FACULTY PROFILE

Name : **Dr.AL.NARAYANAN**

Designation : PROFESSOR

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Area of Specialization : Agrometeorology, Climatology, Small millets Agronomy.

Years of Experience : 27 Years

RESEARCH PUBLICATIONS:

Research Articles (International)	Research Articles (National)	Research Notes
10	18	4

Conference/ Seminar/ Symposium Papers	Poster Papers	Manuals (Teaching/ Training/ E-Courses)	Popular Articles/ Pamphlet/ Leaflet
32	2	16	113

Students guided	UG	PG	PhD
16	-	16	-

Awards:

Sl. No.	Name of the award	Year	National/ State / University /College / Local
01	ICAR -JRF Award	1992	National 23rd Rank
02	Hexamer Award for Best thesis in Weed Management	1994	State level-TNAU
03	Best paper presentation award in National Seminar on Resource Management for Sustainable Agriculture	2005	International conference
04	Best oral presentation award in international conference on Finger millet production	2022	International conference

RESEARCH PROJECTS/ SCHEMES COMPLETED

Sl. No.	Name of the scheme/ Project	Year / Period	Closing Date	Position	Salient Findings
1	Studies on the effect of weed control in transplanted rice for coastal areas of Karaikal	Three Years	1998	Scientist	On obtaining concurrent results, It was found that Pretilachlor @ 0.50 kg ha^{-1} + one hand weeding at 30 DAT can be recommended as an effective weed management practice for transplanted rice in the coastal region of Karaikal.
2	Evaluation of new technology for weed management	One Year	1999	Scientist	Results showed that Glyphosate @ 1.50 kg a.i ha^{-1} as pre-plant herbicide + conservative tillage can be advised as an efficient management practice to control *Cyperus* in transplanted rice.
3	Studies on the performance of central rice varieties (medium duration) under Karaikal region	One Year	1999	Scientist	Among the five central rice varieties of medium duration viz., Tapswin, Chandrama, Swarnadhan, IET 5814, CR 749-202, it was found that Chandrama recorded highest yield of 3.6 tonnes $ha^{-1}$and also is of slendour type.
4	AGR 09 Evaluate the benefits of conservative tillage as compared to farmer's practice of growing rice	One year	2000	Scientist	The study revealed that the practice of conservative tillage can be adopted along with Round-up (Glyphosate) @ 3 litre kg ha^{-1}as pre-plant herbicide to manage the weeds and to reduce the cost of cultivation, increased through conventional tillage.
5	Influence of weather parameters on hybrid rice and validation of Ceres-rice model for staggered weeks of transplanting : Ph.D work	Three years	2001-2004	Scholar	Summarizing, planting hybrid CORH 2 on 26th September or 3rd October will reap highest grain yield. The planting of ADT 39 has to be done either at 19th September or 26th September to obtain higher grain yield. Phyllochron study helps to study the growth and development of inflorescence that can be related to agronomic management practices like fertilization, weeding or spraying growth regulators. The CERES-Rice model of DSSAT simulated the single grain weight, harvest index, anthesis date, physiological maturity date, LAI, and grain yield satisfactorily. But it poorly predicted the panicles m^{-2}, grains m^{-2}, and biomass in kg ha^{-1}.
6	Analysis of efficient zones for major cereals crops in	One year	2002	Scholar	▪ Considering the major cereals, namely rice, sorghum, cumbu and maize Tamilnadu is found to be fit for cultivation of rice followed by

