

Anand Agricultural University
College of Agricultural Engineering & Technology
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PRINCIPAL AND DEAN

F. No. AAU/CAET/AGRESCO-2015/ 2804-06 /2015
Dated 29 / 02 / 2015

To
All Members
AGRESCO Sub Committee on AET & AIT
Anand Agricultural University.

Sub: The AET & AIT subcommittee meeting of 11th AGRESCO.

Ref: 1. Circular no. AAU/DR/RES/T-3/13458/14, Dt. 3/12/14.
2. Letter no. AAU/CAET/AGRESCO-2015/ 2563-65 /2015, Dt. 06/02/2015./

All the members of AGRESCO subcommittee on Agril. Engg. & Technology and Agril. Information Technology are hereby formally intimated that 11th AGRESCO subcommittee meeting on AET & AIT will be held on 27th February, 2015 at 10.00 hrs. at **Conference hall, College of Agricultural Engineering & Technology, AAU, Dhola-kuva, Godhra.**

All are requested to make it convenient to attend the same.

(M.L. Gaur)

**Convener – AET & AIT Subcommittee, &
Principal and Dean, CAET, AAU, Godhra**

Copy SWCs to:

- (1) The Director of Research and Dean, P.G. Studies, Anand Agricultural University, University Bhavan, Anand 388110....for kind information.
- (2) The Director of Information Technology, AAU, University Bhavan, Anand 388110....for information and with request to **upload the same.**
- (3) P.S. to Hon'ble Vice Chancellor, Anand Agricultural University, University Bhavan, Anand 388110....for kind information.

Action Taken Report of AGRESKO subcommittee on AET & AIT

Sr. No	Project Code	Title	Action suggested			Action	Action Taken
			1 st AGRESKO subcommittee on AET & AIT	10 th Joint AGRESKO meeting	10 th combined AGRESKO meeting		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
RECOMMENDATIONS							
AGRICULTURAL ENGINEERING AND TECHNOLOGY							
1.	AE.AIT/ FMP, Godhra/ 2011/04	<u>Recommendations for the farming community</u> Development and evaluation of pedal operated maize Sheller.	The recommendation was approved with the suggestions: - to incorporate person wise data in recommendation instead of male/female separately. - to incorporate ergonomic/anthropometric data in the report, if possible. - to collect wider farmers' response and extend the work by developing electric power operated maize sheller as a separate study, if feasible.	Approved with following suggestion <ul style="list-style-type: none">Initiate process for patentData on germination percentage may be recorded.	The house approved the recommendation with recasted language subject to the approval to the release committee formulated by house.	PI/HOD/Principal , CAET, Godhra	<ul style="list-style-type: none"> The person wise data was provided at Joint AGRESKO Anthropometric data was incorporated in Combined Joint AGRESKO New Technical program is proposed in AGRESKO subcommittee 2015. The proposal for formation of release committee is sent to DR office.
2.	AE.AIT/ FMP, Godhra/ 2011/03	Effect of sowing methods on yield of <i>rabi</i> maize (GM-3) under middle Gujarat conditions.	House suggested the following: - Germination data needs to be incorporated. - Proper statistical analysis is to be carried out. - Large scale field demonstrations on Multi crop planter (MCP) and farmer's practice should be carried out before concluding the study next year.	NA	NA	PI/ HOD, Principal, CAET, Godhra	<ul style="list-style-type: none"> Germination data were incorporated. Proper statistical analysis was carried out. At Kankanpur farm MCP with farmers practices was carried out. Recommendation is made for farmers.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
AGRICULTURAL INFORMATION TECHNOLOGY							
3.	AE.AIT/ DIT / 2013/01	<u>Recommendations for the farming community</u> <u>Scientific Recommendation</u> A Web Based Soil Health Card Application: Decision Support System for Agriculture Development	After healthy discussion, Chairman suggested that the recommendation should be modified and submitted to the Convener with modified version.	Approved	The house approved the recommendation.	PI / Director IT, Anand	NA
4.	AE.AIT/ DIT / 2013/02	<u>Scientific Recommendation</u> Web User Interface Assisted Live Stock Research Station Management Information System	After well discussion, Chairman suggested that the system will be requiring data entry and validation. House accepted suggestion and result will be presented in next AGRESKO.	Approved	The house approved the recommendation with the suggestion that the critical/threshold limits of data should be given in the software.	PI / Director IT, Anand	NA
5.	AE.AIT/ DIT / 2013/03	A Critical Analysis of Internet usages by the faculty members of Anand Agricultural University	Chairman suggested that Director (IT) will circulate the message to all Head of Units , Anand Agricultural University. After vigorous discussion, House suggested to conclude the program.	Approved	The house did not approve the recommendation. House suggested that findings can be considered as useful information and project is concluded.	PI / Director IT, Anand	NA
ANNUAL PROGRESS REPORT							
COLLEGE OF AGRICULTURAL ENGINEERING AND TECHNOLOGY, GODHRA							
1.	AE.AIT/ SWE, Godhra/ 2011/ 01	Investigation on spatial & temporal variability of infiltration under real field conditions.	House found the progress satisfactory with the hope of a good recommendation next year.	NA	NA	NA	The work is completed and recommendation will be presented.

