


TAMIL NADU AGRICULTURAL UNIVERSITY

BIO DATA

A. GENERAL

1.0 General Information of the Applicant

Name (in Capital Letters)	S. MOHAN			
Date of Birth (dd / mm / yyyy)	24.12.1958			
Age (as on date of advertisement)	59 years, 8 months			
Place of Birth	PONDICHERRY			
Nationality	INDIAN			
Mother Tongue	TAMIL			
Correspondence Address	P – 58, TNAU QUARTERS, TAMIL NADU AGRICULTURAL UNIVERSITY, COIMBATORE 641 003, TAMIL NADU, INDIA			
Permanent Address	P – 58, TNAU QUARTERS, TAMIL NADU AGRICULTURAL UNIVERSITY, COIMBATORE 641 003, TAMIL NADU, INDIA			
Phone. No	Mobile No.	9488458006	Landline No.	0422- 2448006
email:	sarmamohan@hotmail.com		Alternate Email, if any	sarmamohan@tnau.ac.in

2.0 Educational Qualifications

S.No	Degree Awarded	Name of the Degree	Year	Institution/ University	Discipline/ Subject	Class/Distinction
1	Doctor of Philosophy	Agricultural Entomology	1993	AC & RI, TNAU, Coimbatore	Post-Harvest Entomology	4.00 / 4.00
2	Masters Degree	Agricultural Entomology	1982	AC & RI, TNAU, Madurai	Agricultural Entomology	4.00 / 4.00
3	Under graduate Degree	B.Sc. (Agri.)	1980	AC & RI, TNAU, Coimbatore	Agriculture - Plant Protection specialization	3.99 / 4.00

3.0 Present Position:

1	Designation / Nature of Position	Special Officer (Publications and Public Relations)
2	Organization	Tamil Nadu Agricultural University
3	Nature of activity	Management of University Publications and all Public Relation activities.
4	Duration	23.09.2016 to Till Date

4.0 Total University service including that as Professor

S.No	Date of appointment	Pay scale	Institution / University	From	To	Experience as on date of advertisement (in years & months)	
						Y	M
1	Professor	37400+10000-67000	Tamil Nadu Agricultural University	21.10.2000	12.09.2018	17	10
2	Associate Professor	37400+10000-67000	Tamil Nadu Agricultural University	19.03.1997	20.10.2000	3	7
3	Assistant Professor	10000-325-15200	Tamil Nadu Agricultural University	21.10.1983	18.03.1997	13	5
Total service						34	10
Total service as Professor						17	10

B. ADMINISTRATIVE EXPERIENCE

5.0 Administrative Experience – Post(s) Held & Responsibilities

S.No	Positions	Institution/University	Duration duly indicating the break in service, if any		Experience as on date of advertisement (in years & months) Y M	
			From	To		
1	University Officers					
A	Special Officer(Publications and Public Relations)	Tamil Nadu Agricultural University, Coimbatore.	23.09.2016	Till Date	2	0
B	Dean, School of Post Graduate Studies- In charge	Tamil Nadu Agricultural University, Coimbatore-03.	01.07.2013	22.09.2013	3	3
C	National Principal Investigator (PI) Entomology. All India co-ordinated cotton improvement project, ICAR, New Delhi. (Coordinating All India Cotton Entomological research activities in 21 Centers across India)	ICAR, New Delhi	January 2012	June 2013*	1	6

D	Chairman of the Committee to Revamp and Revitalize the Agricultural School Education in Tamil Nadu.	Government of Tamil Nadu	June, 2010	June, 2012*	2	0
<p>As "Chairman" I made significant academic reforms in Agricultural education in Tamil Nadu Schools. The old curriculum structure which was in practice in Tamil Nadu around last 20 years was revamped and a common text book, Agricultural Practices I and Agricultural Practices II (for 11th and 12th standard schools) was introduced in the year 2010-11, 2011-12 respectively. First time in the curriculum Practical Guide was introduced for 11 and 12th standards in Tamil Nadu. I was solely responsible for this administrative reform in school Education.</p>						
E	Chairman of the Committee to Revamp and Revitalize the Agricultural School Education in Tamil Nadu.	Government of Tamil Nadu	June 2017 –	February 2018*	0	8
TOTAL					9	5
<p>Note :</p> <p>* The assignment as Chairman, Government of Tamil Nadu School Education for Agricultural Curriculum revision and National Principal Investigator (PI) Entomology, All India co-ordinated cotton improvement project, ICAR, New Delhi, were done simultaneously as additional work and responsibility during my Professor and University Officer incharge period.</p>						

Responsibilities under Various Position listed above (Significant Impact Made)

A. As Special Officer – Directorate of Publications & Public Relations, TNAU, Coimbatore – 641003.

As Special Officer (Publications), I **motivated the scientists** of my university to publish their innovation, agricultural information pertaining to their field of specialization and as a result around 549 **Books / Booklets / Journal / Manuals / Folder / Brochures / Leaflet etc..** have been brought out by this Directorate within a period of 1 year and 6 months.

B.As DEAN School of Post Graduate Studies(i/c), TNAU, Coimbatore- 03,

In General DEAN will coordinate the entire post graduate programme in collaboration with other Deans/Directors/Heads of Departments.

- I. **Special Impact Made:** Responsible for signing the MoUs between TNAU and other research institutes to have a collaborative research facility for the PG students.

1. National :

- a. National Research Centre for Grapes, ICAR, Pune.
- b. National Research Centre for Citrus, ICAR, Nagpur.
- c. Institute of Pesticide Formulation Technology, Gurgaon, Haryana.
- d. Central Agricultural Research Institute (CARI), Port Blair, Andaman & Nicobar Islands.
- e. Jain Irrigation Systems Ltd., Jalgaon, Maharashtra.

Implemented with the approval of Academic Council of TNAU- 2015, the movement of students between ICAR Institutes and State Agricultural Universities / Deemed Universities for facilitating training / postgraduate research work through execution of Memorandum of Understanding (MoU), as approved by the Governing Body of ICAR Society in its 230th Meeting held on 12th march, 2014.

2. International

World Food Preservation Center ® LLC P.O. Box 1629 Shepherdstown, WV 25443, USA and Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India.

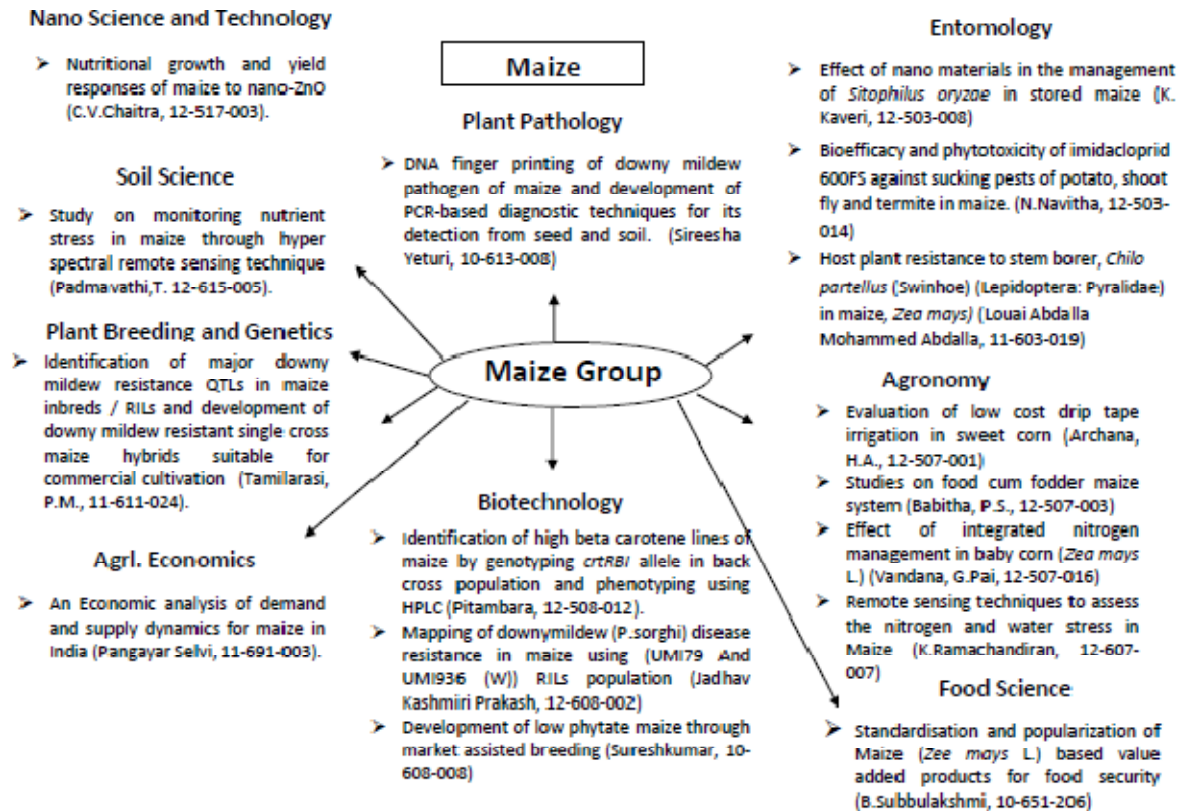
Objective:

To provide a world class education (M.S & Ph.D.) to young students / scientists in developing countries and conduct research on much needed new technologies to preserve Food targeted to the needs of developing countries.

- II. **First time I brought “Students Research Group meet” concept i.e. PG research scholars who are working on the particular area were grouped like ‘Maize group meet’, ‘Zinc group meet’ and ‘Humic acid group meet’ etc. so that they will have a coordinated research on a particular problem.**

An example in this line...

Maize group meet



III. I introduced First time in TNAU, the PG entrance examination pattern vis-à-vis All India competitive exams for admission to M.Sc and Ph.D programmes in TNAU. It is being implemented from 2014, resulted in admission of talented student from all over the country besides students from Tamil Nadu.

IV. Started the following new PG Programmes in the academic year 2015-16

- M.Tech - Storage Engineering
- M.Sc - Agricultural Statistics

C. **As National Principal Investigator (PI) Entomology, All India co-ordinated cotton improvement project, ICAR, New Delhi. (Coordinating All India Cotton research activities in 21 Centers across India)**

- Formulation of technical program for Cotton Entomological research – All India basis - 21 AICCIP centers.
- Monitoring the implementation of the research experiments in 21 AICCIP centers.
- Conducting need based meeting based on Insect Pest outbreak in different parts of the country.
- Collecting and compilation of reports from 21 AICCIP centers.
- Presentation of consolidated 21 AICCIP centers' Entomological reports in annual workshop.

D. Chairman of the Committee to Revamp and Revitalise the Agricultural School Education in Tamil Nadu:

Impressed upon by the creative activity by the school students of Tamil Nadu, based on the technologies developed by me, I was appointed as the **Chairman of the Committee to revamp and revitalise the Agricultural School Education in Tamil Nadu**. I feel this is the greatest achievement in my life as School Education is very important in shaping the future of the student community. The new 11th Standard Agricultural Practices I Book which is read by around 25 thousand school students has a chapter on Importance of Post Harvest Technology in which the TNAU probe trap is highlighted.



As "**Chairman**" I made significant reforms in Agricultural education in Tamil Nadu Schools. The old curriculum structure which was in practice in Tamil Nadu around last 20 years was revamped and a common text book, Agricultural Practices I and Agricultural Practices II (for 11th and 12th standard schools) was introduced in the year 2010-11, 2011-12 respectively. First time in the curriculum **Practical Guide** was introduced for 11 and 12th standards in Tamil Nadu.



Significant reform

Earlier there were many subjects like Crop Management, Crop Protection, Vegetable Cultivation, Agricultural Chemicals, Poultry, Animal Husbandry, Fisheries and Marketing. Schools were free to choose any of the books on subject above for 11 and 12th standard. This was in practice for several years.

School students learn aspects of agriculture theory and practices

Six higher secondary schools offer the subject for two years



HANDS-ON EXPERIENCE: Students of Plus-Two Agricultural Practices visitational class at Government Higher Secondary School at Bangalore during a practical class. - PHOTO: KANAKA

Disadvantage

Students from the above stipulated curriculum, studied only one subject Eg: A students who completes 11 and 12 standard in "Crop Protection" knows only crop protection without any knowledge of crop science. Similarly for other subjects also. This led to a great problem when they got admitted to Diploma or Degree course after 12th standard in Agriculture. Hence I made a major change in this concept. Further it was not practical oriented earlier. I changed this.

MAJOR REFORM

Students currently undergoing 11 and 12th standard in vocational stream Agriculture, will now have two books :

11th standard Agricultural Practices I. This gives a broad basic knowledge in agriculture including Animal Husbandry, Fisheries Marketing Farm Machinery etc.

12th standard - Agricultural Practices II. This gives a detailed knowledge on Important Crops of Tamil Nadu - Cultivation and Management, Animal Husbandry Management etc.

First time

- Practical guide for 11th standard and
- Practical guide for 12th standard were introduced.

This help in acquiring skills in practicing agriculture by the students so that they can get employment in agro-based industries after their school education.

Eg: Seed industry, Honeybee rearing, Cut flower making, Fish culturing, Animal Husbandry management etc.

They can even be self employed.

Advantage of present Syllabus

The greatest advantage of the present syllabus is that the students passed out from 2012 June have more practical knowledge on :

1. Agriculture
2. Veterinary
3. Horticulture
4. Fishery
5. Forestry
6. Agricultural Engineering

Whereas, old curriculum students do not have these facilities. So there will be good competition, hence our "**Rural Students**" are expected to perform very well in the Degree / Diploma Programme equal to their counterparts from 11, 12 standard **Science students in Agriculture and Allied Subjects.**

This is a revolutionary step in **Rural Agricultural Education I** made as **Chairman.**





ABSTRACT

Education – TANUVAS – Under Graduate Admission – B.V.Sc., & A.H. and B.F.Sc., Academic Year 2012-13 – Vocational Course "Agricultural Practices" included under Vocational Stream – Orders – Issued.

Animal Husbandry, Dairying and Fisheries (AH6) Department

G.O.(D) No.111

Dated: 12.06.2012

Vaikasi – 30

Thiruvalluvar Aandu – 2042

Read:

1. From the Director, School Education, Chennai-6, Letter No.037497/V1/E1/2012, dated 25.05.2012.
2. From the Registrar, TANUVAS, Letter No.1567/E5/UGADMN/Voc/12 Dated 29.05.2012.

In the letter first read above, the Director, School Education, Chennai-6, has informed that 11 subjects were grouped under vocational stream offered by the School Education under single heading as "Agricultural Practices" which has been under existence since 2010 onwards and the first batch of students are coming out from this academic year 2012-13. He has also requested to consider the students who underwent the vocational subject on Agricultural Practices for admission in B.V.Sc., & A.H. and B.F.Sc., courses since there is no separate vocational group on Dairying / Poultry and Fisheries.

2. In the letter second read above the Registrar, Tamil Nadu Veterinary and Animal Sciences University has stated that TANUVAS is going to select 260 candidates for B.V.Sc., & A.H. and 40 candidates for B.F.Sc., degree programme in the academic year 2012-13. Among the total intake capacity, 5 percent of seats are reserved to vocational stream candidates for the subject Dairying / Poultry for B.V.Sc., & A.H. course and Fisheries subject for B.F.Sc., course for admission. He has therefore requested the Government to grant permission to include the vocational course "Agricultural Practices" offered by the Directorate of School Education, Chennai, in addition to Dairying / Poultry and Fisheries for selection of candidates under Vocational stream for the year 2012-13.

3. The Government has examined the proposal of the Registrar, Tamil Nadu Veterinary and Animal Sciences University, at Para 2 above and concur with the views of the Director of the School Education and accord permission to the Registrar, Tamil Nadu Veterinary and Animal Sciences University, to include the vocational course "Agricultural Practices" offered by the Directorate of School Education, Chennai, in addition to Dairying / Poultry and Fisheries for selection of candidates under Vocational stream for the year 2012-13.

4. This order issues with the concurrence of School Education vide U.O.No.19697/VE/2012-1, dated 08.06.2012.

//By order of the Governor//

GAGANDEEP SINGH BEDI
SECRETARY TO GOVERNMENT

To

✓ The Registrar,

Tamil Nadu Veterinary and Animal Sciences University, Chennai – 51.

The Director, School Education, Chennai – 6.

//Forwarded by Order//

Dr. U. Raju
12/6/12
Section Officer

Thus a great door has been opened for our Rural students who mainly study Agriculture in their +1 and +2 level to become future VETERINARY DOCTORS of our country.

This I feel the greatest achievement in my life.

வேளாண் செயல்முறைகள்
கருத்தியல்
தொழிற்கல்வி
மேல்நிலை - முதலாம் ஆண்டு

 தமிழ்நாட்டுப் பாடநூல் கழகம்

© தமிழ்நாடு அரசு
முதல் பதிப்பு - 2010

குழுத்தலைவர்

முனைவர். ச. மோகன்,

பேராசிரியர் பூச்சியியல் துறை,
தமிழ்நாடு வேளாண்மைப் பல்கலைக்கழகம்,
கோயம்புத்தூர் - 641 003.