Sl. No.	Name of the scheme/ Project	Year / Period	Closing Date	Position	Salient Findings
	Tamilnadu : Topical Research Ph.D. work				sorghum and cumbu. ▪ Rice area has to be improved in certain pockets like Vellore, Salem , Dharmapuri, Coimbatore, Erode Dindugal, Virudhunagar , Thoothukudi and The Nilgiris , since the RYI is high in these areas.
7	Analysis of thirty years of north east 8monsoon rainfall f Karaikal : Ph.D work	One year	2003	Scholar	❖The average rainfall of NEM is 877mm. ❖The seasonal total follows with a peak for every 'four year batch' period. ❖There is possibility of a moderate flood for every four years and heavy flood for every 8-10years. ❖The onset is between fifth to tenth of October and withdrawal is between fifteenth to twentieth of December.
8	Performance of finger millet varieties under two dates of sowing in the coastal region of Karaikal (UT of Pondicherry)	One Year	2006	PI	From the present investigation, it is concluded that among the seven finger millet varieties tested, three varieties viz., CO13, GPU 26 and Indaf 8 produced higher grain yield than other varieties when sown early on 14th June . However when these varieties were sown on 29th June (delayed sowing) there was 7.0 to 10.3 per cent reduction in grain yield . The varieties CO 13, GPU 26 and Indaf 8 are found to be suitable for Karaikal region than other four varieties tested.
9	FM (Ag) 201.1 Response of Finger Millet varieties to different levels of nitrogen under rainfed conditions.	One year	26.06.07 to 22.10.07.	PI	The response of varieties to nitrogen level was also significant. The grain yield level steadily increased for 0 to 90 kg ha^{-1} of nitrogen. However the interaction effect of variety with nitrogen was not significant. All the varieties produced significantly higher grain yield at 90 kg ha^{-1}. The highest grain yield of 2401 kg ha^{-1} was observed with Co 14 at 90 kg ha^{-1}.
10	FM (Ag) 201.2 Intercropping studies in finger millet at Karaikal.	One Year	27.07.07 to 22.10.07.	PI	It was concluded that cowpea was the best intercrop suitable for finger millet followed by black gram, especially when the rainfall was very high.
11	Jatropha- Demonstration Plot	From 2004	Till date	PI	The crop under lowland situation failed due to excess moisture during 2004. However the crop planted in upland situation succeeded and now the crop stand is good.

Sl. No.	Name of the scheme/ Project	Year / Period	Closing Date	Position	Salient Findings
12	FM (Ag) 201.11.3. Comparative performance of different finger millet varieties for *Kharif* season at Karaikal.	One year	07.07.08 to 18.11.08	PI	Form the present investigation , it is concluded that among the six varieties tested TRY 1, GPU 28, GPU 48 and CO13 produced higher grain yield than other varieties (CO14 and GPU 26) that too especially during early sowing (First fortnight of July 07^{th}) compared to later sown crop (Second fortnight August 18^{th}).
13	FM (Ag) 201.11.2. Comparative performance of different finger millet varieties for *Kharif* season at Karaikal.	One year	10.07.09 to 20.11.09	PI	Form the present investigation , it is concluded that among the six varieties tested TRY 1, GPU 26, GPU 48 and CO13 produced higher grain yield than other varieties (CO14 and GPU 28) that too especially during early sowing (First fortnight of July10^{th}) compared to later sown crop (Second fortnight August 24^{th}).
14	FM (Ag) 201.3. Chemical weed control studies in Finger millet under irrigated conditions (Karaikal).	One year	10.07.09 to 04.11.09	PI	Form the present investigation, it is concluded that application of Oxyfluorfen + two weeding (T_5) is the best integrated method of weed management practice in irrigated transplanted Finger millet at Karaikal conditions.
15	Production oriented survey of Rice under AICRIP of Pathology Dept.	One year	2010	Member	Survey was done in the farmers field of Karaikal
16	FM (Ag) 201.3. Chemical weed control studies in Finger millet under irrigated conditions (Karaikal).	One year	22.06.10 to 25.10.10	PI	Form the present investigation, it is concluded that application of Oxyfluorfen @ 0.1 litre a.i.ha^{-1} + one IC (30 DAT) & one HW (50 DAT) [T_5] is the best integrated weed management practice in irrigated transplanted finger millet at Karaikal conditions
17	Production oriented survey of Rice under AICRIP of Pathology Dept.	One year	2011	Member	Survey was done in the farmers field of Karaikal
18	FM (Ag) 201.3. Chemical weed control studies in Finger millet under irrigated conditions	One year	29.04.11 to 30.09.11.	PI	Form the present investigation, it is concluded that application of Oxyfluorfen @ 0.1 litre a.i.ha^{-1} + one IC (30 DAT) & one HW (50 DAT) [T_5] is the best integrated weed management practice in irrigated

