤ No.of technologies	6		2		
	➤ No.of crops covered	5		2		

Selected Farm Mechanisation Technologies - UASD

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Crop specific technologies - Specific to individual crops										
▪ Paddy										
477	UASD 25	163	3	Mechanized harvesting in paddy	Dwd	1.5		MEQ	58	P2
▪ Maize										
478	UASD 26	164	1	Application of organic manures 3 weeks before planting in maize crop	Dwd	2.4	✓	MEQ	60	P2
479	UASD 27	165	2	Mechanized harvesting in maize	Dwd	1.8		MEQ	58	P2
▪ Tur										
480	UASD 28	166	4	Mechanized harvesting in pigeon pea	Dwd	1.5		MEQ	78	P2
▪ Blackgram										
481	UASD 29	167		Mechanized harvesting of black gram using threshers	Dwd	2		MEQ	64	P3
▪ Safflower										
482	UASD 30	168	5	Mechanized harvesting in safflower	Dwd	2		MEQ	68	P2

Excluded Farm Mechanization Technologies - UASD

Tech Sl.No.	SAU Sl.No.	Tech. Excl.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Tech. Priority
◆ Crop specific technologies - Specific to individual crops								
▪ Bengal gram								
483	UASD 31	315		Mechanized harvesting in Chickpea	Dwd	1.6		P3
▪ Green gram								
484	UASD 32	316		Mechanized harvesting in green gram	Dwd	1.4		P3



ತಂತ್ರಜ್ಞಾನಗಳ ಸಮಗ್ರ ಕೈಪಿಡಿ

Appendix - D

ಕೊಯ್ಲಿನೋತ್ತರ ತಂತ್ರಜ್ಞಾನಗಳು



ಖರ್ಚಿಲ್ಲದ ಮತ್ತು ಕಡಿಮೆ ವೆಚ್ಚದ ತಂತ್ರಜ್ಞಾನಗಳನ್ನು ಪ್ರಚಲಿತ ಪಡಿಸುವ ದಿಕ್ಕಿನಲ್ಲಿ
ಕರ್ನಾಟಕ ಕೃಷಿ ಬೆಲೆ ಆಯೋಗದ ಒಂದು ವಿಶಿಷ್ಟ ಪ್ರಯತ್ನ

ದಾಖಲೀಕರಣ ಯೋಜನಾ ಸಲಹೆಗಾರರು:

ಆಗ್ರಿಇನ್‌ಸೈಟ್ಸ್ ಕನ್ಸಲ್ಟನ್ಸಿ ಸರ್ವಿಸಸ್ ಪ್ರೈವೇಟ್ ಲಿಮಿಟೆಡ್,

ನಂ.71, 5ನೇ ಮುಖ್ಯ ರಸ್ತೆ, 2ನೇ 'ಎ' ಅಡ್ಡ ರಸ್ತೆ, ಎಜಿ ಕಾಲೋನಿ, ಆನಂದ ನಗರ, ಬೆಂಗಳೂರು.-560024.

ದೂರವಾಣಿ: 9449028395, 7259703394.

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Post Harvest Technologies-UAS, Bangalore

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Technologies	Selected		Excluded		Total
	No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■ Generally applicable technologies	-	-	-	-	-
■ Crop specific Technologies	10	485-494			10
➤ No.of technologies	10				
➤ No.of crops covered	8				
■ Food processing			1	495	1

Selected Post Harvest Technologies - UASB

Tech. Sl.No.	SAU. Sl.No.	Tech. Sel. No.	Univ. Ref. No.	Technology	Univ.	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Crop processing and value addition										
▪ Groundnut										
485	UASB 88	169	9	3-in-1 MINI GROUNDNUT DECORTICATOR-CUM-SUNFLOWER THRESHER & MAIZE SHELLER	Bng	2	✓	PHT	80	P3
486	UASB 89	170	11	GROUNDNUT DECORTICATOR	Bng	2		PHT	60	P3
▪ Sunflower										
487	UASB 90	171	4	2-in-1 SUNFLOWER THRESHER-CUM-MAIZE SHELLER	Bng		✓	PHT	72	P3
▪ Coconut										
488	UASB 91	172	5	FOOT/ PEDAL OPERATED COCONUT DEHUSKER	Bng	1.3	✓	PHT	76	P3
489	UASB 92	173	10	COCONUT TREE CLIMBER	Bng		✓	PHT	76	P3
▪ Arecanut										
490	UASB 93	174	2	MANUAL ARECANUT DEHUSKER	Bng			PHT	72	P3
▪ Tamarind										
491	UASB 94	175	3	TAMARIND DEHULLER-CUM-DESEEDER	Bng	3		PHT	72	P3
▪ Pepper										
492	UASB 95	176	1	WHITE PEPPER PROCESSING MACHINE	Bng	1.5		PHT	80	P3
▪ Mango										
493	UASB 96	177	6	MANGO HARVESTER	Bng			PHT	64	P3
▪ Sapota										
494	UASB 97	178	7	SAPOTA HARVESTER	Bng			PHT	64	P3