நூல் ஆசிரியர்கள்

முனைவர் த. வசந்தி,

பேராசிரியர் தூண்டினால் மற்றும் வேளாண் வேதியியல் துறை,
தமிழ்நாடு வேளாண்மைப் பல்கலைக்கழகம்,
கோயம்புத்தூர் - 641 003.

அ- ஆனந்தகலைச்செல்வி,
தொழிற்கல்வி ஆசிரியை (வேளாண்மை),
அரசு ஆண்கள் மேல்நிலைப்பள்ளி,
கொண்டாமுத்தூர் - 641 109.

பெ. திருமால்சாத்தி,
தொழிற்கல்வி ஆசிரியர் (வேளாண்மை),
அரசு மேல்நிலைப்பள்ளி,
ஊடுகாட்டூர் - 641 113.

இரா. மலர்விழி,
தொழிற்கல்வி ஆசிரியை (வேளாண்மை),
அரசு மேல்நிலைப்பள்ளி,
காரமலை - 641 104.

ச. ஹில்லா,
தொழிற்கல்வி ஆசிரியை (வேளாண்மை),
அரசு ஆண்கள் மேல்நிலைப்பள்ளி,
பண்டையம் - 641 664.

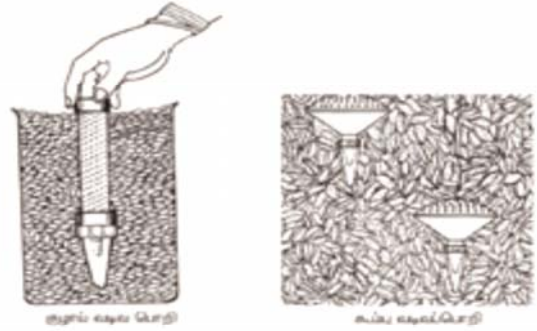
பாடங்கள் தயாரிப்பு : தமிழ்நாடு அரசுக்காகப்
பள்ளிக் கல்வி இயக்ககம், தமிழ்நாடு

இந்த நூல் 60 ஜிஎஸ்.எம்.தரவில் அச்சிடப்பட்டுள்ளது

பெயர் அட்டை: குழுத்தலைவர் அச்சிடப்பட்டது

வேளாண் செயல்முறைகள்
செய்முறை - I & II
தொழிற்கல்வி
மேல்நிலை - முதலாம் ஆண்டு

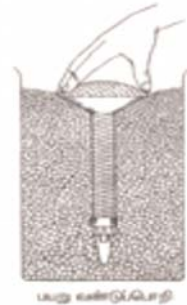
 தமிழ்நாட்டுப் பாடநூல் கழகம்



குழுப்பை வடிவில் செய்தல்



கம்பி வடிவில் செய்தல்



பட்டை வண்ணம் செய்தல்

படம் 53. தானிய சேமிப்புப் பொறிகள்

I was appointed as the Chairman of the Committee to revamp and revitalise the Agricultural School Education in Tamil Nadu.

தமிழ்நாடு பள்ளிக் கல்வி இயக்குநரின் செயல்முறைகள், சென்னை-6
ந.க.எண்.040994/பிடி2/09-1 நாள் 13.07.2009

பொருள் பள்ளிக் கல்வி-தொழிற்கல்வி பாடங்கள்-11 மற்றும் 12ம் வகுப்பு தொழிற்கல்வி பாடத்திட்டம் மற்றும் பாடநூல்கள்-பாடத்திட்டம் மற்றும் பாடநூல்கள் மாற்றி அமைக்கப்பட உள்ளமை-குழுத் தலைவர் மற்றும் பாட நூல் ஆசிரியர் நியமனம்-சார்ந்து.

பார்வை அரசாணை எண்.8 & 9, பள்ளிக் கல்வி (விஇ) துறை, நாள் 06.01.2009.

பார்வையில் காண் அரசாணையின்படி, 11 மற்றும் 12ம் வகுப்பு தொழிற்கல்வி பாடங்களுக்கான பாடத்திட்டம் மற்றும் பாடநூல்கள் மாற்றி அமைத்திட ஆணை வழங்கப்பட்டுள்ளது.

இதன் அடிப்படையில் 27.06.2009 அன்று கோவையில் வேளாண்மை பல்கலை கழக பேராசிரியர்கள், வேளாண் கல்வி பயிற்றுநர்கள் ஆகியோருடன் நடைபெற்ற கலந்துரையாடலில் மேல்நிலை வேளாண் தொழிற்கல்விக்கு, விவசாய செயல்முறைகள் (Agricultural Practices) என்ற தலைப்பில் மேல்நிலை வகுப்புகளுக்கு புதிய தொழிற்கல்வி பாடநூல்களை உருவாக்குவது என தீர்மானிக்கப்பட்டுள்ளது. அதன் அடிப்படையில் விவசாய செயல்முறைகள் என்ற மேல்நிலை 11 மற்றும் 12ம் வகுப்பு தொழிற்கல்வி பாடத்திட்டம் மற்றும் பாடநூல் எழுதிடும் பணி சார்பாக கீழ்க்கண்டவாறு பாடக்குழு அமைக்கப்படுகிறது.

பாடக்குழு தலைவர் தங்கள் குழு உறுப்பினர்களின் கூட்டத்தை உடன் கூட்டி பாடத்திட்டப் பணிகளை மேற்கொள்ள கேட்டுக் கொள்ளப்படுகிறார்கள்.

பாடத்திட்டம் மற்றும் பாடம் எழுதிடும் பணி நாட்கள் "பிற பணி" யாக கருதப்பட்டு பின்னர் அதற்கான பணிச்சான்று வழங்கப்படும்.

பாடக்குழு உறுப்பினர்களின் விவரம்

வ.எண்	பெயர்/முகவரி திரு/திருமதி	பாடக்குழு உறுப்பினர் விவரம்	தொலைபேசி எண்
1	Dr.மோகன் Professor (Endomology) வேளாண்மை பல்கலைக்கழகம் கோவை மாவட்டம்	பாடக்குழு தலைவர்	9488458006 9842619830 0422-6611212
2	Dr.D. வசந்தி Professor (Soil Science) வேளாண்மை பல்கலைக்கழகம் கோவை மாவட்டம்	பாட ஆசிரியர்	0422-6611335 9442001215

3	A. ஆனந்த கலைச்செல்வி அரசு மேல்நிலைப்பள்ளி தொண்டமுத்தூர்	பாட ஆசிரியர்	9791819818
4	திருமால் காந்தி அரசு மேல்நிலைப்பள்ளி புஜங்கனூர்	பாட ஆசிரியர்	9003720272
5	R. மலர்விழி அரசு மேல்நிலைப்பள்ளி காரமடை	பாட ஆசிரியர்	9843465940
6	S. ஹில்லா அரசு (ஆ) மேல்நிலைப்பள்ளி பல்லடம்	பாட ஆசிரியர்	0422-2471006 9629329233

மேற்குறிப்பிட்டுள்ள குழுத் தலைவர் மற்றும் பாட ஆசிரியர்கள் பாடம் சார்பாக பாடநூல் தயாரிப்பு பணிக்காக பணியிலிருந்து விடுவிக்கவும் தெரிவிக்கலாகிறது.

பள்ளிக் கல்வி இயக்குநருக்காக.

பெறுநர்

14/7

சார்ந்த பாடக்குழு தலைவர்
சார்ந்த பாடக்குழு உறுப்பினர்கள்

நகல்

முதல்வர், வேளாண்மை பல்கலைக்கழகம், கோவை மாவட்டம் .

நகல்

தலைமை ஆசிரியர், அரசு மேல்நிலைப்பள்ளி, தொண்டமுத்தூர், கோவை மாவட்டம்
தலைமை ஆசிரியர், அரசு மேல்நிலைப்பள்ளி, புஜங்கனூர், கோவை மாவட்டம்
தலைமை ஆசிரியர், அரசு மேல்நிலைப்பள்ளி, காரமடை, கோவை மாவட்டம்
தலைமை ஆசிரியர், அரசு (ஆ) மேல்நிலைப்பள்ளி, பல்லடம், கோவை மாவட்டம்

Based on my contribution in 2010 – 2012, I was Re-appointment as Chairman of the Committee to Revamp and Revitalise the Agricultural School Education in Tamil Nadu during the year 2017. The text book for 11th standard - Agricultural has been completed and handed over to the Tamil Nadu government.

C. TEACHING / ACADEMIC
6.0 Teaching Experience

S.No	Degree	Institution/University	Duration		Experience as on date of advertisement (in years & months)	
			From	To	Y	M
1	Ph.D	AC&RI, Coimbatore	1999	2001	2	0
2	Masters	AC&RI, Coimbatore	June 1994	June 2013	19	0
3	Under graduate	a) AC&RI, Coimbatore	May 1986	July 1992	6	2
		b) AC & RI, Killikulam	July 1992	Nov 1993	1	6
Total Experience					28	8*

***UG, PG and Ph.D., Simultaneously handled.**

All researchers must get involved in practical classes of all courses according to the cropping seasons and assist the full time teachers / part time teachers However; I have taken the following courses as **course teacher**.

Sl. No.	Degree	Coarse taken		From	To	Institution/University
1	Under Graduate					
	a) AEN 201	Principle of Applied Entomology	2+1	Feb 2001	Jul. 2001	AC & RI, Coimbatore
	b) AEN 202	Economic Entomology	2+1	Mar 1993	Oct. 1993	AC & RI, Killikulam
2	Post Graduate					
	a) AEN 513	Storage Entomology	1+1	28.1.2013	24.6.2013	AC & RI, Coimbatore
	b) ENT 513	Storage Entomology	1+1	19.01.2012	28.05.2012	AC & RI, Coimbatore
	c) AEN 611	Storage and Quarantine Entomology	1+1	26.12.2008	03.09.2009	AC & RI, Coimbatore
	d) AEN 611	Storage and Quarantine Entomology	1+1	18.01.2008	10.07.2008	AC & RI, Coimbatore
3	Ph.D.,					
	AEN 821	Techniques in Plant Resistance to Insects (My Area of Specialization)	2+1	28.12.2001	19.06.2002	AC & RI, Coimbatore

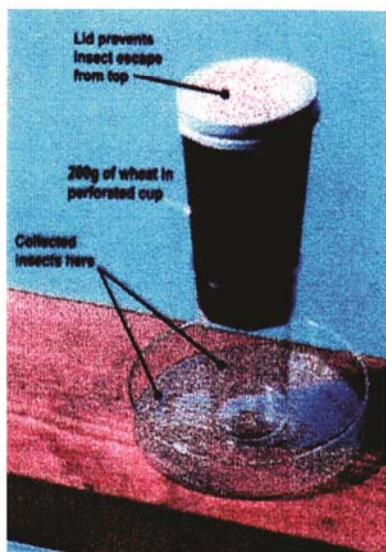
7.0 Other Contribution / Accomplishments relevant to education

S.No	Post	Institution/ University	Discipline/Subject	Period	No. (Where ever applicable)
1	Resource person for Summer institutes / Teacher training / Curriculum development (No. of events)				
	A) ICAR WINTER SCHOOL On Securing Stored Grains from Pests and Diseases	AC & RI, Madurai, TNAU	Storage Entomology - Lecture on : Introduction, history, concepts and significance of stored insect pests and diseases	11.09.2013	1
		AC & RI, Madurai, TNAU	Storage Entomology - Lecture on : 1.Gadget for stored grain insect pest management and their impact 2.Procedure for patenting of gadgets 3.Entrepreneurs Meet	21.09.2013	3
B) ICAR WINTER SCHOOL On Recent trends in Seed Production, Post-Harvest Handling and Value addition techniques for effective seed supply chain	Seed Technology Center, Tamil Nadu Agricultural University, Coimbatore	Storage Entomology - Lecture on : Factors Influencing Stored Seed Pests Proliferation and advance techniques to combat stored pest.	14.09.2016 to 04.10.2016	1	

	C) Teacher Training	Center of Advanced Faculty Training, Tamil Nadu Agricultural University, Coimbatore	Storage Entomology	Sep. 1999 to Sep. 2018	12
	S. No.	Topic of lecture/practical	Topic of the training programme	Date of the training	
	1.	Local farm practices in management of pests of crops	Ecology based pest management	September 1-21, 1999	
	2.	IPM for stored product insects	Modern trends in integrated pest management	November 7-27, 2001	
	3.	Novel gadgets in storage pest management	Modern trends in pest management	February 13 – March 05, 2009	
	4.	A case study on use of pheromone in stored products with special reference to cocoa bean storage	Infochemicals for eco-friendly pest management	February 06-26, 2013	
	5.	Practical studies on TNAU gadgets for stored product insect pest management	Recent advances in stored insect pests management	November 13 – December 03, 2013	
	6.	Success story of TOT – regarding TNAU gadgets	Recent advances in stored insect pests management	November 13 – December 03, 2013	
	7.	Modern gadgets for storage pest management	Functional insect pest management	December 02 - 22, 2014	
	8.	Post harvest insect pest management	Functional insect pest management	December 02 - 22, 2014	
	9.	Alternate management strategies in stored pest management	Pesticide Application in Agro Ecosystems: Its Dynamics and Implications	<i>September 29 – October 19, 2015</i>	
	10.	Gadgets for pest management in rural storage structures	Sustainable pest management strategies in tribal and marginal farming systems	December 02 - 22, 2015	
	11.	Gadgets for assessing diversity of insects in stored products	Innovative approaches in insect biodiversity conservation	November 30 – December 20, 2017	
	12.	Alternate management strategies in stored pest management	Capitalizing pesticide benefits for safer environment	August 23 – Sept, 12, 2018	

	<p>D) Curriculum development</p>	<p>Cereal Research Center (CRC), Agrl. And Agri. Food Canada, Winnipeg, Manitoba, Canada</p>	<p>Biochemical Ecology of Insects</p>	<p>Jan. 10 to Apr. 10, 2000</p>	<p>1</p>
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a) NEW TECHNIQUE DEVELOPED FOR RESEARCH WORK



A simple and rapid technique named **cup bioassay** to determine if natural products are repellent or attractive to stored product insects (cup bioassay technique) was developed (Details in a poster format is enclosed)

Reference : Mohan, S. and Paul Fields 2002. A simple technique to assess compounds that are repellent (or) attractive to stored product insects. *Journal of Stored Product Research*. 38: 23-31.

III) IMPACT MADE ON EDUCATION DUE TO MY CONTRIBUTION

Improvement in class room teaching

New courses designed

- 1) A new practical exercise called "CUP BIOASSAY" Technique for assessing the repellency of plant products against stored product insects has been designed and already incorporated in the practical class for the following courses : (Post graduate course).
 - AEN 606 Storage Entomology 0+1 course
 - AEN 803 Insect Plant Interaction 1+1 course
 - AEN 802 Insect behaviour and reproduction 1+1

METHODS

CUP BIOASSAY:

- Natural products tested as repellants; diatomaceous earth (DE, Protect-It®), powdered pea seed (*Pisum sativum*) pea starch, pea fibre and protein-rich pea flour.
- Natural products tested as attractants: 20 g of broken wheat kernels, 20 g of broken wheat kernels with 30 adults of the species being tested; *R. dominica* pheromone, Dominicalure for *R. dominica*; *T. castaneum* pheromone for *T. castaneum*; and oil and pheromone bait (Pantry Patrol which contains: food oil, pheromones for *Tribolium* spp., *Plodia interpunctella*, *Lasioderma serricorne* and *Trogoderma variabile*) for *S. oryzae*.
- Adult insects tested: the rice weevil, *Sitophilus oryzae*, red flour beetle, *Tribolium castaneum*, rusty grain beetle, *Cryptolestes ferrugineus*, lesser grain borer, *Rhyzopertha dominica*.




Fig. 1. Cup bioassay to determine repellency or attractiveness of products to stored-product insects. Grain is placed in the perforated container, insects are introduced by a funnel into the centre of the grain mass. Insects leaving the grain are captured in the collection device.

INSECT-REMOVAL BIN:

- 2 kg of sorghum (*Sorghum vulgare* 11.6 % moisture content w/w) in insect-removal bin (Fig. 2)
- Natural products tested; 1% neem kernel powder, 0.01% DE (Protect-It®)
- Insect tested: 20 adult *S. oryzae*
- Additional treatment with regular bin, insects can not escape



Fig. 2. Exploded view of insect-removal bin. The grain is held in the perforated inner bin (red) and insects can leave the grain and are trapped in the bottom (white).