Sl. No.	Name of the scheme/ Project	Year / Period	Closing Date	Position	Salient Findings
	(Karaikal).				transplanted finger millet at Karaikal conditions
19	Performance trial of Minor millets at irrigated conditions of Karaikal.	One year	19.07.11 to 23.10.11.	PI	The findings showed that Barnyard millet is performing better than all other millets followed by Little millet; Foxtail millet.
20	Production oriented survey of Rice under AICRIP of Pathology Dept.	One year	2012	Member	Survey was done in the farmers field of Karaikal
21	Screening of small millets for problematic soils.	One year	29.06.12 to 24.09.12	PI	The study resulted in identifying Barnyard millet as the best minor millet suitable for Karaikal region followed by Finger millet. However in terms of remuneration and marketing aspects Finger millet shall considered as the better crop suitable for Karaikal region
22	GKMS : AMFU	One year	2012-13	Nodal Officer	AAB is disseminated to the farmers of Karaikal and Pondicherry , NGO's and the Department of Agriculture Officials viz. Director , Additional Director , Assistant Director, Deputy Director, and Agricultural Officers and now it has a great response as evidenced by the reciprocation of the farmers. Mobile SMS alert is also sent to the Dept. officials and progressive farmers for communicating the same to other farmers and public in general.
23	Production oriented survey of Rice under AICRIP of Pathology Dept.	One year	2013	Member	Survey was done in the farmers field of Karaikal
24	Co-ordinated in conducting the survey for " Climatic change adaptation in Delta areas of India" at Ambagarathur and Sirkali with PAC , Bangalore.	2013	02 & 03 Aug	PI	Survey was conducted and data sent to PC, Bangalore
25	Screening of small millets for	2014	24.07.13 to 18.10.13	PI	The study resulted in identifying Foxtail millet as the best minor millet

Sl. No.	Name of the scheme/ Project	Year / Period	Closing Date	Position	Salient Findings
	problematic soils. .				suitable for Karaikal region followed by Finger millet. However in terms of remuneration and marketing aspects Finger millet shall considered as the better crop suitable for Karaikal region
26	GKMS : AMFU	One year	2013-14.	Nodal Officer	The analysis showed that the forecasting of weather parameters such as rainfall, and wind velocity was correct and found to be very useful. While the parameters such as maximum and minimum temperature was usable and relative humidity was not usable. This was mainly due to influence of Bay of Bengal oceanic effect, which lead to erratic movement of wind and pressure. It was observed that the forecasted and observed values are nearer except for Relative humidity.
27	Screening of small millets for problematic soils. .	One year	2014-15	PI	The study resulted in identifying Barnyard millet as the best minor millet suitable for Karaikal region followed by Foxtail millet. However in terms of remuneration and marketing aspects Finger millet shall considered as the better crop suitable for Karaikal region
28	GKMS : AMFU	One year	2014-15.	Nodal Officer	The results from the present investigation revealed that the forecasting of weather parameter viz., rainfall was correct and found to be very useful. The prediction for relative humidity has to be refined to meet the differences occurring mainly because of oceanic effect of Bay of Bengal. There is an erratic wind movement and unexpected pressure changes due to the behavior of the Bay of Bengal. It was observed that the forecasted and observed values are nearer for all the parameters studied except for Relative humidity.
29	Screening of small millets for problematic soils.	One year	2015-16	PI	The results of varietal evaluation was also significant. CO13 of Finger millet (2035 kg ha^{-1}), GPU K3 of Kodo millet (1719 kg ha^{-1}), VL 29 of Barnyard millet (1447 kg ha^{-1}), PS 4 of Foxtail millet (1134 kg ha^{-1}) , CO 4 of Little millet (934 kg ha^{-1}) and GPU 21 of Proso millet (744 kg ha^{-1})