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2.	AE.AIT/ SWE, Godhra/ 2011/ 02	Preliminary Studies on Assessing & Simulating Seepage from Irrigation Canals in Panchmahal & Vadodara Area	House found the progress satisfactory with the hope of a good recommendation next year.	NA	NA	NA	Recommendation for the Scientific community has been generated.
3.	AE.AIT/ SWE, Godhra/ 2011/ 03	Preliminary Assessment of Prevailing Quantitative and Qualitative Status of Ground Water in Selected Locations of Panchmahals District	House advised Dr. P.K. Singh to take care of the project goals and activities in consultation with the CAET, Godhra.	NA	NA	NA	Required quantitative and qualitative data for appropriate locations has been generated and its analysis will be presented in AGRESO.
4.	AE.AIT/ SWE, Godhra/ 2011/ 04	Studies on roof top rain water harvesting (RTRWH) for conservation and management of water resources.	House advised Dr. P.K. Singh to take care of the project goals and activities in consultation with the CAET, Godhra.	NA	NA	NA	Work is in progress and results will be presented in next AGRESO subcommittee meeting.
5.	AE.AIT/ SWE, Godhra/ 2013/ 01	Impact assessment of climate change on hydrology in the semi-arid region of middle Gujarat, India.	House found the progress satisfactory and advised to continue the project.	NA	NA	NA	Project work completed.
6.	AE.AIT/ FMP, Godhra/ 2013/01	Development and evaluation of mini tractor operated strip till multi crop planter cum fertilizer applicator.	House suggested that while presenting the results varieties of crops needs to be incorporated.	NA	NA	PI/HOD, Principal, CAET, Godhra	Varieties of crops has been incorporated in the results and work is in progress
7.	AE.AIT/ FMP, Godhra/ 2013/02	Development and evaluation of a multipurpose tool bar for mini tractor suitable for maize and wheat crop in the middle Gujarat region	House found the progress satisfactory and advised to continue the project.	NA	NA	PI/HOD, Principal, CAET, Godhra	One prototype has been developed and work is in progress.

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8.	AE.AIT/ APE, Godhra/ 2011/01	Assessment of prevailing post harvesting practices of Custard Apple and developing set of complete post harvest practices for this crop in Panchmahal district.	House agreed to conclude the project and suggested to publish status report of post harvest handling of custard apple.	NA	NA	NA	Concluded, Status report has been prepared and will be published.
9.	AE.AIT/ APE, Godhra/ 2013/01	Process Development of juice preparation from Ivy Gourd (<i>Coccinia grandis</i>).	House suggested to use parthenocarpic varieties (commercial) of ivy gourd in the study and advised to continue the project.	NA	NA	PI/ HOD, Principal, CAET	Experiments have been conducted with commercial variety again and results will be presented.
10.	AE.AIT/ APE, Godhra/ 2013/02	Production Technology for Preparation of Wood Apple (<i>Limonia acidissima</i>) Jam.	House suggested to blend the jam with fruit pulp of papaya and advised to continue the project.	NA	NA	PI/ HOD, Principal, CAET	Experiments have been conducted for blended wood apple and papaya jam and results will be presented.
11.	AE. AIT/ RE, Godhra/ 2011/01	Development of a biomass gasifier combustor of 200 Nm ³ /h capacity hot air production suitable for drying and thermal applications.	House suggested to submit recommendation of the project before Joint AGRESCO after changing the particle size with biomass size.	Not approved	NA	PI/ HOD, Principal, CAET	Concluded.
12.	AE. AIT/ RE, Godhra/ 2013/01	Software implementation of effective Space Vector PWM scheme for a Multilevel Inverter for Stand-alone/off grid PV applications.	House advised to include the name of software to be used in the title also and suggested for detailed progress next year and advised to continue the project.	NA	NA	PI/ HOD, Principal, CAET	As per the house suggestion, the name of the software to be used has been included in the title and detailed report will be submitted New Title : Implementation of effective Space Vector PWM scheme for a Multilevel Inverter for Stand-alone/off grid PV applications using MATLAB/Simulink.