	<p>b) I introduced First time in TNAU, the PG entrance examination pattern vis-à-vis All India competitive exams for admission to M.Sc and Ph.D programmes in TNAU. It is being implemented from 2014, resulted in admission of talented student from all over the country besides students from Tamil Nadu.</p>	<p>Tamil Nadu Agricultural University, Coimbatore</p>	<p>PG entrance examination pattern vis-à-vis All India competitive exams for admission to M.Sc., and Ph.D., programmes</p>	<p>2014 – Till Date</p>	<p>1</p>
2	<p>E-Learning and Distance learning materials prepared</p>	<p>Tamil Nadu Agricultural University, Coimbatore</p>	<p>TNAU-Stored Grain Insect Pest Management Kit containing prototypes of all the devices along with a CD-ROM about the devices and how to use them.</p>	<p>24.03.2004 15 Sep. 2005</p>	<p>1</p>
<p>I developed a “KIT” named as TNAU-Stored Grain Insect Pest Management Kit containing prototypes of all the devices along with a CD-ROM about the devices and how to use them. This kit will be of great use in popularization of the technologies across the country. The kit will be an ideal “hands – on training” tool for Education, Extension centers (KVK, Plant clinic, save grain centers) and also for private ware housing. This TNAU kit is the first of its kind in the world.</p>					
					

3	Trainings undergone in leading institutions.				
	Institution / University	Discipline / Subject	Period	Expertise developed or learnt	No. (Where ever Applicable)
	Cereal Research Centre Agricultural and Agricultural Food Canada Winnipeg, Manitoba Canada.	Biochemical ecology of stored product insect under AHRDP	Jan. 10th to April 10th 2000. (3 months)	Developed a cup bioassay technique to assess plant compounds that are attracted/ repellent to stored product insects	1
	McGill University Montreal, Canada.	Food security in South India (Post harvest Entomology) under TNAU - McGill- Canadian International Development Agency (CIDA) project	Nov. 1 st to May 10 th (2004 - 2005) (6 months)	TNAU stored product insect management kit	1
	University of Queens/ and Brisbane Australia	Indo-Australia Strategic research on Food security	25 th May to June 1 st , 2013	Stored product Entomological techniques.	1
	Hyderabad	National Academy of Agrl. Research Management,	Aug. 11-27, 1997	Educational technology - AHRDP	1
	GRD Trust Coimbatore	Course for young science writers conducted by National Council for Science and Technology Communication. Dept. of Science and Technology, GOI.	10 days 25.1.94 3.2.04	Research and Popular articles writing skills	1


8.0 Involvement with formulation of new academic programmes (Degree/Course)

S.No	New Academic Programmes introduced (UG/PG Level)	University /Institute Implemented	Year
1	Started the following new PG Programmes M.Tech - Storage Engineering	Tamil Nadu Agricultural University, Coimbatore	2015-16
2	M.Sc - Agricultural Statistics		

9.0 Books written

S.No	Category	Authorship (First author/ Coauthor)	Editorship (Chief editor/ Co-editor)	Numbers already published			
1	Book authored with ISBN	3	-	3			
	S. No	All Author's Name	Name of the Book	Publisher	ISBN No	Year	Pages
	1	P. Pretheep Kumar and S. Mohan.	Novel Strategies in Stored-Product insect Control.	LAP LAMBERT Academic Publishing AG & CO. KG	978-3-8383-9015-4	2010	104
	2	Pratheep Kumar and S. Mohan.	Pea Fractions - Concepts and Applications.	Dudweiler Landstr, 99, 66123 Saarbrücken, Germany	978-3-8433-5543-8	2010	68
	3	Pratheep Kumar, S. Mohan and P Balasubramanian.	Insecticide Resistance - Stored-Product Insects.		978-3-8433-7411-8	2010	64
2	Books Edited with ISBN	-	3	3			
	S. No	All Author's Name	Name of the Book	Publisher	ISBN No	Year	Pages
	1	P. Narayana samy, S. Mohan and J.S.Awaknavar,	Pest Management in Stored Grains.	Satish Serial Publishing House, Delhi.	81-89304-62.	2009	272
	2	S. Mohan, S. Kuttalam, S. Jayarajan Nelson, M.R. Srinivasan and M.Suganthi.	Recent Advances in Stored Product Insect Pest Management.	A.E. Publications, Coimbatore, Tamil Nadu.	93-81972-51-6.	2015	269
	3	R. K. Murali Bhaskaran, N. Muthu krishnana, S. Mohan.	Integrated Control of Stored Products Pests and Diseases.	Agrotech Publishing Academy.	97-88183213-71-4.	2015	440
	Total					6	

10.0 List of Ph.D. Students successfully guided as Chairman of Advisory committee

S.No	Name of Student / Scholar	University / Institution	Title of Thesis	Year of award	Number of papers published out of the thesis work*
Ph.D Students					
1	Pretheepkumar, P	TNAU, Coimbatore-3.	Studies on the development and testing of newer strategies for the management of Stored Product Insect Pests.	2004	8
 <p>Jawaharlal Nehru Award for best post graduate thesis of ICAR 2005.</p>					
2	Jayaprakash,S.A	TNAU, Coimbatore-3.	Studies on toxicity and effects of transgenic Bt cotton (Bollgard II) on <i>Helicoverpaarmigera</i> .	2011	3
3	Nandhini, S	TNAU, Coimbatore-3.	Evaluation of Bt transgenic cotton (Bollgard and Bollgard II) against Pink Bollworm, <i>Pectinophoragossypiella</i> , <i>Sunders</i> (Gelichidae; Lepidoptera).	2014	2



Best Thesis Award Ph.D. 2013-14 (Crop Protection)

4	Abhuri Rajesh	TNAU, Coimbatore-3.	Development of Eco-friendly pest management system for stored turmeric.	2016	4
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He has won Best Poster Award in the National Expo on Assemblage of Innovative Ideas for a part of his Ph.D., Work.

5	Kiruba, S.	Manonmani Sundarnar University, Thirunelveli, Tamil Nadu	Experimental confirmation of the bruchidae natural Parasitism efficacy using an innovative device, friendly to the environment	2008	1
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This student has developed a new trapping technique based on my external expert guidance and published in high rate NAAS Journal.

EXPERIMENTAL CONFIRMATION OF THE BRUCHIDAE NATURAL PARASITISM EFFICACY USING AN INNOVATIVE DEVICE, FRIENDLY TO THE ENVIRONMENT

Solomon Kiruba¹, **Sarma Mohan²**, Sathiadas Sam Manohar Das¹ and Smaragdi Papadopoulou³

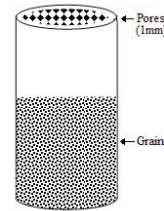
¹Department of PG Studies and Research Centre in Zoology, Scott Christian College, Tamil Nadu, India

²Tamil Nadu Agricultural University, Department of Agricultural Entomology, Coimbatore, Tamil Nadu, India

³Technological Educational Institute of Thessaloniki, School of Agricultural Technology, Laboratory of Entomology,

Biotechnol. & Biotechnol. Eq. 2012, 26(1), 2722-2725


Keywords: environmentally-friendly device, natural parasitism, biological control, *Callosobruchus maculatus*, *Uscanalariophaga*, *Dinarmus basalis*






Parasitoid facilitator bin.



DEPARTMENT OF ZOOLOGY
(DST - FIST - Funded Department)
SCOTT CHRISTIAN COLLEGE, (AUTONOMOUS)
(Re-accredited with 'A' grade by NAAC)
NAGERCOIL - 629 003, KANYAKUMARI DISTRICT, TAMIL NADU, INDIA

6	<p>Ms Anita Jeyanthi Bose.</p>  <p>DEPARTMENT OF ZOOLOGY (DST - FIST - Funded Department) SCOTT CHRISTIAN COLLEGE, (AUTONOMOUS) (Re-accredited with 'A' grade by NAAC) NAGERCOIL - 629 003, KANYAKUMARI DISTRICT, TAMIL NADU, INDIA</p>	<p>ManonmaniS undarnar University, Thirunelveli, Tamil Nadu</p>	<p>Management of a Selected Primary Pest of Stored Produce.</p>	<p>2008</p>	<p>-</p>
7	<p>CSIR - SRF – Extended Fellowship- M. Kannan</p>	<p>Tamil Nadu Agricultural University, Coimbatore.</p>	<p>Analysis of Genetic Diversity In Different Geographical population of Cotton boll worm, <i>Helicoverpa armigera</i> using molecular marker. (I was (Dr.S.Mohan) Supervisor for this SRF) Post Doctorate Level Work.</p>	<p>2005-06</p>	<p>-</p>
<p>CSIR - SRF (Extended): All those candidates who have submitted their ph. D/MD/MS/MDS thesis can apply under this category. All such candidates must submit necessary documents issued by the competent authority, as proof of their having submitted the thesis. In the absence of such documents, application will be rejected. The selected candidates will be offered SRF extended for a period of one year only at a stipend of Rs. 6400 p.m. (Consolidated). The work will be related to Ph.D., thesis.</p>					

Master Students Guided as Chairman					11
Total Papers Published M.Sc., Students					10
Master Students' Excelled (Honor)					2
1) Pratheepkumar,P	TNAU, Coimbatore-3.	Investigations on the repellency of pea products against Stored Product Insects,	2001	1	
<div style="text-align: center;">  <p>Tamil Nadu Agricultural University Coimbatore</p> <p><i>Certificate of Award</i></p> <p>This is to certify that</p> <p>PPIC Medal</p> <p>for the Best Thesis on Efficient Use of production Inputs for Maximizing Crop Yields In Agricultural Entomology</p> <p>has been awarded to</p> <p>PRETHEEP KUMAR, P.</p> <p>in recognition of his/her performance in the M.Sc.(Ag.) Programme of the Tamil Nadu Agricultural University during 2001</p> <p>Coimbatore - 3 Date : 14.03.2002</p> <p><i>Dr. M. SWAMIAPPAN</i> Registrar</p> <p><i>Prof. Dr. S. KANNAYAN</i> Vice-Chancellor</p> </div> <p>Investigations on the repellency of pea products against stored product insects (2001). This thesis has won PPIC medal for Best thesis on efficient use of production inputs for maximizing crop yields.</p>					
2) Dr. S.A. Jayaprakash	TNAU, Coimbatore-3.	Investigations on the egg removal device for pulse beetle (TNAU Patent, 198434) for other important Pests of Storage	2010	2	
<div style="display: flex; justify-content: space-around;">   </div> <p>TNAU "Egg Removal Device" in 10th International Working Conference on Stored Product Protection held at Estoril, Portugal during 27 June to 2 July 2010</p>					

11.0 Membership in Councils and Professional Bodies

S. No.	Council / Professional Body	Position Chairman / President / Secretary / Member	Institution / University	Duration		Experience (in years & months) Y M	
				From	To		
1	Executive Council / National level committee / State level Committee	1. Member of Varietal Identification Committee.	ICAR	09.04.2012	11.04.2012	-	3 Days
		2. Member of Institution Biosafety committee - GOI.	Bharathiyar University, Coimbatore, Tamil Nadu	2009	2012	3	-
		3. All India Co-ordinated Cotton Improvement Project.	AICCIP centers of India.	26.10.2001	06.11.2001	-	11 Days
		4. Monitory Team.	South Zone AICCIP	15.12.2002	23.02.2012	-	7 Days
		5. Secretary for conducting the monitoring of the front line Demonstrations	AICCIP centers of India by ICAR	23.07.2002	01.08.2002	-	8 Day
		6. Monitoring team constituted by the monitoring cum Evaluation committee (MEC)	Ministry of Science and Technology. Govt. of India.	2002	2004	2	-
		7. Research Project Approval Committee	Indian Institute of Crop Processing and Technology (IICPT), GOI, Thanjavur.	2012	2013	1	-
		8. Task of setting Agricultural Scientists Recruitment Board NET/ ARS exam	ICAR (Net)	26.04.2013	01.05.2013	-	5 Days

		9. Member of ASRB – Assessment Committee-SBI-CBF	ICAR (Recruitment)	14.05.2010	-	1	1 Day
		10. Member of Higher secondary examination committee	Government exam Tamil Nadu.	29.09.2011	-	-	1 day
2	Special Projects / Task Force	11. Vice Chairman Duty : Policy making body and Guidance	All India Agricultural Students association NAAS Committee	2014	2016	2	-
		12. Member of the technical group	Indian Grain Storage Working Group (IGSWG), ICAR, Govt. of India.	2015	Till Date	3	9
3	Professional / Academic Bodies	13. Member of PG Board of Studies	University of Agricultural Sciences, Bangalore	Apr. 2014	Apr. 2016	2	-
		14. Member of PG Board of Studies	Dr. Y.S.R. Horticultural university, Venkataraman agude, West Godavari, Andhra Pradesh	July 2015	July 2017	2	-
4		15. PG Chairman Board of Studies TNAU*	TNAU	01.07.2013	22.09.2016	3	3
		16. Member of Academic Council TNAU*					
		17. Standing Committee (Private Agri. College Member)					
		*Dean, SPGS is Chairman of PG Board of studies and member of the Academic Council as per TNAU Act.					

5	Professional / Academic Bodies	International					
		18. Member in American society of Agricultural and Biological Engineering	American society of Agricultural and Biological Engineering	2009	2010	2	0
		National					
		19. Life member in MASU	Madras Agricultural Students Union (MASU)	30.05.1995	29.05.2010	15	-
20. Life member	National Academy of Biological Sciences.	Life Member		-	-		





D. RESEARCH

12.0 Research Projects obtained / Research Fund mobilized

S.No	Title of Project	Sponsor Name	Duration of the Project & period	Amount of Grant (INR.Lakhs)	PI or Co-PI
Internationally funded or sponsored (Projects obtained by the individuals only)					
1	Ensuring food security : Harnessing science to protect our grain harvest from insect threats (TNAU UV light trap and TNAU Stack probe trap for warehouse have been approved for use in Indian Warehouses as IRM strategy for stored grain insect management in Indian Warehouses) (as CO-PI)	Collaboration between University of Queensland, Australia and TNAU (Dept. of Science and Technology, GOI) (No.CPPS/CBE/ENTO 12 S131/2012 dated 04.05.2012 of the O/o. Director, CPPS)	April 2012 to Sep. 2016	INR.107.00	CO-PI
2	Deploying biotechnology based decision making tools in postharvest grain pest management to enhance food security and market access(as CO-PI)	Indo-Australia Biotech Fund, DBT, New Delhi	2017-2020	INR. 90.57	CO-PI
3	Adhoc Project : Popularization of TNAU gadgets for management of stored grain insects	TNAU-McGill CIDA Project	November 2005 to September 2007	Around INR. 10.00 From McGill, CIDA Fund	PI
4	Management of Cigarette beetle <i>Lasiodermaserricornes</i> on senna pods/seeds	M/s. Madaus Pharmaceuticals Goa (German Firm)	Jan. 2002 - December 2004	INR. 6.80	PI

Nationally Funded or sponsored (Projects obtained by the individuals only)					
1	Design and development of container model for removing store product insects exploiting their behavior	ICAR Adhoc	April 1996 to Sep. 1998	INR. 3.10	PI
2	Low cost technology for safe storage of pulses	NATP-RPPS-5 (Rainfed mode)	April 2000 - 2003 Dec.	INR. 11.50	PI of Co-ordinating Center
Private Agency funded or sponsored (Projects obtained by the individuals only)					
1	Detection of Cigarette beetle <i>Lasiodermaserricornis</i> in herbal Tea	M/s.Saraf Trading corporation, Cochin	July 2007 - June 2009	INR. 3.53	PI
2	DCPPS / CBE / AEN 03 S23 Development and testing of location specific IPM model for BT cotton	M/s. Monsanto India Ltd.,	23.09.03 - 22.09.05	INR. 3.88	PI
3	Bioefficacy of Mitlar (A Herbal Pesticide) against sucking pests of Cotton and Biodart (<i>Bacillus thuringiensis</i> var. Kurstaki) 7.5% WP cotton Bollworm	M/s Ajay Biotech (India) Ltd., Mumbai	July 2012 - June 2013 (One year)	INR. 1.88	PI
Total fund mobilized				INR. 238.26	

**13.0 Crop varieties released /Patents obtained/ Technology released for adoption /
Key policy documents prepared**

Title	Crop /Subject /Material	Variety / type of invention / type of document	Role of the candidate	Year of release / Year of award
Patents obtained	1) TNAU Stack Probe Trap	Trap for monitoring stored product insects in warehouse.	Inventor	2017
 				
	2) TNAU Egg removal device	A Device to Remove Insect Eggs from Stored Pulse Seeds	Inventor	03-02- 2006
 				

Technology released	1. TNAU Stored Grain Trap	To trap the Insect in Stored Grain	Technology Developer	1993
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2. TNAU Mosquito TRAP	Entomologist develop unique mosquito trap	Technology Developer	1994
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Entomologists develop unique mosquito trap *Ind-Express 19-10-73*

EXPRESS NEWS SERVICE

KILLIKULAM - The entomologists of the Agricultural College and Research Institute of Killikulam in Chidambaranar district have developed a simple battery-operated suction trap for quick and large scale collection of mosquitoes. These mosquitoes responsible for spreading malaria, filaria and brain fever are sought by scientists for research and vector studies.

Hitherto a cumbersome process was used to harvest mosquitoes where investigators collecting mosquitoes had to go in search of mosquito resting places armed with a torch light and suction tube and manually suck the insects with suction tubes. This was tedious and time-consuming.

To overcome this problem, three entomologists at the Agricultural College here - S. Mohan, A. Janagarajan and M. Rangarajan - have designed the new mosquito trap. The trap comprises a small plastic bucket measuring 15 cm in diameter and 15 cm high. The bottom is provided with an inlet for sucking air. (see figure). Attached to the inside of the bucket near the inlet is a small plastic fan to which is fitted a six volt motor, which is operated by a shoulder mounted rechargeable battery. A net with a mouth covers the top of the bucket. A handle is also provided on one side of the bucket to facilitate collection in any direction. The process is simple. When the motor is operated, air is sucked into the bucket bringing the mosquitoes with it. The inlet has a cover which is used before the motor is switched off, to prevent the insects from escaping.