Sl. No.	Name of the scheme/ Project	Year / Period	Closing Date	Position	Salient Findings
					performed better and produced highest grain yields.
30	GKMS : AMFU	One year	2015-16	Nodal Officer	Among all weather parameters, the predictions of rainfall and wind speed were found to be accurate for both Karaikal and Puducherry region during the study period from April, 2015 to March, 2016. Next to rainfall and wind speed, the forecasted values for maximum, minimum temperature and evening relative humidity of both Karaikal and Puducherry region were observed to be 'Usable'. Whereas the morning relative humidity of Puducherry was found to be correct and morning relative humidity of Karaikal was found to usable.
31	FM (Ag) Studies on evaluation of System of Ragi Intensification (SRgI).	One year	2016-17	PI	Finally the study revealed that under System of Ragi Intensification (SRgI); finger millet crop can be planted with 13 days old seedling utilizing two seedling per hill at square planting of 22.5 cm.
32	GKMS : AMFU	One year	2016-17	Nodal Officer	Among all weather parameters, the predictions of rainfall and wind speed were found to be accurate for both Karaikal and Puducherry region during the study period from April, 2016 to March, 2017. The Forecast is very much useful for preparatory cultivation of crop, sowing and irrigation etc. Next to rainfall and wind speed, the forecasted values for maximum, minimum temperature and evening relative humidity of both Karaikal and Puducherry region were observed to be 'Usable'. Whereas the morning relative humidity of Puducherry was found to be correct and morning relative humidity of Karaikal was found to be usable. The forecasted cloud cover of Puducherry was found to be correct and in contrast, the forecasted cloud cover of Karaikal was found to be not usable.
33	FM (Ag) Studies on evaluation of System of Ragi Intensification	One year	17-18	PI	The study revealed that under System of Ragi Intensification (SRgI); finger millet crop can be planted with 12 days old seedling

Sl. No.	Name of the scheme/ Project	Year / Period	Closing Date	Position	Salient Findings
	(SRgI).				utilizing one seedling per hill at square planting of 30 cm.
34	GKMS : AMFU	One year	2017-18	Nodal Officer	To conclude, the analysis of annual forecasted rainfall was found to be correct for both Karaikal and Puducherry. The forecasted values for maximum, minimum temperature and evening relative humidity of both Karaikal and Puducherry region were found to be usable. The wind speed of Karaikal was found to be correct whereas for Puducherry it was not usable. The morning relative humidity and cloud cover of Puducherry were found to be correct and that of Karaikal was found to be usable for relative humidity and not usable for cloud cover. So, the weather forecast is most effective in making short-term adjustments in daily agricultural operations which minimize losses resulting from adverse weather conditions and improve yield and quality of agricultural productions.
35	FM (Ag) Studies on evaluation of System of Ragi Intensification (SRgI).	One year	18-19	PI	The study revealed that under System of Ragi Intensification (SRgI); finger millet crop can be planted with 12-15 days old seedling utilizing one / two seedling per hill at square planting of 30 cm.
36	GKMS : AMFU	One year	2018-19	Nodal Officer	The analysis of annual forecasted rainfall was found to be correct for both Karaikal and Puducherry. The forecasted values for maximum, minimum temperature and morning relative humidity of both Karaikal and Puducherry region were found to be usable. Whereas, evening relative humidity of Puducherry was found to be not usable. The wind speed of Karaikal and Puducherry was found to be correct and cloud cover of Puducherry were found to be correct and that of Karaikal was found to be usable. Thus the verification of weather forecast gives its accuracy and helps in usage of weather information for success of agriculture