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13.	AE. AIT/ PAE, Dahod/ 2013/01	Modifications in hand operated disc type Maize Sheller.	House suggested to modify the design by mounting the maize sheller on separate frame and advised to continue the project.	NA	NA	PI/ HOD, Principal	Work is in progress and results will be presented in next AGRESO subcommittee meeting
14.	AE. AIT/ PAE, Dahod/ 2013/02	Modifications in existing hand operated paddy thresher.	House suggested to incorporate threshing efficiency and also to compare the modified paddy thresher with the hand operated one. House also advised to continue the project.	NA	NA	PI/ HOD, Principal	Work is in progress and results will be presented in next AGRESO subcommittee meeting
AGRICULTURAL INFORMATION TECHNOLOGY							
15.	AE. AIT/ AIT/ 2013/01	Critical Evaluation of Gujarat State Agricultural Universities Websites: A case study.	After healthy discussion, house suggested to conclude the program.	NA	NA	PI/ HOD, Principal, AIT	Concluded
16.	AE. AIT/ AIT / 2013/02	Calculation of leaf area index through image processing (LAM Software)	After critical discussion, Chairman suggested to contact Plant Physiologist for the method of LAI calculation, identify leaf diseases/ damages. Programme will be continued. House accepted suggestion and approved the same.	NA	NA	PI/HOD, Principal, AIT	Discussed with plant physiologist and concluded.
17.	AE. AIT/ AIT / 2013/03	Web based Experiment Data Management Tool for Plant Breeders.	After critical discussion, House suggested to conclude the program.	NA	NA	PI/HOD, Principal, AIT	Concluded
18.	AE. AIT/ DIT / 2013/04	Web based Inward-Outward Management System	Chairman suggested that the same system will be implemented in all the units of Anand Agricultural University. After the discussion, House suggested to conclude the program.	NA	NA	PI/HOD, Principal, AIT	Concluded

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<u>NEW TWCHNICAL PROGRAMME</u>							
AGRICULTURAL ENGINEERING AND TECHNOLOGY							
1.	AE·AIT/FMPE/2014/01	Development of a modified manual twin wheel weeder	House advised to specify twin wheel weeder as manual operated twin wheel weeder. Conceptual drawing should be added before presenting in Joint AGRESCO. House approved the programme accordingly.	Modify as per the suggestions made by the house	Approved with following suggestion/s Availability and performance of various twin wheel weeders needs to be taken in consideration by incorporating more intensive observations on machine components & field applications.	PI/HOD/Principal CEAT, Godhra	Conceptual drawing was added and work is in progress.
2.	AE·AIT/FMPE/2014/02	Development of a low cost planting unit for conventional plough	House advised to add conceptual drawing before presenting in Joint AGRESCO, and approved the programme accordingly.	Approved	Approved with following suggestion/s 1. Height of hopper /seed metering mechanism needs to be lowered 2. Additional observation on soil properties, field conditions, draft, weight, seed damage ,germination percentage etc needs to be ensured. 3. Information on metering configuration,	PI/HOD/Principal CEAT, Godhra	Conceptual drawing was added and work is in progress.

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					number and size of blade must find place in the study with possibility of reduced hopper size & alternate location of wheel.		
3.	NA	Investigation on present status and further scope of improvement in occupational safety, health and comfort on agricultural tractors and trailers used in middle Gujarat region.	The programme was not approved.	NA	NA	PI/HOD/Principal CEAT, Godhra	NA
4.	NA	Development of Solar Powered Air Cooler	House advised to assess the practical aspects of the work and suggested to revise the technical programme after discussion with Dr. R.F. Sutar, Professor, FPTBE, AAU, Anand.	Approved	Project was Not Approved. House differed the project	PI/HOD/Principal , CEAT, Godhra	NA
5.	AE·AIT/RE/2014/01	Performance Evaluation of the developed biomass combustor for drying of ginger & turmeric	House suggested to incorporate turmeric as additional crop, and approved the programme accordingly.	Approved	Approved with following suggestion/s 1. Title should be framed in tune with the objectives 2. Refine the Objectives 3. Design and development aspects of dryer should be taken with biomass combustion for drying ginger and turmeric	PI/HOD, Principal, CAET	<ul style="list-style-type: none"> ➤ Title: “Development of biomass combustion based drying systems for ginger and turmeric”. ➤ Objective <ol style="list-style-type: none"> 1. To study the effect of biomass combustor on the performance of existing dryer. 2. Design and fabrication of biomass combustor based dryer for ginger & turmeric. 3. Performance evaluation of developed dryer. 4. Techno economic analysis of biomass combustor based dryer for ginger & turmeric.