Trials conducted in collaboration with the Zonal Malaria Entomological Team of Tirunelveli led by N. Kandasamy by the entomologists of the Agricultural College during nights in cattle sheds and farm houses resulted in the collection of large quantities of mosquitoes and other flying insects. All the mosquitoes collected were alive with a full meal of blood, which was essential for vector studies. The species collected included encephalitis vector, culex tritaeniorhynchus and many varieties of anopheles mosquitoes.

Normally mosquitoes begin their foray after dusk from their resting place in search of blood meal. They can be collected during this period and used for vector and other studies.



3. TNAU Automatic Insect Removal Bin - Stored Product Entomology

Invention - New storage BIN for Farmers

Inventor

1998



4. TNAU UV Light Trap

UV Light Trap for Warehouses

Technology Developer

9.1.1992



5. **TNAU Two – in – One Model**

Increased the efficiency of Probe Trap.

Inventor

2003



6. **TNAU Stored Grain Insect Pest Management Kit**

These include TNAU probe trap, TNAU pit fall trap, two in one model trap, indicator device, Automatic insect removal bin UV-light trap technology

Inventor

15th Sep. 2005



Key Policy documents prepared for the Government	The Process of Policy Formulation and Implementation on Quarantine	India – Quarantine Technical policy	Author	2014 -2018
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Technologies developed by me and their impact on end users:

1. TNAU INSECT PROBE TRAP: TNAU Insect traps are excellent insect detection devices in food grains and more effective in the detection of stored grain insects namely *Rhyzoperthadominica* (F.), *Sitophilusoryzae* (L.) and *Triboliumcastaneum* (Herbst) in stored food grains. They are also good mass trapping devices when used at 2– 3 numbers / 25 kg bin (28 cm dia and 39 cm length). They can remove > 80% of the insects within 10 – 20 days.



2. TNAU PIT FALL TRAP: Pitfall traps are used for capturing insects active on grain surface and in other layers of grain.



3. TNAU TWO-IN-ONE MODEL TRAP:

Best suited for pulse beetles as they are seen only on grain surface wandering here and there.

4. INDICATOR DEVICE

This helps in, timely detection of insects which will help the farmers to initiate early control measure for pulse beetle in storage.



5. TNAU AUTOMATIC INSECT REMOVAL BIN



TNAU insect removal bin can remove insect automatically. Grains (paddy and sorghum) stored in Automatic insect removal bin (100 kg and 500 kg) recorded only 1 – 4% damage by insects compared to 33 to 65% damage in ordinary bin after 10 months of storage. The population of insects (*R. dominica*, *S. oryzae*) ranged from 0 – 2 / kg in grain stored in 100 kg Automatic insect removal bin compared to 5 – 191 / kg in ordinary bin after 10 months of storage.

6. FLOUR INSECT TRAP

TNAU Pit Fall Trap is modified to suit trapping of insects in wheat Flour / Maida / Spices Powder.

The top lid with 2mm perforation is fitted to a cylindrical tumbler shaped unit with a sieve of 0.8 – 0.9mm size at the bottom of tumbler.

The insects enter through the 2mm perforation in the top of tumbler portion and get settled over the 0.8 – 0.9mm sieve at the bottom. Any spill over flour into the trap can get sieved out by gentle shaking of the trap unit or removed and thrown out as only a very very small quantity of flour will be inside and sometimes it may be with the eggs laid by the trapped insect.



7. UV – LIGHT TRAP FOR GRAIN STORAGE GODOWNS

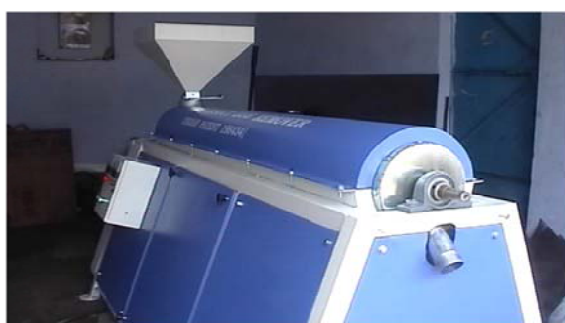
The trap is ideal for use in godowns meant for long term storage of grains and to trap the resistant strains during post fumigation. The light trap attracts stored product insects like lesser grain borer, *Rhyzoperthadominica*, red flour beetle, *Triboliumcastaneum* and cigarette beetle *Lasiodermaserricornein* large numbers.



8. A Device to Remove Insect Eggs from Stored Seeds/ Grains (Indian Patent No. 198434)

The device is useful in crushing the eggs from the seeds/ grains without affecting the germination. Removing the eggs laid by the beetles will have a significant impact in arresting the population build up in storage. The patent has been recently commercialized.

Machine operated



Cleaning efficacy: 200 kg/ hr
Approximate unit cost- Rs: 1, 75,000/-

Hand operated



Cleaning efficacy: 50 kg/ hr
Approximate unit cost- Rs: 40,000/-

9. TNAU- STACK PROBE TRAP for monitoring stored product insects in warehouse. (Indian Patent No. 284727)

The device is useful in detecting stored grain insects in bag stacks of the food grain warehouses without any damage to sacks. No such non baited trap is available anywhere in the world.



10. TNAU Kit- TNAU STORED GRAIN INSECT PEST MANAGEMENT KIT

The kit containing prototypes of all the devices listed above along with a CD-Rom will be an ideal “hands – on training” tool for Education, Extension centers (KVK, Plant clinic, save grain centers) and also for private ware housing.

IMPACT

1. AROUND 5 LAKH PEOPLE IN INDIA USES TNAU INSECT TRAP



From *Pallapalayam, Village, Tamil Nadu, India*

Jo *France*

Next My aim is to take the Trap



Technologies cross border ...

These trap technology have been introduced recently in Ethiopia, Rwanda, Nigeria, Turkey, Egypt, Thailand and France



2.AROUND 300 AGRICULTURAL COLLEGES / KVK'S USING THE TNAU KIT FOR TEACHING AND TRAINING.

TNAU - Kit Technology spread Across the country



The TNAU Kit was launched by Tamil Nadu Agriculture University, Coimbatore, on 15th September, 2005.



TNAU - Kit



I Traveled with Kit to Popularize



INDIA

Anantapur, Andhra Pradesh



Palladam, Tamil Nadu.



Trichur, Kerala.



Madurai, Tamil Nadu.



3.UV LIGHT TRAP TECHNOLOGY USERS

Significant out come of a Technology Transfer due to Indian Grain Storage Working Group

- Indian Council of Agricultural Research (ICAR) has formed the Indian Grain Storage Working (IGSWG). Vide D.O./IGSWG/2015, Dated, the 26th June-2015 with Dr. K. Alagusundaram, Deputy Director General(Agri. Engg.) as Chairman, IGSWG
- Under the technical activities of the Group TNAU UV Light was tested by Food Corporation of India (FCI).

THE 'TRAP' EXPERIMENTS

@ Food Storage of Depot, Bicavolu,
East Godavari District, Andhra Pradesh



- The UV light traps were found to be effective in reducing the insect population inside the sheds.
- It is also effective for the godowns situated near residential areas by preventing the flying insects in the late hours.

This lead to large scale adoption of UV Light Trap by FCI as well as by many private Warehouses across India. (around 1000 users)



- Large scale production by M/s Melwin Engineering Coimbatore, Tamilnadu, India. who has been given License by Tamil Nadu Agricultural University.
- Promotion of a small scale Entrepreneur

Significance :



TNAU UV Light Trap release in 1992

Though TNAU UV Light Trap was released in 1992, the technology was transferred in Large scale to FCI only after the formation of **Indian Grain Storage Working Group** in 2015 which formed strategies for effective Grain Storage Management.

S.Mohan, Member, IGSWG
Professor of Agricultural Entomology
Tamil Nadu Agricultural University, Coimbatore - 641 003
web site : www.mohantrap.com, Mail Id : sarmamohan@hotmail.com

4. EGG REMOVAL DEVICE (INDIAN PATENT 198434) USERS - 6 UNITS OF THE VARIOUS CAPACITIES ARE BEING CURRENTLY USED



Capacity of cleaning efficacy 5kg/hr



Capacity of cleaning efficacy 50kg/hr



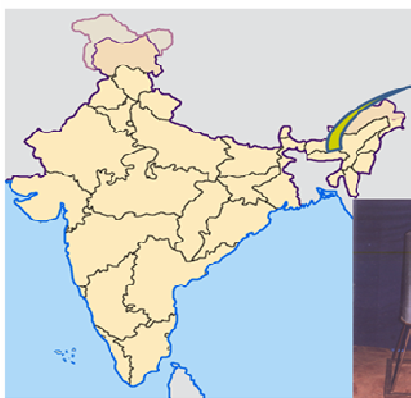
Capacity of cleaning efficacy 200kg/hr (1HP motor)

5. STACKS PROBE TRAP USERS (INDIAN PATENT 284727)



At present 500 units are being used in the detection of insects in warehouses in India I Hope and am always optimisticthat every warehouse in India will have this tool ... an essential tool to detect insects in warehouses which stores > 60 million tonnes of food grains for Public distribution system in our National Food Security Mission.

6.TNAU – INSECT REMOVAL BIN USERS



**A factory in North-Eastern Zone of India-
Manufacturing and marketing the BIN.**

**Around 5,000 farmers are using the bin
for paddy seed storage.**

14.1 Research Publications in UGC listed/ ICAR listed / NAAS rated Journals

 Publication as First Authors Before Ph.D., (1993) = 14

 Publication as First Authors After Ph.D., (1993) = 23

 As First Authors

S. No	Author's name	Title of Paper	Journal Name with Vol, pages & year	If UGC listed, the Journal Number* / If ICAR listed / NAAS Rated, the NAAS impact factor*
1	S.Mohan , M. Gopalan	A study on the use of Biogas from cow dung for storage insect control. Bioresource Technology.	1992	11.65
2	S.Mohan , M. Gopalan, V.V. Sreenarayanan	Fish meal waste as an attractant for economically important flies of Agricultural Crop. Bioresource Technology.	1993	11.65
3	S.Mohan , S.Mohan, R.H.L. Disney	A new species of scuttle Fly (Diptera : Phoridae) that is a pest of Oyster Mushrooms (Agaricales : Pleurotacea) in India. Bulletin of Entomological Research.	1995	7.76
4	S.Mohan , Paul Fields	A simple technique to assess compounds that are repellent (or) attractive to stored product insects. Journal of Stored Product Research.	2002	7.75
5	S.Mohan , S.S. Sivakumar, S.R. Venkatesh and G.S.V. Ragavan.	Penetration of polyethylene sheets coated with protein enriched pea flour solution by two stored product insects. Journal of Stored Product Research.	2007	7.75

6	S.Mohan, S.S. Sivakumar, S.R. Venkatesh and G.S.V. Ragavan	Simple technique to increase the sensitivity of probe traps in detecting <i>Cryptolestes ferrugineus</i> in stored wheat. Canadian Entomologists.	2006	7.26
7	S.Mohan, G. Prasad	Development of a new fish meal attractant and insecticide formulation for management of sorghum shoot fly. <i>Atherigona variasoccata</i> Rond. Tropical Pest Management.	1991	6.64
8	S.Mohan, M. Gopalan, P.C. SundaraBabu and V.V. Sreenarayanan	Practical studies on the use of light trap and bait trap for management of <i>Rhyzoperthadominica</i> in rice warehouses. International Journal of Pest Management.	1994	6.64
9	S.Mohan, K. Karuppu samy	A potential predator for sorghum mite, <i>Oligonychus indicus</i> (Hirst). Current Science.	1987	6.84
10	S.Mohan D. Purushothaman, S. Jayaraj and A.V. Rangarajan.	PAL-ase activity in the sorghum bicolor (L.) inoculated with <i>Azospirillum</i> . Current Science.	1988	6.84
11	S.Mohan, S. Jayaraj, D. Purushothaman and A.V. Rangarajan	Can the use of <i>Azospirillum</i> biofertilizer control sorghum shootfly? Current Science.	1987	6.84
12	S.Mohan, and A. Tajuddin.	Communication through written words - an effective extension tool for technology transfer. Indian J. Extn. Education.	1989	5.32
13	S.Mohan, and A. Tajuddin	Efficacy of a battery operated suction trap for sampling insects. Indian J. Plant Prot.	1988	5.07
14	S.Mohan	Only females sorghum shoot flies in fish meal traps. Indian J. Plant Prot.	1991	5.07
15	S.Mohan and R. Janarthanan.	Effect of light trap on the incidence of yellow rice borer in trap zone and field. Oryza.	1985	4.44

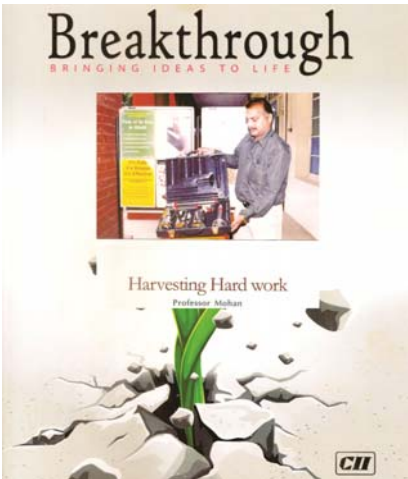
16	S.Mohan, S. Jayaraj and A.V. Rangarajan	A reliable egg count method to fix economic threshold level for sorghum shoot fly, <i>Atherigonasoccata</i> Rond. Entomon.	1988	4.42
17	S.Mohan and ZaddaKavitha.	A technique for detection of cigarette beetle in herbal tea products. Green farming.	2007	4.38
18	S.Mohan	Ecofriendly post harvest technologies for management of stored grain insects. Green farming.	2007	4.38
19	S.Mohan, M. Suganthy, S. Palanisamy and C. Kailasam	Farmers friendly scouting technique for <i>Helicoverpaarmigera</i> in Bt cotton hybrids. 2006. The Madras Agricultural Journal.	2006	3.98
20	S.Mohan., G. Balasubramanian, M. Gopalan and S. Jayaraj.	Solar heat treatment - a novel method to check rice weevil and red flour beetle infestation in sorghum during storage. Madras Agric. J.	1987	3.98
21	S.Mohan, G. Balasubramanian and M. Gopalan	Biogas fumigation of sorghum grain for the control of red flour beetle, <i>Triboliumcastaneum</i> . Madras Agric. J.,	1989	3.98
22	S.Mohan, S. Sivakumar, Z. Kavitharaghavan, S. Venkatesh and G.S.V. Ragavar.	A new trap model to increase the trapping of <i>Cryptolestesferrugineus</i> (Coleoptera : Laemophloeidae) in wheat filled containers. <i>Madras Agric. J.</i>	2008	3.98
23	S.Mohan, and ZaddaKavithaRaghavan	Pitfall trap for stored grain insect management in Tamil Nadu. Journal of Eco-friendly Agriculture.	2008	3.80
24	S.Mohan., P.T. Palanisamy, K. Parvathy, B. Rajasekaran and M. Balasubramanian.	Studies on the effect of defatted neemkernel powder for pulse beetle <i>Callosobruchus chinesis</i> (L.) control. <i>Pestology</i> , 25(9): 23-26.	1990	2.76* (NAAS Score 2015)
25	S.Mohan.	Laboratory studies of a new storage bin to remove <i>Sitophilus oryzae</i> and <i>Rhyzopertha</i>	1997	2.76* (NAAS Score

		dominica from stored paddy seeds. Pestology., XXI (12): 30-35.		2015)
26	S.Mohan., M. Kalyanasundaram, M. Swamiappan and P.C. SundaraBabu.	Preliminary investigation of some gadgets for management of Triboliumcastaneumin Corcyra cephalonicarearing trays. Pestology, 22 (5): 38-40.	1998	2.76* (NAAS Score 2015)
27	S.Mohan.	Laboratory studies of a storage container model to remove grubs and adults of Caryedonserratus from tamarind seeds. Pestology XXII(9): 39-42.	1998	2.76* (NAAS Score 2015)
28	S.Mohan. and Paul Fields.	A novel and rapid techniques to assess the repellency of plant products against stored product (4) insects without bioassay. Pestology XXIV (4): 20-22.	2000	2.76* (NAAS Score 2015)
29	S.Mohan., M. Gopalan, P.C. SundaraBabu and V.V. Sreenarayan.	Studies on the movement of some insect pests of rice through grain stored in bin. Pestology, XXIV (7): 25-30.	2000	2.76* (NAAS Score 2015)
30	S.Mohan., C.T. Devadass and D. Mahendran.	Pitfall trap for bruchid management. Pestology, XXV(7): 25-26.	2001	2.76* (NAAS Score 2015)
31	S.Mohan. and S. Uthamasamy.	Technologies for cotton bollworm management. Pestology, XXV(4): 22.	2001	2.76* (NAAS Score 2015)
32	S.Mohan. and ZaddaKavithaRaghavan	Systematic feed back studies on TNAU Probe trap in Pallapalayam, Palladam in Coimbatore, Tamil Nadu. Pestology, XXXII, (6): 49-51.	2008	2.76* (NAAS Score 2015)
33	S.Mohan. and ZaddaKavithaRaghavan	A technique for detection of Cigarette beetle. LasiodermaserricornesFab. in herbal products. Pestology XXXII (9) : 37-38.	2008	2.76* (NAAS Score 2015)
34	S.Mohan., P. Pretheep Kumar, M. Sivakumar, L. Rajendran and R. Samiyappan.	Influence of an entomopathogenic fungus Beauveriabassiana as a biopesticide in the management of stem weevil in cotton. Pestology. 33(8): 20-31.	2009	2.76* (NAAS Score 2015)
35	S.Mohan.	A device to remove adult insects and crush their eggs in stored grains. Pestology Vol. XXXV No.9, 29-30.	2011	2.76* (NAAS Score 2015)