Post Harvest Technologies-UHS, Bagalkot

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Technologies		Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■ Generally applicable technologies		-	-	-	-	-
■ Crop specific Technologies		2	496-497	3	498-500	5
	➤ No.of technologies	2				
	➤ No.of crops covered	2				
■ Packing, Preservation, and Storage				5	501-505	5
■ Food Processing				14	506-519	14
■ Others				4	520-523	4

Selected Post Harvest Technologies - UHSB

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Crop processing and value addition										
▪ Onion										
496	UHSB 244	179	26	Bulk Onion Curing Unit.	Bgk			PHT	52	P3
▪ Packaging, Preservation and Storage										
497	UHSB 245	180	11	Brining Preservation of vegetables.	Bgk			PHT	50	P4

Excluded Post Harvest Technologies - UHSB

Tech. Sl.No.	SAU. Sl.No.	Excl. No.	Unvi.Ref. No.	Technology	Unvi.	BCR	POP	Tech. Priorit
◆ Crop processing and value addition								
▪ Fig								
498	UHSB 246	318	15	Collection and evaluation of fig genotypes ¹	Bgk			P3
▪ Capsicum								
499	UHSB 247	319	10	Individual shrink-wrapping of capsicum fruit.	Bgk			P3
▪ Potato								
500	UHSB 248	320	14	Extending the post harvest life of potato by using PVC pipes with different ventilation during storage	Bgk			P3
◆ Packaging, Preservation and Storage								
501	UHSB 249	321	13	Storage in onion	Bgk			P4
502	UHSB 250	322	5	Individual shrink-wrapping of pomegranate fruits	Bgk			P4
503	UHSB 251	323	6	Long term preservation of raw mango slices in brine for use in pickling	Bgk			P4
504	UHSB 252	324	19	Extraction and preservation methods for gel from Indian Aloe (Home-scale)	Bgk			P4
505	UHSB 253	325	28	Banana Flower Pickle (Thokku)	Bgk			P4
◆ Food processing								
506	UHSB 254	326	1	Pilot plant (100 kg/day capacity) for making cherry/tutty-fruity	Bgk			P5
507	UHSB 255	327	2	Technology for RTS beverage from jackfruit (Ready-to-Serve Beverage from Jackfruit)	Bgk			P5
508	UHSB 256	328	3	Blended RTS beverage from mango and papaya	Bgk			P5
509	UHSB 257	329	4	Watermelon Rind Candy	Bgk			P5
510	UHSB 258	330	7	Watermelon RTS Beverage	Bgk			P5
511	UHSB 259	331	8	Ready to Serve Beverages	Bgk			P5
512	UHSB 260	332	9	Fruit Bar Technology	Bgk			P5
513	UHSB 261	333	20	Influence of cold soaking and thermovinification on quality of Jamun wine ¹	Bgk			P5
514	UHSB 262	334	21	Standardization of pulp extraction techniques in Wood apple ¹	Bgk			P5
515	UHSB 263	335	22	Preparation of thirst quenching dehydrated Lime slices ¹	Bgk			P5
516	UHSB 264	336	23	Standardization of value added products from Cucumis melo var. conomon (Oriental pickling Melon) ¹	Bgk			P5
517	UHSB 265	337	24	Development of vegetable juices ¹	Bgk			P5
518	UHSB 266	338	25	Honey processing unit	Bgk			P5
519	UHSB 267	339	27	Banana Flour Based Products - Baby Food, Health Drink And Soup Mix	Bgk			P5
◆ Others								
520	UHSB 268	340	16	Seed germination in custard apple ²	Bgk			
521	UHSB 269	341	17	Seed germination in papaya ²	Bgk			
522	UHSB 270	342	18	Fortification of Tomato ketchup and its storage ²	Bgk			
523	UHSB 271	343	12	Eco-Friendly Waste Water Treatment ²	Bgk			

Note: 1 Needs more information
2 Excluded for prioritization

Post Harvest Technologies-UAS, Raichur

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Technologies		Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■ Generally applicable technologies		-	-	-	-	-
■ Crop specific Technologies		5	524-528	2	539-540	7
	➤ No.of technologies	5		2		
	➤ No.of crops covered	3		2		
■ Packing, Preservation, and Storage		4	529-532			4
■ Food Processing		6	533-538	1	541	7
■ Others				2	542-543	2