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6.	AE·AIT/RE/2014/02	Design and development of a throat type down draft biomass gasifier for thermal application	House approved the programme.	Approved	Approved with following suggestion/s Adopt updraft biomass gasifier for maize cob as it is used for thermal application	PI/HOD, Principal, CAET	Throat type updraft gasifier has been taken in the study in place of Throat type down draft gasifier accordingly. Title: Design and development of a throat type up draft biomass gasifier for thermal application. Objectives: 1. Determination of fuel characterization of maize cobs. 2. Design and development of throat type up draft biomass gasifier for thermal application. 3. Techno-economic analysis of throat type up draft gasifier combustor for cooking application.
7.	AE·AIT/PAE, Dahod/2014/01	Comparative Study on Various Drying Techniques of Cluster Bean	House suggested to revise the technical programme in consultation with Dr. R.F. Sutar, Professor, FPTBE, AAU, Anand.	Approved	Approved with following suggestion/s Pretreatment of cluster bean to be accounted before drying	PI//Principal, PAE, Dahod	Work is in progress and results will be presented in next AGRESO subcommittee meeting.
8.	AE·AIT/PAE, Dahod/2014/02	Parameterization of probability models for SUH derivation using Geomorphological model of a catchment response	House advised to thoroughly discuss and modify the programme in consultation with Dr. M. L. Gaur, Prof. & Head, SWE before presenting in Joint AGRESO.	Approved	Approved	PI//Principal, PAE, Dahod)	Work is in progress and results will be presented in next AGRESO subcommittee meeting.
AGRICULTURAL INFORMATION TECHNOLOGY							
9.	AE·AIT/AIT/2014/01	Web-Based Farm Management Information System	After healthy discussion, house approved the new technical programme.	Approved	Approved	PI/HOD, Principal, AIT, Anand	Web-Based Farm Management is an Information system for MFRS farm, which provides information on various aspects of management of farm on agriculture and give exact visualization of the farm.

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10.	AE·AIT/AIT/2014/02	Web-based Pesticide Information System (WPIS) for Chilli crop	House approved the new technical programme.	Approved	Approved with following suggestion/s Incorporate the provision for making availability of weather/ metrological based data/ information on the system/ web portal	PI/HOD, Principal, AIT, Anand	Work continue as per suggestion
11.	AE·AIT/AIT/2014/03	Web Based Application: e-Student Corner with Attendance and Result Modules	House approved the new technical programme.	Approved	Approved with following suggestion/s Incorporate some of the critical parameters like fees paid and its relevant information for each student on the proposed portal	PI/HOD, Principal, AIT, Anand	Result, Attendance and fees module is approved and registrar has asked all colleges to record result of all exams and attendance. BACA has used fees module for UG and PG and all fee receipts were generated via this application. College of AIT has also started using this module.
12.	AE·AIT/DIT/2014/01	Web User Interface Assisted Document Management System	Chairman suggested that the same program will be implemented as a pilot project. House approved the new technical programme.	Approved	Approved	PI / Director IT, Anand	2nd Version Continue
13.	AE·AIT/DIT/2014/02	Web based Capacity Building programme for the AAU	House has approved the new technical programme.	Approved	Approved	PI / Director IT, Anand	Completed
14.	AE·AIT/DIT/2014/03	Online Objective/MCQ examination for Anand Agricultural University	After critical discussion, house approved the new technical programme.	Approved	Approved	PI / Director IT, Anand	Completed
15.	AE·AIT/DIT/2014/04	Fertilizer recommendation for the Web Based Soil Health Card Portal	House approved the new technical programme.	Approved	Approved	PI / Director IT, Anand	Completed