36	S.Mohan. and S. Nandini.	A promising entry for cotton leaf hopper. Pestology XXXV No. 6: 11-18.	2011	2.76* (NAAS Score 2015)
37	S.Mohan. and S. Nandini.	American Bollworm Helicoverpaarmigera (Hobner) incidence in cotton a thirteen year analysis. Pestology XXXV No: 51-52.	2011	2.76* (NAAS Score 2015)

***Journals could not be assigned NAAS Score due to Non-Receipt of required information.**

14.2 Research Publications other than given in the section 14.1 above

S.No	Category	Numbers already published
1	International Journals (Peer reviewed Journals only)	10 Referred as (I) in the list – Annexure 2
2	National Journals (Peer reviewed Journals only)	36 Referred as (II) in the list – Annexure 2
3	Book chapters appeared in ISBN books only	2
	<p>A) Mohan.S, 2002 Light Traps. In: Encyclopedia of Pest Management. P.455-459 Maral Dekker Inc. Newyork. ISBN No.97-81482-249-52-1.</p> <p>B) Mohan.S, 2009 Harvesting Hard Work. In:Breakthrough- Bringing Ideas to Life. CII Publication. New Horizon Media Pvt. Ltd. Canada. P:48-53. ISBN No.:978-81-8943-095-05.</p> <p>Honour from CII (Confederation of Indian Industries): CII shortlisted my innovations after several screening by experts and included in the special publication on 'Innovations in Tamil Nadu' show casing innovators and their innovations from three broad categories such as Academics, Industrialists and social entrepreneurs. Name of the Publication: Breakthrough - Bringing ideas to life, 2009.</p>	
4	Scholarly reviews in reputed Journals	1 Referred as (III) in the list – Annexure 2
5	Papers published in non-peer reviewed magazines and journals with the candidate as the senior or sole author.	18 Referred as (IV) in the list – Annexure 2
6	Paper presented in International Conference	3
	Total	70

14.3 Publication & Citation Record (Web of Science or Scopus or Google Scholar)*

S.No	Details	Google Scholar
1	Publications (number as appeared)	61
2	Citations (Overall)	363
3	Citations (excluding review/overview papers)	363 (All referred Publications)
4	h-index	9


15.1 Details of research or academic events conducted at International level

S.No	Title of Event	Institution / University	Date	Role
1	The Agricultural Graduate Student Conference (AGSC) Sustainable Agriculture to FUEL (Feed, Unite, Educate & Lead) the Future	Tamil Nadu Agricultural University, Coimbatore	6.5.2014 to 7.5.2014	Organizing Director and Mentor
				
2	The Agricultural Graduate Student Conference (AGSC) Impact of climate risks on agricultural and horticultural productivity	Tamil Nadu Agricultural University, Coimbatore	13.5.2015 to 14.5.2015	Organizing Director and Mentor
				



3	The Agricultural Graduate Student Conference (AGSC) Agricultural Skill Development to Foster the Future	Tamil Nadu Agricultural University, Coimbatore	03.5.2016 to 04.5.2016	Organizing Director and Mentor
				
4	Six West African Countries who visited TNAU (MALI, BENINI, CAMEROON, BURKINA FASO, IVORY COAST, NIGERIA)	TamilNadu Agricultural University, Coimbatore	22.6.2007	Member explained the TNAU Technology to African Visitors.
 <p data-bbox="293 1637 1406 1776">Around 30-40 Insect traps were purchased by delegates and taken for on farm test in their countries. We are optimistic, based on the good response we had from different parts of our country, that the feedback from Africa will open a scope for introduction of TNAU technologies in African continent.</p>				

15.2 Academic/ Research events / Trainings / Summer schools (Institutes) Organized at national level (Director, Co-director etc.,)

S. No	Name of the Programme	Sponsor	Place	Duration	Role
1	Short course : One day paid training on “TNAU stored grain insect traps / gadgets” to 15 persons from pesticide industry, processing industry and private warehouse organization.	Paid	TNAU	13.09.2006	Director
2	ICAR short course as Director on “Post-harvest entomological techniques for insect free grain storage to achieve nutritional security” in the Department of Agricultural Entomology.	ICAR	TNAU	19 th – 28 th September 2007.	Director
<p>Significant (Very Important matters):</p> <p>1. The Director Short course Dr.S.Mohan, Professor of Agrl. Entomology is one of the National / International specialists working in the field of post-harvest entomology. Currently he is one of the Principal Investigators of the TNAU, McGill CIDA Project. (Canadian International development Agency project) on “Food Security in South India’ where in popularization of Post Entomological techniques useful for home, farm and warehouse are being attempted. Based on the Director’s (Short Course) good work being carried out since last two years under CIDA project, the Project Director, CIDA was kind enough to sponsor TNAU stored product insect management kit (costing each INR.7000/-) to all the participants who have successfully completed the training. The kit was distributed to the participants at the valedictory function by the Director, Centre of Advanced Studies, Department of Agrl. Entomology, TNAU, Coimbatore-3.</p> <div data-bbox="601 1494 1101 1861" data-label="Image"> </div> <p>2. A field day (Demonstration cum evaluation of some gadgets) was organized in collaboration with KVK (ICAR), Avinashilingam Deemed University, Coimbatore</p>					

	<p>and TNAU McGill CIDA project at a village Kothagam – Near Puliampatti, Annur Taluk, Coimbatore districts. This provided a very good opportunity to the participants to visit the farms, evaluate the technology, study the cropping pattern and attend a “Mega field day function”. This is a very unique event, well received by all, conducted as part of this short course.</p> <p>In short I feel that this course should be made available to all entomologist, seed technologists, post harvest scientists working in the ICAR fully sponsored schemes namely AICH & PHT schemes, National seed project (NSP), as our country leads in this science of post harvest entomological techniques especially “Eco friendly gadget Science” for management of stored grain/seed insects.</p> 				
3	ICAR – Centre of Advanced faculty training on "Recent advances in stored product insect pest management" in the Department of Agricultural Entomology.	ICAR	TNAU	13 th November to 3 rd December 2013.	Director
4	National Expo on “Assemblage of Innovative Ideas / Work of Post Graduate Agricultural Research Scholars”.	M/s Ratna TATA	AC&RI, Madurai	27 th March 2015	Organizer (DEAN SPGS)
<p>First time organized a National Expo on “Assemblage of Innovative Ideas Work of Post Graduate Agricultural Research Scholars” on 27th March 2015 at AC&RI, Madurai.</p> <p>The Dean (SPGS), TNAU in collaboration with Agricultural College and Research Institute, Madurai and NavajbaiRatan Tata Trust, Mumbai had organized the National Expo. The grant was fully supported by Sri NavajbaiRatan Tata Trust. Dr. S Natarajan, Honorable Vice- Chancellor, Ghandhigram Rural Institute, Deemed University, Dhindigul presided the Expo and delivered the inaugural address. A total of 251 candidates have registered for the expo, out of which 222 candidates have attended and displayed their posters belonging to 13 themes.</p>					

						
5	Regional Workshop on Preventing Grain Losses: Scientific Approach	UPL – National level	TNAU, Coimbatore	August–30-31, 2017	Organizing Secretary	
						
6	16 th All India Inter Agricultural Universities Sports and Games Meet	ICAR	TNAU	Feb, 22 – 26, 2016	Convener of organizing team	
7	Awareness programme on TNAU stored grain insect trap technology.	KVK located in the Agricultural Research Station, Anantapur of AcharyaRanga Agricultural University, Andhra Pradesh	ANGRAU Anantapur, Andhra Pradesh, India	30.7.2007	PI TNAU-McGill, CIDA Project	

					
8	One day training programme on stored grain insect pest management kit.	Dr.M.K.Shella, Director of Extension Education, Kerala Agricultural University	Kerala Agricultural University, Kerala, India	23.4.2007	PI TNAU-McGill, CIDA Project
					
9	TNAU – Mc Gill CIDA Project on Consolidation of Food security in south India Entrepreneur Meet	TNAU – Mc Gill CIDA	Tamil Nadu Agricultural University, Coimbatore	25.06.2007 to 26.06.2007	PI TNAU-McGill, CIDA Project
10	Book Exhibition	ICAR, New Delhi	Techno Park, Tamil Nadu Agricultural University, Coimbatore.	20.02.2018 & 21.02.2018	Organizing Secretary

BOOK EXHIBITION

The two days Book Exhibition from 20.02.2018 & 21.02.2018 held at Techno Park, Tamil Nadu Agricultural University, Coimbatore. The Registrar i/c Dr. D.Sudhakar inaugurate the Book Exhibition. About 24 Publishers and Distributors from all over India participated and displayed their latest books in the Book Exhibition. The books pertaining to agriculture and related sciences, including curriculum based text book , reference books and the books written by TNAU Scientists were displayed.



16.0 Contribution to Journals

S.No	Position	Name of the Journal	Period / Year(s)
1	Editor / Editor-in-Chief of academic / research journals i) Editorial board member – subject Editor (Stored product Entomology).My area of Specialization.	Indian Journal of Entomology	2017- 2018
	ii) MASU President over all supervisor of Madras agricultural student union journal Publications / Administration.	Madras Agricultural Journal	2013-2016

E. EXTENSION AND DEVELOPMENT

17.0 Capacity building trainings organized for Extension Officials and Scientists

S.No	Name of the training Programme	Sponsor	Duration	PI or Co PI	Budget
1	One day training programme to scientists of TNAU-KVK on "TNAU stored grain insect traps / gadgets" on 6.3.2006 under	TNAU-McGill CIDA project.	6.3.2006	PI	From TNAU McGill CIDA scheme budget

Impact of Training (details)

Objectives

- to train the subject matter specialists (Entomologists) working in the Krishi Vigyan Kendra's, Agricultural Colleges, selected NGO's "across Tamil Nadu" about the gadgets for the stored product insect management in order create awareness among end users.
- to assess feedback from the end users with reference to the benefit of using the gadgets for insect management in storage of food grains.

Methodology



- Twenty five subject matter specialists from across Tamil Nadu were trained through **"one day training programme on 'Gadgets for stored product insect management" on 06.03.2006** under TNAU-McGill CIDA project.
- Trainees were provided with the 'TNAU-Kit' with CD for use in their respective centres for popularisation of the gadgets.
- The trainees were later on provided with specific gadgets as per the need (type of grain stored, method of grain storage etc.) in their respective zones with the support of TNAU-McGill project.
- The major gadgets supplied for feed back studies under the project were :

- i) Probe traps
 - ii) TNAU plastic pitfall traps
 - iii) TNAU automatic insect removal bin (50 kg) for seed storage.
- e) Besides the above, all centers were supplied with pamphlets (both English and Tamil) brought out with the funding from CIDA project.

Impact of One Day Training – Feedback Study

Study period

The study, which included trainings, testing of trap in end user's (farmer's) storage structures etc. was started by the concerned trainees after they were back to their respective technology centers and the activity was monitored by the Principal Investigator (Dr. S. Mohan, Professor of Agrl. Entomology) and consolidated work done is presented below :

Significant out come

Awareness created across Tamil Nadu :

- i) Farmers / end users trained so far through trainings across Tamil Nadu, India

SI.No.	Center (TNAU)	No. of trainings organized	No. of participants trained	
			Men	Women
1.	KVK, Tirur	7	237	82
2.	KVK, Viringipuram	2	40	10
3.	KVK, Tindivanam	3	53	65
4.	KVK, Virudhachalam	7	170	113
5.	KVK, Salem	14	409	204
6.	KVK, Coimbatore	2	44	6
7.	PHT Centre, Coimbatore	13	200	87
8.	Agrl. Research Station, Bhavanisagar	10	260	113
9.	KVK, Vamban	2	10	77
10.	Tamil Nadu Rice Research Institute (TRRI) Aduthurai	15	180	125
11.	Soil and water management institute, Thanjavur	4	137	42
12.	KVK, Needamangalam	7	70	115
13.	KVK, Sirugamani	10	300	0
14.	KVK, Madurai	3	32	108
15.	KVK, Ramanathapuram	2	25	10
16.	Regional Research Station, Aruppukottai	7	284	291
17.	Horticultural Research Station, Yercaud	5	100	120
18.	Horticultural Research Station, Pechiparai	7	41	93
19.	Agricultural College, Killikulam	3	171	3
20.	Horticultural College, Periyakulam	1	30	0
	Total	124	2793	1664



Vellore



Aruppukkottai



Madurai



Needamangalam



Bhavanisagar



Vriddhachalam



Tindivanam



Aduthurai



Thanjavur



Yercaud

Impact:

Around 124 training programmes were organised by the subject matter specialist trained by myself (S. Mohan, P.I) across Tamil Nadu covering almost all districts of Tamil Nadu. A total 2793 men and 1664 women were made aware of the technologies. The participants included mainly members of self help groups (SHG), farmers, Agricultural Officers of the State as well as Central Agricultural Departments.

18.0 Capacity building Trainings organized for Farmers

S.No	Name of the training Programme	Sponsor	Duration	PI or Co PI	Budget
1	Organized one day training programme sponsored by Tamil Nadu State Council for Science and Technology for Rs.10,000 during 1998 for popularization of Gadgets to women folk.	Tamil Nadu State Council for Science and Technology	1998	PI	INR. 10,000/-

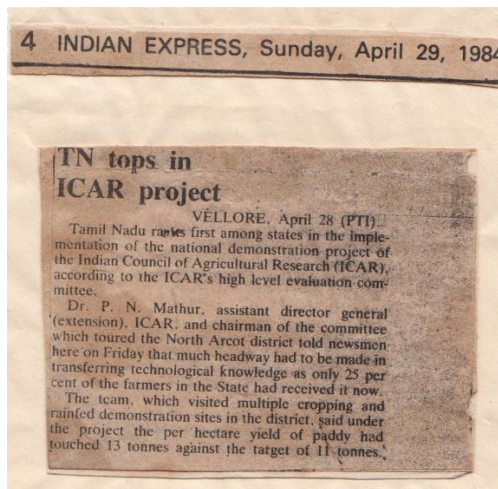



Popularization of TNAU Gadgets to Farm Woman

19.0 Other extension programmes organized

S.No	Name of the Programme	Place	Sponsor	Team leader or member
1	Farmers Mela organized (District & State level only)			
	Regional workshop on Preventing grain Losses : Scientific approach	TNAU, Coimbatore	UPL	Nodal Officer
	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">   </div> <div style="width: 50%;"> <p>ORGANIZED BY</p>  <p>Regional Workshop on Preventing Grain Losses : Scientific Approach August 30-31, 2017 Tamil Nadu Agricultural University, Coimbatore</p> <p>Day 2 - 31st August 2017 9:30 - 11.30 am Farmers' Session & Practical Venue: Convocation Hall, TNAU, Coimbatore 641003 Chair: Dr. H. Philip, Director of Extension Education, TNAU; Co Chair: Dr. R. Balasubramanian, Prof. & Head (Market Extension), TNAU</p> <p>9.30-9.40 am Welcome address & Initiation Dr. S. Mohan, Special Officer (Publication and Public Relation), TNAU</p> <p>9.40-10.10 am Power Point Presentation & Movies (2) Mr. Suresh Brahmankar UPL, Mumbai + Translation</p> <p>10.15-11.30 am Practical Demonstration Dr. S. Mohan, TNAU Dr. Ujjwal Kumar & Mr. Harshal Sonuwan Translation, UPL, Mumbai and team</p> <p>11:30 - 11:45 am Tea break</p> <p>11.45-12.30 pm Farmers' Interaction- Team of Scientists to initiate / respond Dr. D. Varadharaju, Prof. & Head, Post Harvest Tech Centre, TNAU Dr. S. Mohan Kumar, Prof. & Head (Biotechnology), TNAU Dr. R. Umarani, Prof. & Head, Dept. of Seed Sci. & Tech., TNAU Dr. M. R. Srinivasan, Professor (Agrl. Entomology), TNAU, Dr. S. Jayarajan Nelson, Professor (Agrl. Entomology), TNAU Dr. K. Bhuvanawari, Professor, Dept. of Agrl. Entomology, TNAU Dr. T. Kempuraj, Professor (Agrl. Entomology), TNAU Followed by Q&A Session for Farmers</p> </div> </div>			
2	Demonstrations A) National demonstration project of the ICAR	Vellore District Tamil Nadu, India	ICAR	Member of team
	<p>Significance: I Started my career as Extension worker in 1983 in TNAU and Worked in National Demonstration scheme (NDS) of ICAR and Conducted IPM Demonstrations in Rice Groundnut & Vegetable Crops.</p> <p>In 1984 a high-level Committee of ICAR which was reviewing the work of NDS across India Ranked TNAU NDS unit as first in India</p>			

This was a great encouragement for my work as Extension Scientist which helped me later on to Win the ICAR **Out Standing Extension Scientist Award (2010)**



	<p>Demonstrations B) Under all India coordinated cotton improvement project of ICAR 25 frontline demonstration on IPM of cotton were conducted 1998 - 2002</p>	<p>TNAU, Coimbatore</p>	<p>ICAR</p>	<p>Member of cotton team</p>
	<p>Others (Specify) Village Adoption Programs</p>	<p>A) Pallapalayam</p>	<p>TNAU McGil Project</p>	<p>PI</p>
<p>4</p>	<p>Development, Demonstration and utility of Stored Grain saving Technologies under McGill Project, Canada</p>  <p>A) Pallapalayam A case study with TNAU Probe trap: Detailed systematic feedback studies on TNAU probe trap by the author in Pallapalayam Village, Palladam in Coimbatore, Tamil Nadu, India with Canadian International Development Agency (CIDA) during 2005.</p> <p>A detailed investigation was made on the effect of TNAU probe trap for management of insect of stored rice in Pallapalayam Village, Palladam in Coimbatore, Tamil Nadu.</p>			

The various phase of the study programme included.