Selected Post Harvest Technologies - UASR

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
◆ Crop processing and value addition										
▪ Foxtail millet (Navane)										
524	UASR 123	181	3	ನವಣೆ ಅಕ್ಕಿ ಮಾಡುವ ಯಂತ್ರ	Rch			PHT	60	P3
525	UASR 124	182	13	ನವಣೆ ಅಕ್ಕಿ ಶೇಖರಣಾ ಪದ್ಧತಿ	Rch			PHT	68	P3
▪ Groundnut										
526	UASR 125	183	1	ಶೇಂಗಾಕಾಯಿ ಒಡೆಯುವ ಯಂತ್ರ	Rch		✓	PHT	68	P3
527	UASR 126	184	16	ಪೆಡಲ್ ಮತ್ತು ಮೋಟಾರ್ ಚಾಲಿತ ಶೇಂಗಾಕಾಯಿ ಒಡೆಯುವ ಯಂತ್ರ	Rch			PHT	52	P3
▪ Onion										
528	UASR 127	185	8	ಒಣಗಿಸಿದ ಈರುಳ್ಳಿ ತಯಾರಿಸುವ ತಂತ್ರಜ್ಞಾನ	Rch			PHT	64	P3
◆ Packaging, Preservation and Storage										
529	UASR 128	186	4	ದೊಡ್ಡ ಪ್ರಮಾಣದ ವಿವಿಧ ಶಕ್ಕಿ ಮೂಲಗಳಿಂದ ಒಣಗಿಸುವ ಘಟಕ (ಮಲ್ಟಿ ಮೋಡ್ ಡ್ರೈಯರ್)	Rch			PHT	56	P4
530	UASR 129	187	5	ಇಂಗಾಲದ ಡೈಆಕ್ಸೈಡ್ ಅನಿಲ ತುಂಬಿ ಧಾನ್ಯಗಳನ್ನು ಪ್ಯಾಕ್ ಮಾಡುವ ಸಾಧನ	Rch			PHT	50	P4
531	UASR 130	188	7	ಪೆಡಲ್ ಮತ್ತು ಮೋಟಾರ್ ಚಾಲಿತ ಮಂಜುಗಡ್ಡೆ ಪುಡಿ ಮಾಡುವ ಯಂತ್ರ	Rch			PHT	50	P4
532	UASR 131	189	14	ಒಣ ಅಂಜೂರ ತಯಾರಿಸುವ ತಂತ್ರಜ್ಞಾನ	Rch			PHT	58	P4
◆ Food processing										
533	UASR 132	190	10	ಪಪ್ಪಾಯಿ ಜಾಮ್ ತಯಾರಿಸುವ ವಿಧಾನ	Rch			PHT	54	P5
534	UASR 133	191	11	ಮೀನಿನ ಮಾಂಸ ಬೇರ್ಪಡಿಸುವ ಯಂತ್ರ (ಫಿಶ್ ಡಿ-ಬೋನರ್)	Rch			PHT	58	P5
535	UASR 134	192	12	ಲೋಳೆಸರದ ಎಲೆಗಳ ಪುಡಿ	Rch			PHT	50	P5
536	UASR 135	193	17	ಲೋಳೆಸರದ ತಿರುಳಿನ ಪುಡಿ	Rch			PHT	54	P5
537	UASR 136	194	18	ಲೋಳೆಸರ ಮತ್ತು ಬೆಟ್ಟದ ನೆಲ್ಲಿಕಾಯಿಯ ಪಾನಿಯ	Rch			PHT	54	P5
538	UASR 137	195	19	ಲೋಳೆಸರ ಮತ್ತು ಮೋಸಂಬಿ ಪಾನಿಯ	Rch			PHT	54	P5

Exlcuded Post Harvest Technologies - UASR

Tech. Sl.No.	SAU. Sl.No.	Tech. Excl. No.	Unvi. Ref. No.	Technology	Unvi.	BCR	POP	Tech. Priority
◆ Crop processing and value addition								
▪ Chilli								
539	UASR 138	344	6	ಮೆಣಸಿನಕಾಯಿ ಪುಡಿ ಮಾಡುವ ಯಂತ್ರ (ನೀರಿನ ಕವಚ ಹೊಂದಿದ)	Rch			P3
▪ Dal making								
540	UASR 139	345	9	ಸುಧಾರಿತ ಬೇಳೆ ಮಾಡುವ ಯಂತ್ರ (ಪಿ.ಕೆ.ವಿ. ಮಾದರಿ)	Rch			P3
◆ Food processing								
541	UASR 140	346	15	ಮೇಕೆ ಹಾಲಿನ ಪುಡಿ ಮಾಡುವ ತಂತ್ರಜ್ಞಾನ	Rch			P5
◆ Others								
542	UASR 141	347	2	ಸುಧಾರಿತ ಸ್ವ-ಹರಿತಗೊಳ್ಳುವ ಕುಡಗೋಲು ¹	Rch			
543	UASR 142	348	20	ನ್ಯಾನೋ ತಂತ್ರಜ್ಞಾನ ಆಧಾರಿತ ನೀರು ಶುದ್ಧೀಕರಿಸುವ ಸಾಧನ ¹	Rch			

Note: 1 Excluded for prioritization

Post Harvest Technologies-UAS, Dharwad

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Technologies		Selected		Excluded		Total
		No.of Tech.	Tech. Sl.no.	No.of Tech	Tech. Sl.no.	No.of Tech
■ Generally applicable technologies		-	-	-	-	-
■ Crop specific Technologies		1	544	-	-	1
➤	No.of technologies	1				
➤	No.of crops covered	1				

Selected Post Harvest Technologies - UASD

Tech Sl.No.	SAU Sl.No.	Tech. Sel.No.	Univ. Ref. No.	Technology	Univ	BCR	POP	Cat	Tech. Rating	Tech. Priority
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◆ **Crop processing and value addition**

▪	Chilli									
544	UASD 33	196	9	Grading and machine drying after harvesting in red chilli	Dwd	3		PHT	58	P3