- i) Base line survey about the village
- ii) Awareness programme to the Agricultural officers of the target village
- iii) Awareness programme to the farmers
- iv) Feedback studies at farmers holding in target village

**Feedback Study on TNAU Probe Trap:
Village Adoption**

Stored product insect loss estimation in village.



Awareness programme to the Agricultural officers of the target village:

An awareness programme was conducted to the Agricultural Officers, Assistant Agricultural Officers of the State Agricultural Department, Palldam Taluk, Coimbatore District, Tamil Nadu, in which is located, on the use of various Tamil Nadu Agricultural University gadgets for stored grain insect control. All the gadgets were demonstrated to them. About 25 participants attended the meeting. Tamil Nadu Agricultural University – Kit Box for stored grain insect management was also demonstrated.

Awareness programme to the farmers:

An awareness programme to the farmers of the village was held on 22.12.2005 in the presence of Dr. G.S.V.Ragavan, Project Director, CIDA, around 60 participants, mostly women attended the programme.



Significant outcome:

1. The major insect species recorded were rice weevil *Sitophilusoryzae* and saw toothed beetle, *Oryzaephilus sp.*
2. There was very good reduction in population of the insects as well reduced rice grain loss in the bins where TNAU Probe Trap were used, compared to bins without trap.

Very Important :

This success story finds a place in a CRC Book chapter (In Press) entitled "Postharvest Extension and Capacity Building for the Developing World"

5

B) Village Adoption Studies Done Under NATP Project (National Agricultural Technological Project) on Low cost Storage of Pulses

Under World Bank sponsored NATP project TNAU Automatic Insect Removal Bin Model for Pulse Seed Storage got good response among farm women in Ganesapurum, Tamil Nadu.

Under the World bank funded National Agricultural technology project (ICAR), 7 units of bin (slightly modified to suit for pulse storage) were given for on Farm Demonstration to the farm women for storing their pulse seeds in Ganeshapurum Village, Coimbatore District, Tamil Nadu.

Seeing the good response from these women, entire village has put forth their willingness to adopt this technology **when Dr.Masood Ali, Director Indian Institute of Pulses Research (ICAR), Kanpur. Inspected the Performance of NATP Project.**



Dr.Masood Ali, Director Indian Institute of Pulses Research (ICAR), Kanpur and Dr.S.D. Deshpande, Principle Scientist, NATP project, CIAE (ICAR), Bhopal visited the village and highly impressed by the response shown by farm women regarding the bin technology. Based on this good response, ICAR has sanctioned 10 front line demonstrations to this village for pulse productivity improvement. Even today FLD's are being continued by the Department of Pulses, TNAU in that village.



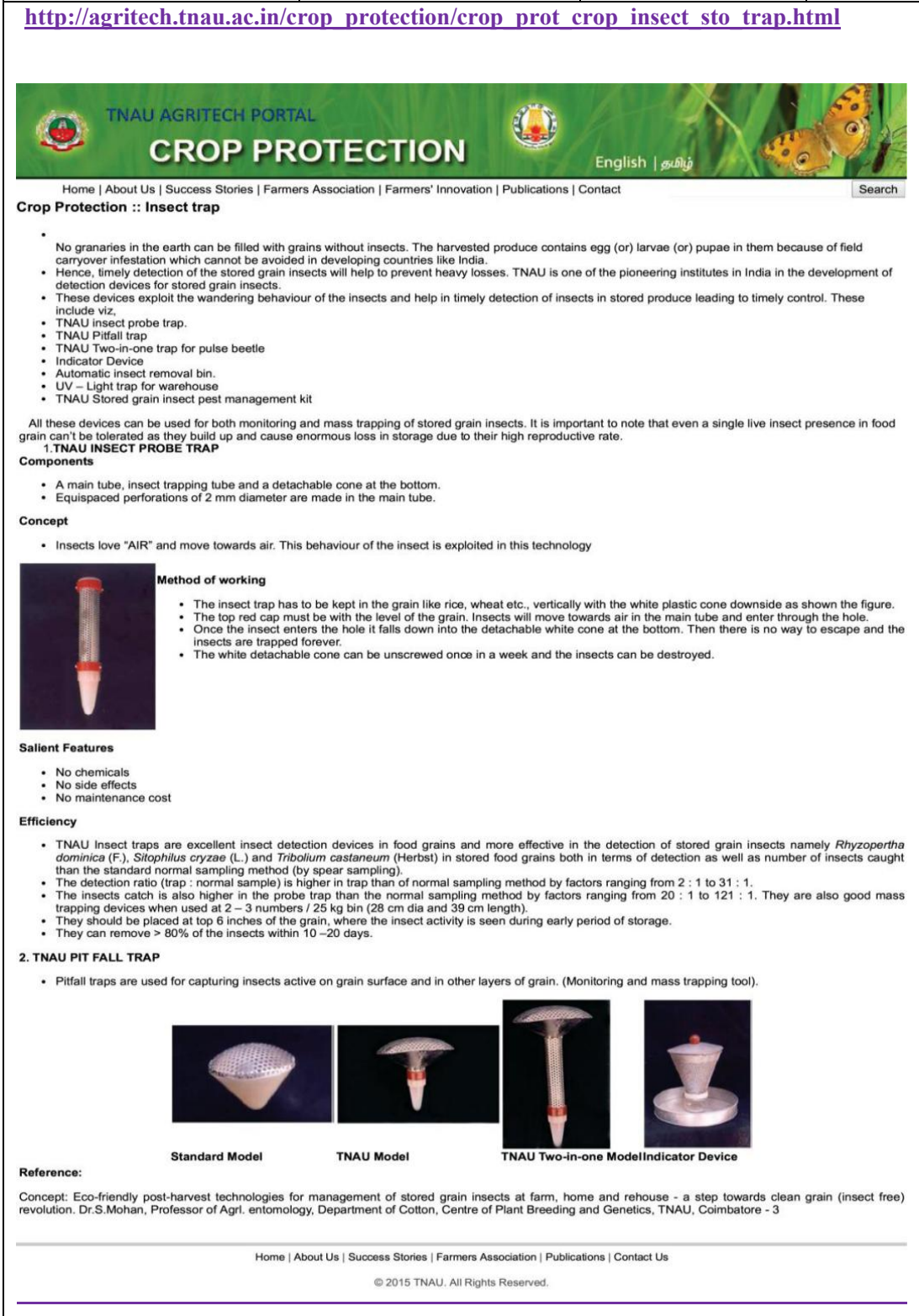
Significance

This success story of creating awareness among farm women through a technology and thereby attracting administrators to see and study the impact and subsequent implementation of a new scheme to improve the productivity of a crop in that village will be a great role model for our beloved country which is aiming for a Second **Green Revolution**.

20.0 Contribution by developing Extension Tools

S.No.	Category	Name of the item	Authorship/ PI or Co-PI	Year
1	Training Manuals			
	S.No.	Name of the Item	Authorship	Year
	1.	Practical manual on pests of horticultural crops and their control	S. Palanisamy T. Manoharan S. Mohan M. Gopalan	1987
	2.	Gadgets to manage stored product insects	S. Mohan and K. Asaf Ali	1998
	3.	Trap models for use in insect pest management	S. Mohan P.C. SundaraBabu	1998
	4.	A guide on storage entomology	K. Asaf Ali S. Mohan	1998
	5.	Question Bank IAS/IFU competitive examinations plant protection	S. Mohan V. Prakasam P. Sangeetha P.C. SundaraBabu	1998
	6.	Stored product pests and their management	S. Mohan P.C. SundaraBabu	1999
	7.	Manual on gadgets to manage stored product insects	S. Mohan	2001
	8.	Status report on pulse beetle research	S. Mohan, C.T. Devadass, D. Manoharan	2001
	9.	Practical manual on principles of applied entomology	C. Chinnaiah M.K. Srinivasan S. Mohan T. Manoharan R.J. Rabindra	2001
	10.	Cotton - The White Gold	T.S. Ravindran S. Mohan Ravikesavan	2002
	11.	Bulletin on Technologies developed under NATP project RPPS 5 Low	C.T. Devadass K. Manoharan B. Usharani	2002
	12.	Gadgets to manage insects attacking food grains	S. Palanisamy M. Suganthy S. Thiruselvan	2005
	13.	Pest and disease Management in Organic Ecosystem	S. Mohan P. Devasenaathy C. Vennila M.S. Gill	2008
	14.	Practical Manual "Recent Advances in stored product insect pest management"	M.R. Srinivasan M. Suganthy S. Jeyaraj Nelson S. Mohan S. Kuttalam	2013
	15.	Integrated Pest Management Package for Cotton	S. Mohan and Team	2014

16.	Steps Up for Agricultural Graduates in Research Career- Dean, SPGS, TNAU.	S. Mohan G. Jothi C.S. Sumathi	2015
Tamil			
1.	ஒருங்கிணைந்த பூச்சிக்கட்டுப்பாடுபரிந்துரைகள்	ச. மோகன் நா. நடராஜன் தி. கெம்புராஜ் மு. கோபாலன்	1990
2.	காய்கறிபயிர்களைத் தாக்கும் பூச்சிகளும் பராமரிப்பு முறைகளும்	சு. பரமேசுவரன் ச. மோகன் சா. ஆசப் அலி	1997
3.	தானியசேமிப்பில் ஏற்படும் பிரச்சனைகளும் தீர்வுகளும்	ச. மோகன் ஜி.பாலசுப்பிரமணியன் எம். கோபாலன்	1989
4.	தானியசேமிப்பில் ஏற்படும் பூச்சிகளும் அவைகளைப் பராமரிக்க உதவும் புதியசாதனங்களும்	ச. மோகன் சா. ஆசப் அலி பொ.சி. சுந்தரபாபு	1988
5.	பருத்தி	ச. மோகன் தொ.சு. இரவீந்திரன் இரா. ரவிகேசவன் பா.கு. பார்த்தீபன் சி. சுரேந்திரன்	2001
6.	பருத்தியைதாக்கும் பூச்சிகளும் அவைகளைப்பராமரிக்கும் முறைகளும்	ச. மோகன் இரா. இரவீந்திரன் தொ.சு. இரவீந்திரன் சி. சுரேந்திரன்	2002
7.	தானியசேமிப்பின் போதுஏற்படும் பூச்சிகளை அகற்ற புதியசாதனங்கள்	ச. மோகன் செ. பழனிசாமி மா. சுகந்தி சோ. திருச்செல்வன்	2005
8.	தானியசேமிப்பில் ஏற்படும் பிரச்சனைகளும் தீர்வுகள்	ச. மோகன்	2008

2	A) ICT Tools developed	TNAU Agri. Tech portal – Crop Production Details TNAU gadgets for transfer of technology	Author	2015
<p>http://agritech.tnau.ac.in/crop_protection/crop_prot_crop_insect_sto_trap.html</p>  <p>Crop Protection :: Insect trap</p> <ul style="list-style-type: none"> No granaries in the earth can be filled with grains without insects. The harvested produce contains egg (or) larvae (or) pupae in them because of field carryover infestation which cannot be avoided in developing countries like India. Hence, timely detection of the stored grain insects will help to prevent heavy losses. TNAU is one of the pioneering institutes in India in the development of detection devices for stored grain insects. These devices exploit the wandering behaviour of the insects and help in timely detection of insects in stored produce leading to timely control. These include viz, <ul style="list-style-type: none"> TNAU insect probe trap. TNAU Pitfall trap TNAU Two-in-one trap for pulse beetle Indicator Device Automatic insect removal bin. UV – Light trap for warehouse TNAU Stored grain insect pest management kit <p>All these devices can be used for both monitoring and mass trapping of stored grain insects. It is important to note that even a single live insect presence in food grain can't be tolerated as they build up and cause enormous loss in storage due to their high reproductive rate.</p> <p>1. TNAU INSECT PROBE TRAP</p> <p>Components</p> <ul style="list-style-type: none"> A main tube, insect trapping tube and a detachable cone at the bottom. Equispaced perforations of 2 mm diameter are made in the main tube. <p>Concept</p> <ul style="list-style-type: none"> Insects love "AIR" and move towards air. This behaviour of the insect is exploited in this technology <p>Method of working</p> <ul style="list-style-type: none"> The insect trap has to be kept in the grain like rice, wheat etc., vertically with the white plastic cone downside as shown the figure. The top red cap must be with the level of the grain. Insects will move towards air in the main tube and enter through the hole. Once the insect enters the hole it falls down into the detachable white cone at the bottom. Then there is no way to escape and the insects are trapped forever. The white detachable cone can be unscrewed once in a week and the insects can be destroyed. <p>Salient Features</p> <ul style="list-style-type: none"> No chemicals No side effects No maintenance cost <p>Efficiency</p> <ul style="list-style-type: none"> TNAU Insect traps are excellent insect detection devices in food grains and more effective in the detection of stored grain insects namely <i>Rhyzopertha dominica</i> (F.), <i>Sitophilus cryzæ</i> (L.) and <i>Tribolium castaneum</i> (Herbst) in stored food grains both in terms of detection as well as number of insects caught than the standard normal sampling method (by spear sampling). The detection ratio (trap : normal sample) is higher in trap than of normal sampling method by factors ranging from 2 : 1 to 31 : 1. The insects catch is also higher in the probe trap than the normal sampling method by factors ranging from 20 : 1 to 121 : 1. They are also good mass trapping devices when used at 2 – 3 numbers / 25 kg bin (28 cm dia and 39 cm length). They should be placed at top 6 inches of the grain, where the insect activity is seen during early period of storage. They can remove > 80% of the insects within 10 –20 days. <p>2. TNAU PIT FALL TRAP</p> <ul style="list-style-type: none"> Pitfall traps are used for capturing insects active on grain surface and in other layers of grain. (Monitoring and mass trapping tool). <p>Reference:</p> <p>Concept: Eco-friendly post-harvest technologies for management of stored grain insects at farm, home and rehouse - a step towards clean grain (insect free) revolution. Dr.S.Mohan, Professor of Agri. entomology, Department of Cotton, Centre of Plant Breeding and Genetics, TNAU, Coimbatore - 3</p> <p>Home About Us Success Stories Farmers Association Publications Contact Us</p> <p>© 2015 TNAU. All Rights Reserved.</p>				

B) ICT tool developed

Personal Webpage
Which describe and
demonstrate all the
Innovation by me for
Transfer of
Technology

Web Page
Author

2015

<http://www.mohantrap.com>

9/17/2018

Prof. Dr. S. Mohan - Personal webpage

Home Technology Developed Awards GADGETS Contact

Prof. Dr. S. Mohan Tamil Nadu Agricultural University

Home
Technology Developed
Awards
GADGETS
Contact

Area of Specialization :
Stored Product Entomology

Designed and developed 12 gadgets for insect pest management including stored products insects. Recent development is "TNAU stored product insect pest management kit". The kit with a multimedia contains prototypes of 8 gadgets. This kit will be an ideal "hands-on training" tool for Education, Extension and also for Post Harvest Entomology Research Centres.

Received several awards from State Government, ICAR, GOI and other Commercial Organization.

My vision for India

Skill center establishment

Website: <http://www.mohantrap.com>
Mobile: +91 9488458006
Email: sarmamohan@hotmail.com
Scientific Consultation: National and International
Social links: [f](#) [t](#) [s](#) [l](#)

TECHNOLOGY DEVELOPED
Insect pests of stored grains are the descents of earlier insects which came into existence 250 to 500 million ...
[Read more](#)

GADGETS
Designed and developed 'Gadgets' for management of stored product insects, teaching, training and extension...
[Read more](#)

TRANSFER OF TECHNOLOGY
A Success Story of my Technology reaching farmers. The model led spread of TNAU technology not only across our country.
[Read more](#)
[Impact on School Education](#)

PROFESSIONAL QUALIFICATION
Started the carrier as Assistant Professor in the year 1983 and developed suitable gadgets for stored grain pests.
[Read more](#)

MY CONTRIBUTION TO AGRICULTURE
My entire scientific career revolves around these priority areas of Agriculture as stipulated by State and Central Govt.
[Read more](#)

MY ACHIEVEMENTS
I started my research interest on this Post-Harvest Technology in the year 1986.
[Read more](#)

COMMERCIALIZATION
Promotion of Agro-based industries for rural technologies. Technology becomes viable only if it is commercialized.
[Read more](#)



PUBLICATIONS
Published so far 18 International Research Papers, 97 National Research Papers, 125 Popular Articles ...
[Read more](#)

CONFERENCES ATTENDED / ORGANIZED
Conference attended so far three International, 18 National and two as Chairperson ...
[Read more](#)

AWARDS
Awards obtained so far 13 from different Organizations. And more over two device patented ...

HUMAN RESOURCE DEVELOPMENT
Training attended so far five and five training organized. Many countries visited regarding research activities ...

PROJECTS HANDELED
Schemes worth Rs. 274.04 lakhs sponsored by Government of India and International Agencies ...

	<p>C) ICT tool developed</p>	<p>In 11th Standard book new technology is Introduced - QR code to Demonstrate the Technology which will support the students easy learning. TNAU automatic Insect removal bin demonstration through QR Code has been included in the chapter on Harvest and Post-Harvest Technology</p>	<p>பாடநூல் வல்லுநர் The Expert (S. MOHAN)</p>	<p>2018</p>
<p>ICT tool developed</p> 				
<p>3</p>	<p>Others (Specify) A) Compendium</p>	<p>Research Compendium</p>	<p>S.MOHAN</p>	<p>2016</p>
<p>Preparation of Research Compendium :</p> <p>A compendium bringing out all the significant and salient research achievements so far made since, inspection by all the scientists of Tamil Nadu Agricultural, has been brought out by me as Special Officer (Publications). Indeed this is a special task taken by me. A soft copy (CD rom) of the TNAU compendium sent to all Heads Under TNAU for circulation. This task has taken almost a year besides my routine office duties of Publication and Public Relation of Tamil Nadu Agricultural University.</p> 				

A) TOT model	TOT Models	S.MOHAN	2008-09
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A ROLE MODEL FOR OUR COUNTRY

The TOT model adopted by me for Transfer of TNAU trap technologies:

- 1. Developing entrepreneurs**
- 2. Feedback studies**
 - a. Tamil Nadu
 - b. Telangana
 - c. Uttar Pradesh
 - d. Madhya Pradesh
 - e. Assam
 - f. Kerala
 - g. Africa
- 3. Training**
- 4. MOU between TNAU and Private Firm**
- 5. TOT through school education**
- 6. TOT through developing a kit**
- 7. Popularization through websites and publications**

THIS MODEL LED TO SPREAD OF TNAU TECHNOLOGY NOT ONLY ACROSS OUR COUNTRY BUT ALSO TO AFRICAN SUB-CONTINENT.

FOR THE ABOVE METHOD OF TECHNOLOGY TRANSFER ACHIEVEMENT,
INDIAN COUNCIL OF AGRICULTURAL RESEARCH (ICAR), NEW DELHI
AWARDED ME

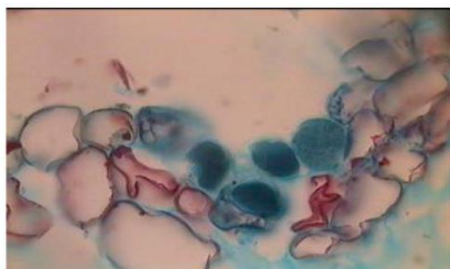
**SWAMI SAHAJANAND SARASWATI OUTSTANDING EXTENSION
SCIENTIST AWARD – 2010**



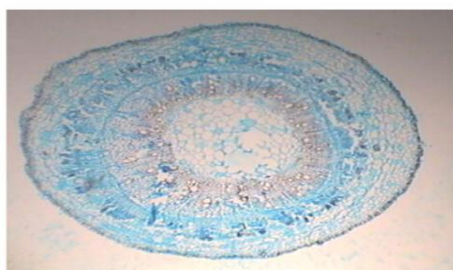
21.0 Extension and Development support to GOI (Government of India) Agencies / State Development Departments / Agencies

S.No	Details	Scaled up by State/ GoI	PI or Co PI	Years		Amount. INR. In Lakhs
				From	To	
1	Evaluation of local specific IPM model for cotton	GOI / ICAR	PI of Coordinating Centre	Apr. 2001	Mar. 2003	7.10
2	Pest and disease forecasting system in cotton	GOI / ICAR	PI of Coordinating Centre	Apr. 2001	Mar. 2003	8.70
3	Development and validation of IPM / IRM strategies for Bt. cotton	GOI / ICAR	PI of Coordinating Centre	Apr. 2007	Mar. 2012	19.98
<p>Outcome :</p> <p>Detection of right time of infestation by stem weevil <i>Pempherulusaffinis</i> to facilitate timely application of insecticide</p> <p>Description of the technology :</p> <p>a. Current status of the existing technology: Stem weevil incidence normally prevail upto 40 days old crop and can cause 95-100 per cent mortality. Current pest management recommendation involves drenching the collar region of young stem with Chlorpyriphos 20 EC @ 2.5 ml/lit on 20 days after sowing (DAS) and 40 DAS followed by earthing up, as the weevil deposits the eggs in the region of nodes which are tender, soft and succulent. But, the recommendation did not yield fruitful results in controlling stem weevil infestation. Hence, histopathological studies were undertaken with the stem tissue samples taken from 10 DAS onwards to get a clear picture about the timing of egg laying by the stem weevil in cotton crop.</p> <p>b. Description of the developed technology: Histopathological studies carried out with the stem tissues of cotton plants of different age helped to trace the path of stem weevil (<i>Pempherulusaffinis</i> Faust.) infestation in cotton. Presence of eggs in 10 DAS sample clearly reveal that egg</p>						

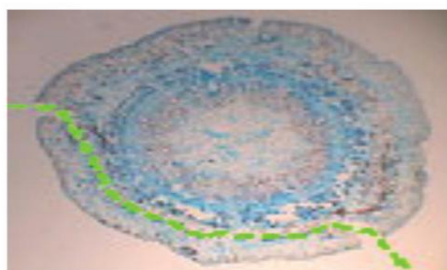
laying by the adults have taken place in the very early stage, i.e. around 7-8 DAS contrary to the current theory of 20 DAS.



Eggs laid by stem weevil in groups on the epidermis (10 DAS)



Uninfested stem



Infested stem (18 DAS)

- Tunneling by maggot
- Cavities in cortex and vascular region
- Secondary infection in the tunnels



Bore hole by maggot (19 DAS)



Thickening of Pericycle and endodermal layer (19 DAS)

Merits of the Technology

The infestation of stem weevil starts around 10 DAS. The current recommendation is drenching the collar region with insecticide on 20 and 40 DAS followed by earthing up. The present study indicates that egg laying by adult weevil in the collar region starts around 10 DAS. So the control strategy needs a change i.e. drenching may be started around 10DAS. Based on the above finding the following recommendation was evolved found effect.

Reference :

- 1 **Mohan, S.**, P. Pretheep Kumar, M. Sivakumar, L. Rajendran and R. Samiyappan. 2009. Influence of an entomopathogenic fungus *Beauveria bassiana* as a biopesticide in the management of stem weevil in cotton. *Pestology*, 33(8): 20-31.

- 2 **Mohan, S.**, P. Pretheep Kumar, M. Sivakumar, N. Balakrishnan, R. Ravikesavan 2007, Level of infestation and differential response of Cotton plants to damage by the stem weevil, *Pemphigus affinis*. **Research and Reviews in Bio Sciences**. 1(4-5) :169-171.



c. Recommendation concluded through control experiments based on above findings:




- Seed treatment with Chlorpyrifos (10 ml / kg) + drenching collar region with Chlorpyrifos @2.5 ml/l at 15 & 30 DAS & earthing up will effectively control stem weevil.

A technical bulletin on “**Insect pest of cotton and their management**” describing the various insect pests attacking cotton and the management practices to be adopted and the outcome of the **TMC project-MMII 3.2 Development and Validation of IPM/ IRM strategies in conventional and Bt Cotton under different ecosystems** with special reference to stem weevil, mealy bugs, IRM, IPM practices has been brought out. Video on IPM / IRM strategies followed in the Palakarai Village, Perundurai Block Erode District, has been developed and released by Dr. S. Mohan, PI Coordinating centre, Department of Cotton, Tamil Nadu Agricultural University, Coimbatore – 641003.

F. INSTITUTIONAL DEVELOPMENT & RECOGNITIONS

22.0 Up gradation of existing centers and Establishment of new Centres (FIST Projects / institutions / Infrastructures etc.)

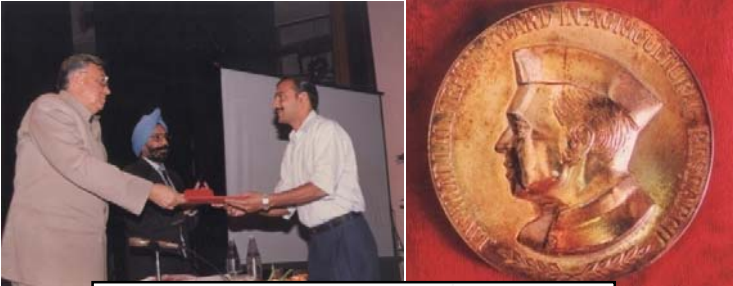
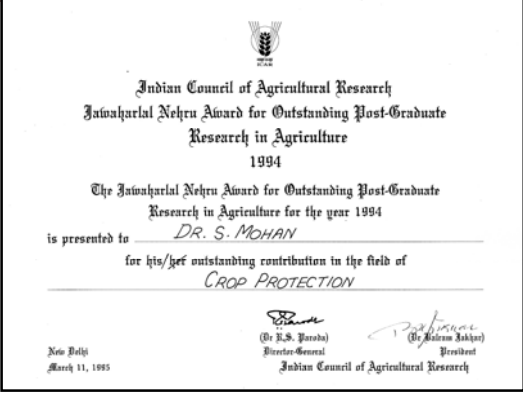

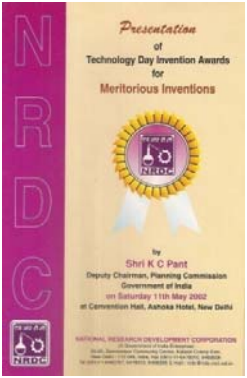
S.No	Title of Project	Year of Signing MoU	Technology Transfer Fee Amount of Grant INR (Rupees)	Role
Funds generated by me through commercializing the technologies developed by me through MoU with private Industries.				
1	KSNM MARKETING (2002) –	2002	25,000	Inventor
	1)TNAU Probe Trap	2003	5000	Inventor
	2) TNAU Pulse Beetle Trap	2005	25,000	Inventor
	3)TNAU stored grain insect pest management Kit	2008	5,000	Inventor
	4)TNAU Egg Removal Device for Pulse Beetle SF No.29/1B, OnaPalayam, Siruvani Water Line Road, DheenamPalayam Post, Coimbatore, Tamil Nadu-641109, India Web : www.ksnmmarketing.com Email : ksnmmarketing@hotmail.com			
				
2	MELWIN ENGINEERING (2011) - TNAU stored grain insect pest management Kit	2011	25,000	Inventor
	18/2, Gandhi Street, Bharathi Nagar, Podanur (PO), Coimbatore – 641 023.Tamil Nadu, India. Email : anithomascs10@gmail.com			
				




3	<p>M/s. KHUSBOO ENTERPRISES (2014) – TNAU Automatic Insect Removal Bin AZIZ Complex, Panbazar, Guwahati Assam. India (2014)</p>	2014	11,00,000	Inventor
				
4	<p>M/s. BHUVI CARE (P) LTD. (2014) - TNAU stored grain insect pest management Kit Sipcot Industrial Growth Centre, Gangaikondan, Tirunelveli – 627 352. Tamil Nadu, India. Email : bcpl2002@gmail.com</p>	2014	1,30,000	Inventor
				
5	<p>M/s. SRI VRINTHA TRADERS (2018) TNAU Insect Egg Removal Device 164/4, Basmathi Complex, Balaji Nagar, Sddhapudur, Coimbatore – 641 044, Tamil Nadu, India.</p>	2018	25,000	Inventor
				
Total			13,40,000*	
<p>*All the money received from the above firms for transfer of technology has been utilized for the Infrastructure development of Directorate of Agricultural Business Development, Tamil Nadu Agricultural University, Coimbatore – 641003.</p>				

23.0 Consulting Experience:

S.No	Client `Organization's name	Nature of Assignment	Duration	Value (in INR)
International				
1	M/s. Madhaus pharmaceuticals, Goa, German firm - SennnaGodown - Stored product insect pest management.	Pest management in Stored Senna and Pods	2 Days	10000/ Day
2	M/s. Cadbury India. Ltd., Dharapuram, TN, Insects Pests of Stored Cocoa.	Cocoa – Pest management in Storage	1 Day	10000/ Day
National				
1	M/s. Bannari Amman Sugars Ltd., Coimbatore, Tamil Nadu Pest Control in Sugar Godown.	Stored Product Pest Control	1 Day	25000/ Day
2	Turmeric warehouses in Erode for insect pest management.	Insect management in Turmeric	1 Day	1000/ Visit
3	M/s. SKM Siddha and Ayurvedic medicines Erode, Tamil Nadu. Insect Pest Management in Siddha and Ayurvedic Products.	Pest Management in Stored Siddha Products	1 Day	5000/ Day
4	M/s. JK Agri Genetics, Ltd., Hyderabad. Hybrid Paddy seed storage in warehouse insect management.	Paddy Stored Product Insect management	1 Day	10000/ Day
5	M/s. Saraf Trading Co-operation Pvt. Ltd., Kochi, Kerala, India. Insect Pests of Stored Herbal tea.	Herbal Tea Storage Insect	1 Day	3000/ Day
6	M/s Jayanthi India Spices Ltd, Coimbatore, India. Insect pests of stored spices	Stored product Insect management in Spices	3 Visits	30000 at 10000/ Visit
TOTAL			1,04,000/-	

24.0 Honors/Awards & Fellowships for Outstanding work

S.No	Name of Award or Fellowship	Elected / Honorary Fellow	Awarded by	Year of Award
1	A) National Jawaharlal Nehru Award for outstanding Post Graduate in Research Agricultural	Dr.S.Mohan	ICAR	1994
 				
2	Technology Day Invention Awards for Meritorious Inventions (Automatic Insect Removal Bin)	Dr.S.Mohan	National Research Development corporation (NRDC), GOI.	11 th May, 2002
 				

3	Swamy Sahajanand Saraswati Outstanding Extension Scientist Award - 2010	Dr.S.Mohan	ICAR	2010
				
4	B) State Govt. of Tamil Nadu Award for Stored Grain Insect Trap (Probe trap) 1993	Dr.S.Mohan	Govt. Tamil Nadu	1993
		<p style="text-align: center;">GOVERNMENT OF TAMIL NADU <u>ABSTRACT</u></p> <p>Agriculture - Tamil Nadu Agricultural Development Project - Agricultural implements - Stored Grain Insect Trap - Developed by Dr.S.Mohan, Entomologist, Tamil Nadu Agricultural University- Cash award - Expenditure sanctioned.</p> <p style="text-align: center;">-----</p> <p style="text-align: center;">AGRICULTURE (TRADE) DEPARTMENT</p> <p>G.O.St.No. 147 Dated: 8.3.1993</p> <p style="text-align: center;">....</p> <p><u>ORDER :</u></p> <p>Sanction is accorded to incur an expenditure of Rs.5,000/- (Rupees five thousand only) towards the payment of cash award to Dr.S.Mohan, Entomologist, AC and RI, Tamil Nadu Agricultural University, for the development of Agricultural implements viz., "Stored Grain Insect Trap".</p> <p>2. The expenditure sanctioned in para 1 above shall be debited to "2415.Agricultural Research and Education - 01.Crop Husbandry - 120.Assistance to other institutions - Schemes in the Eighth Five Year Plan - II.State Plan - JA.Assistance to Tamil Nadu Agricultural University - 09.Grants in aid - 4.Grants For Special Rewards" (D.P.Code No.2415 CO 120 JA 0949)</p> <p>3. Necessary funds will be provided in R.T.A. 1992-93.</p> <p>4. The Director of Agriculture is requested to draw the cheque in favour of Dr.S.Mohan and hand it to the Registrar, Tamil Nadu Agricultural University.</p> <p>5. This order issues with the concurrence of Finance Department vide its U.O.No.19903/93-1/Agri dated: 4.3.93.</p> <p style="text-align: center;">(BY ORDER OF THE GOVERNOR)</p> <p style="text-align: right;">G. RANGA SAO, SECRETARY TO GOVERNMENT AND AGRICULTURAL PROTECTION COMMISSIONER.</p> <p>To The Director of Agriculture, Madras-5. The Registrar, Tamil Nadu Agricultural University, Coimbatore-3. Dr.S.Mohan, Entomologist, Tamil Nadu Agril.University,Coimbatore-3. The Accountant-General, Madras-18. The Treasury Officer, Coimbatore. Copy to: The Planning and Development Department, Madras-9; The Finance Department, Madras-9.</p> <p style="text-align: right;">/forwarded by order/ P. Srinivasan SECTION OFFICER.</p>		



5	Tamil Nadu Scientists Award - 2003	Dr.S.Mohan	Tamil Nadu State Council for Science and Technology	2003
				
6	C) TNAU TNAU Best Researcher Award	Dr.S.Mohan	TNAU	2005
				
7	A device to remove insect eggs from stored pulse seeds (Pat No. : 198434 of the Govt. of India)	Dr.S.Mohan	TNAU	2006
				




8	Scientist as PI for getting the scheme towards Research contribution made for the advancement of Science and Community	Dr.S.Mohan	TMC, ICAR	2012
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9	D) Society Honorary FELLOW - by All India Tamil Agricultural Society	Dr.S.Mohan	New Delhi	2016
				
10	அறிவியல் தமிழ் மாமணி விருது	Dr.S.Mohan	Rotary Club of Coimbatore	2017
				
11	E) MASU RamasastruluMunagala Award Best account of Original Research	Dr.S.Mohan	Madras Agricultural students Union TNAU	1995-96
				

12	MASU O.M Lakshminarayana Reddy Shield and Medal for Best Research	Dr.S.Mohan	Madras Agricultural students Union TNAU	2000																																								
																																												
13	F) Industry Tamil Nadu chamber of commerce & Industry Award	Dr.S.Mohan, TNAU Insect Trap, Coimbatore	Tamil Nadu chamber of commerce & Industry	2002																																								
<p style="text-align: center;">TAMIL NADU CHAMBER OF COMMERCE & INDUSTRY AWARD</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">BEST DISPLAY & DECORATED STALL AWARD</td> <td style="width: 50%;">- ALAGENDRAN GROUP OF COMPANIES LTD., MADURAI</td> </tr> <tr> <td>BEST DEMO STALL AWARD</td> <td>- BHARATH ELECTRONIC CENTRE MAGNA VISION PHILIPS, MADURAI</td> </tr> <tr> <td>BEST NEW PRODUCT AWARD</td> <td>- SRI SAKTHI JEWELLERY - DIVINITY, MADURAI</td> </tr> <tr style="border: 2px solid red;"> <td style="border: 2px solid red;">BEST CREATIVE PRODUCTS STALL AWARD</td> <td style="border: 2px solid red;">- TNAU INSECT TRAP, COIMBATORE</td> </tr> <tr> <td>BEST INFORMATIVE STALL AWARD</td> <td>- INCOME TAX DEPARTMENT, MADURAI</td> </tr> <tr> <td>BEST MAXIMUM STALL AWARD</td> <td>- OMEGA FURNITURE, MADURAI</td> </tr> <tr> <td>BEST SPECIAL STALL AWARD</td> <td>- PADMA STORES, MADURAI</td> </tr> <tr> <td>BEST CUSTOMER CARE STALL AWARD</td> <td>- G.M. PENS INTERNATIONAL, CHENNAI</td> </tr> <tr> <td>BEST DOUBLE STALL AWARD IN "A" SECTOR</td> <td>- JAS TIMBERS, MADURAI</td> </tr> <tr> <td>BEST DOUBLE STALL AWARD IN "B" SECTOR</td> <td>- KALEESWARI REFINERY LTD - GOLD WINNER, CHENNAI</td> </tr> <tr> <td>BEST DOUBLE STALL AWARD IN "D" SECTOR</td> <td>- AROKYA, CHENNAI</td> </tr> <tr> <td>BEST STALL AWARD IN "A" SECTOR</td> <td>- TRIUM MOBILE PHONE, MADURAI</td> </tr> <tr> <td>BEST STALL AWARD IN "B" SECTOR</td> <td>- N.P.S. WIRE BRICKS P. LTD., MADURAI</td> </tr> <tr> <td>BEST STALL AWARD IN "C" SECTOR</td> <td>- FOUNTAIN PARK, MADURAI</td> </tr> <tr> <td>BEST STALL AWARD IN "D" SECTOR</td> <td>- ZEM MARKETERS, MADURAI</td> </tr> <tr> <td>BEST STALL AWARIN IN "E" SECTOR</td> <td>- BANGALORE VEGETABLES, MADURAI</td> </tr> <tr> <td>BEST GOVERNMENT STALL AWARD</td> <td>- BHARAT SANCHAR NIGAM LTD., MADURAI</td> </tr> <tr> <td>BEST GOVERNMENT STALL AWARD</td> <td>- SOUTHERN RAILWAY, MADURAI DIVISION</td> </tr> <tr> <td>BEST MEDICARE STALL</td> <td>- MADURAI MEENAKCHI MISSION HOSPITAL</td> </tr> <tr> <td>BEST CROWD PULLER STALL</td> <td>- ANIL SEMIA</td> </tr> </table> <p style="text-align: center; color: blue;">பரிசு பெற்ற ஸ்டாலும், பெருமையுடன் அமைச்சர்களிடம் பரிசு பெறுதலும்</p> 					BEST DISPLAY & DECORATED STALL AWARD	- ALAGENDRAN GROUP OF COMPANIES LTD., MADURAI	BEST DEMO STALL AWARD	- BHARATH ELECTRONIC CENTRE MAGNA VISION PHILIPS, MADURAI	BEST NEW PRODUCT AWARD	- SRI SAKTHI JEWELLERY - DIVINITY, MADURAI	BEST CREATIVE PRODUCTS STALL AWARD	- TNAU INSECT TRAP, COIMBATORE	BEST INFORMATIVE STALL AWARD	- INCOME TAX DEPARTMENT, MADURAI	BEST MAXIMUM STALL AWARD	- OMEGA FURNITURE, MADURAI	BEST SPECIAL STALL AWARD	- PADMA STORES, MADURAI	BEST CUSTOMER CARE STALL AWARD	- G.M. PENS INTERNATIONAL, CHENNAI	BEST DOUBLE STALL AWARD IN "A" SECTOR	- JAS TIMBERS, MADURAI	BEST DOUBLE STALL AWARD IN "B" SECTOR	- KALEESWARI REFINERY LTD - GOLD WINNER, CHENNAI	BEST DOUBLE STALL AWARD IN "D" SECTOR	- AROKYA, CHENNAI	BEST STALL AWARD IN "A" SECTOR	- TRIUM MOBILE PHONE, MADURAI	BEST STALL AWARD IN "B" SECTOR	- N.P.S. WIRE BRICKS P. LTD., MADURAI	BEST STALL AWARD IN "C" SECTOR	- FOUNTAIN PARK, MADURAI	BEST STALL AWARD IN "D" SECTOR	- ZEM MARKETERS, MADURAI	BEST STALL AWARIN IN "E" SECTOR	- BANGALORE VEGETABLES, MADURAI	BEST GOVERNMENT STALL AWARD	- BHARAT SANCHAR NIGAM LTD., MADURAI	BEST GOVERNMENT STALL AWARD	- SOUTHERN RAILWAY, MADURAI DIVISION	BEST MEDICARE STALL	- MADURAI MEENAKCHI MISSION HOSPITAL	BEST CROWD PULLER STALL	- ANIL SEMIA
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G) Recognitions

14	A Rare Honour To A Scientist In The History Of TNAU	Dr.S.Mohan (Mohan Trap)	Tamil Nadu Government	1994
<p style="text-align: center;">GOVERNMENT OF TAMIL NADU NAMED THE PROBE TRAP DEVELOPED BY ME AS "MOHAN TRAP" DURING THE YEAR 1994</p> <div style="border: 1px solid black; padding: 10px;">  <p style="text-align: center;">GOVERNMENT OF TAMIL NADU <u>ABSTRACT</u></p> <p>Agriculture - Tamil Nadu Agro Industries Corporation Limited - Part II Scheme for 1994-95 - Sanction of financial assistance to Tamil Nadu Agro Industries Corporation for manufacture and supply of Mohan Insect Trap for control of Store grain pests - Orders - Issued.</p> <p style="text-align: center;">----- AGRICULTURE (AE,II) DEPARTMENT.</p> <p style="text-align: center;">G. O. Ms. No. 332 Dated: 10.6.1994</p> <p style="text-align: center;"><u>Read:-</u></p> <p>From Managing Director, Tamil Nadu Agro Industries Corporation Limited Letter No. GM(T)/5360/93, dated 3.2.94.</p> <p style="text-align: center;">...</p> <p>10% of the total grains produced are lost due to storage pests, rats, handling loss, etc. To reduce the loss due to insect a device has been designed by Tamil Nadu Agricultural University, Coimbatore, and named as 'Mohan Insect Trap'. By this device, store grain pests in godowns can be controlled without resorting to chemicals. The Tamil Nadu Agro Industries Corporation will have tie up arrangements for the distribution of trap through Directorate of Agriculture, Tamil Nadu Civil Supplies Corporation, Warehousing Corporation, Save Grain Campaigns, etc. The cost of each trap will be around Rs.3 to Rs.5/- approximately. The Managing Director, Tamil Nadu Agro Industries Corporation has proposed to take up the manufacture and supply of Mohan Traps as a Part II Scheme for 1994-95 at a cost of Re.1/- lakh with the help of Tamil Nadu Agricultural University, Coimbatore.</p> <p>2. The Government, have decided to approve the above proposal of Managing Director, TAI Corporation Limited. Sanction is accorded for incurring an expenditure of Re.1/- lakh (Rupees One lakh only) to TAI Corporation towards manufacture and supply of Mohan Traps with the help of Tamil Nadu Agricultural University, Coimbatore.</p> <p>3. The expenditure should be debited to "2415. Agricultural Research and Education - 01. Crop Husbandry - 004. Research - Schemes in the Eighth FYP. - II. State Plan JT. Manufacture and Supply of Mohan Insect Trap - 19. Machinery and Equipments" (DPC 2415 01 004 JT 1900).</p> <p>4. The Chief Engineer (Agri. Engg.) is authorised to draw the amount sanctioned in para 2 above and disburse it to the Managing Director, Tamil Nadu Agro Industries Corporation Limited.</p> <p style="text-align: right;">...2...</p> </div>				

15	Technology Transfer and commercialization of Prototype developed by me finds a record in our Eleventh Five Year Plan Document	Dr.S.Mohan	GOI	2012
<div style="text-align: center;">  </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; padding: 5px; width: 45%;"> <p>Technology transfer and Commercialization of prototypes developed</p> </div> <div style="border: 1px solid black; padding: 5px; width: 45%;"> <p>A total of 11 no. of manual arecanut dehusker were sold among farmers by Bangalore Centre. Insect traps from TNAU Coimbatore centre has been licenced to one entrepreneur. An improved cassava rasper was developed and one unit was sold to M/s Vineesh Industries, Trivandrum.</p> </div> </div>				
16	25 ஆண்டுகள் நன்னடத்தையுடன் சிறப்பாக பணிப்புரிந்தமைக்காக பாராட்டுச் சான்றிதழ்	முனைவர் ச.மோகன்	TNAU	2010
<div style="text-align: center;">  </div>				

25.0 Your Professional Strength

MY ACHIEVEMENTS LEADING TO ACADEMIC LEADER

I, through my 35 years of academic career made our beloved country - “one of the world leaders in the field of monitoring of stored product insects” as evinced by my Invitation to deliver key note address about My achievements in the 11th International Working Conference on Stored Product Protection, November 24 - 28, 2014, Chiang Mai, Thailand.



11th International Working Conference on Stored Product Protection, November 24 - 28, 2014, Chiang Mai, Thailand.

To make an Institute or a State or a Nation as one of the leading Institutes in the world, a scientist has to make significant contribution in Innovation, outreach (Extension), Education, Agri. Business Development and finally has to be motivated by his teachers. I have all these characters which made India as one of the world Leader in “Monitoring and Sampling and Management of Stored Product Insects”. These characters are my professional Strength which made me to create many Historical Achievements right from my Early stage of Research career.



Only Scientist so far - a Technology developed by him i.e TNAU Plastic **PROBE TRAP** was named after him as “**MOHAN TRAP**” by Government of Tamil Nadu.



Only Scientist so far to receive “Technology Day Invention Award” from Government of India, for an invention namely “**TNAU Automatic Insect removal bin**”.



Only Scientist so far who developed Four **Entrepreneurs** for the technologies developed by him. **Two patented and commercialized.**



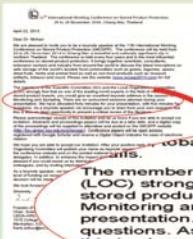
Only Scientist so far to receive “**Outstanding Extension Scientist Award**” from Indian Council of Agricultural Research.



Only Scientist who has been appointed as “**Chairman**” twice by Government of Tamil Nadu to revamp and revitalize the Agricultural School Education.



TNAU Automatic insect removal Bin Technology has been included in 11th Std Agricultural Science Text books (Theory) of Government of Tamil Nadu 2018, through **QR CODE** - a high tech know how through which the school students can see the demonstration of this invention - **A motivation effort.**



...and animal feed as well as non-food products such as tobacco and wood. Please see the website (www.iwcsp2014.com) for details.

The members of the Scientific Committee (SC) and the Local Organization Committee (LOC) strongly feel that as one of the leading world experts in the field of monitoring of stored product insects, you would give an excellent keynote address in the session on Monitoring and Sampling. There are no concurrent sessions planned during your presentation. We have allocated forty minutes for your presentation, with five minutes for questions. As a keynote speaker we encourage you to draw from your own research, but this is also an ideal opportunity to present a critical review of the literature.

Please acknowledge receipt of this invitation and let us know if you are able to accept. Abstracts and proceedings papers will be due at a later date, and a list of attendees will be supplied to attendees and posted on the IWCSP2014 Conference website.

I will continue to contribute for Tamil Nadu Agricultural University.....

26.0 My Vision

Motivate.....

Mobilize.....

Move forward.....

MODEL 1

" Establishment of Agricultural Skill Centers entitled "Save Grain from Insects in Storage" through simple mechanical way

Skill Centre and Its Function

- Education
- Extension



Expected Impact

Establishment of agricultural skill centers using simple mechanical way to protect / save our food grains from insect pests will help in Food Security of our nation

MODEL - 2

Women's Empowerment in Agriculture - A Model for Adoption

- Educate and empower rural women with a skill and create confidence to have their own Agri-business
- In developing and under developing countries farm women do most of the grain storage operations at farm since two third of the grain they produce are stored in their home /farm in tradition storage structure for 6-12 months
- During storage, insects cause both qualitative and quantitative damage
- “Insect eggs” are the main cause of concern for the insect development in storage, since eggs are not killed by fumigation.
- Hence there will be presence of eggs even after fumigation, which hatch and become adult weevils/ beetles / moths.

TNAU Insect Egg Remover Machine Indian Patent no: 198434

- A gadget is available to control the stored product insects.



Cleaning efficacy: 300 kg/ hr
Approximate unit cost- INR: 1, 75,000/-

- Educate and train the farm women with the machine first by providing financial support on loan.
- The trained farm women can run the machine and get nominal charges from the fellow end users who want to clean the stored grain from insect and insect stages.
- Thus a skill learned and an additional income for the trained farm women.



*“A grain saved is a grain produced,
A seed saved is thousands produced”.*

MODEL - 3

Importance of Developing Entrepreneurs to Transfer Innovation to the End Users – A Case Study with TNAU Gadgets for Protecting Grains from Insect Damage in Storage

Encourage Entrepreneurship: Dr. Kalam

- The Hindu, Thursday, January 8, 2004

Dr. Kalam – “Time had come for the **Second Green Revolution** in the country to meet the food requirement of **400 million tonnes by 2020**. This could be achieved through **a mix of technology and innovation**”.



“Unless a product is commercialized there will not be any desirable effects on the technology transfer”

ENTREPRENEURSHIP DEVELOPMENT

- My innovations led to the birth and the growth of four small scale agro-based industries in India.
- TNAU had signed Memorandum of Understanding with four industries, to make available the above technologies to the end-users.

Name of the Firms/Exporters
KSNM MARKETING (2002), Tamil Nadu.
MELWIN ENGINEERING (2011), Tamil Nadu.
M/s. KHUSBOO ENTERPRISES (2014), Assam.
M/s. BHUVI CARE (P) LTD. (2014), Tamil Nadu.

IMPACT ON SOCIETY

- 5 lakh people using the TNAU trap.
- 300 SAU's/ KVK's using the TNAU Stored product insect management kit for teaching and training.
- Introduction of TNAU Trap in Rwanda, Ethiopia, Nigeria, Turkey, Egypt and France.
- 5000 farmers in the North-eastern zone of India use the insect removal bin for paddy seed storage.



My journey continues

What Next ...? Go forward... Way ahead...

**My Efforts will Continue in Popularizing
Non - Chemical Food Grain Saving Technologies
Across the World.**