Sl. No.	Name of the scheme/ Project	Year / Period	Closing Date	Position	Salient Findings
					production.
37	FM (Ag) Studies on role of System of Ragi Intensification (SRgI) in mitigating climate change.	One year	2019-20	PI	Finally the study revealed that under System of Ragi Intensification (SRgI); finger millet crop can be utilized for mitigating the changes in rainfall and temperature conditions at Karaikal.
38	GKMS : AMFU	One year	2019-20	Nodal Officer	The analysis of annual forecasted rainfall was found to be correct for both Karaikal and Puducherry. The forecasted values for minimum temperature and morning relative humidity of both Karaikal and Puducherry region were found to be usable. The wind speed of Karaikal was found to be correct and for Puducherry it was usable. The maximum temperature, evening relative humidity and cloud cover of Karaikal were found to be usable. At Puducherry evening relative humidity and maximum temperature forecast was not usable while it was correct for cloud cover. The wind direction for Karaikal was correct and in contrast, for Puducherry it was found to be not usable. Hence, weather forecast based Agromet advisories helps the farmers in preparedness of farm activities and also minimizes the production losses.
39	FM (Ag) Studies on evaluation of System of Ragi Intensification (SRgI).	One year	2020-21	PI	Early sown crop during June with TRY 1 variety performed better in mitigating the change in climatic conditions compared to later sown crops as well with other varieties viz CO 14, and CO 15.
40	GKMS : AMFU	One year	2020-21	Nodal Officer	The analysis of annual forecasted rainfall was found to be correct for both Karaikal and Puducherry. The forecasted values of maximum and minimum temperature of both Karaikal and Puducherry region were found to be usable. The morning relative humidity of both Karaikal and Puducherry region were found to be correct. The evening relative humidity of Karaikal region found to be usable whereas, Puducherry region found to

Sl. No.	Name of the scheme/ Project	Year / Period	Closing Date	Position	Salient Findings
					be not usable. The wind speed of Karaikal was found to be correct and for Puducherry it was usable. The wind direction for both Karaikal and Puducherry region were found to be not usable. These analyses of forecast gives accuracy of the forecast to rely on it and weather forecast based Agromet advisories helps the farmers in making decision to carryout farm activities to get high yield.
	FM (Ag) Evaluation of System of Ragi Intensification (SRgI) to mitigate climate change.	One year	Sept.2021	PI	It may be suggested that TRY 1 planted during early June will help to cope up with the changes in weather conditions that occur especially during south west monsoon period.
41	Response of small millets to liquid biofertiliser and their mode of application	One year	Sept.2021	PI	It may be suggested that finger millet being a poormans crop may be adopted with seed treatment of bioferiliser to increase the productivity especially in poor soils situations. Also foliar spray will help the crop to perform better at times of aberrant weather conditions.

POST GRADUATE STUDENT GUIDED (As Chairman)

Sl. No.	Title of the thesis	Name of the student and year	Salient findings
1	Studies on Rice weather relationship to identify suitable genotype and planting window for Kharif season in Karaikal region	A.Haridassan 2006	It is concluded that each of the right genotype has specific optimum window of planting during Kharif season. For the genotype ADT 45,46,43 and ADT RH 1 the optimum planting window was first June, first June , fifteenth June and fifteenth July respectively. It is recommended that during Kharif season , for getting the maximum income, the right variety ADT 45 is the best genotype and it should be planted on first June to realise the highest grain and straw yield.
2	Evaluation of Finger millet varieties under staggered weeks of planting during Kharif season at Karaikal region	T.Pandiselvi 2008	Hence the optimum planting window for TRY 1, CO13 and CO14 was May 17th. Finally from the present investigation it can be concluded that for *kharif* season at Karaikal, finger millet is one of the best option where TRY 1 can be planted on May 17th to obtain maximum remuneration.
3	Evaluation of rice genotypes at different planting dates during Kharif season in the	K.Tamilselvan 2008	The optimum planting window for ADT 36 and ADT 45 was fourth June. On slightly delay in planting, ADT 43 and ADT 48 can be planted on 18th June to realise the maximum yield potential . ADT RH 1 is best suited for delayed planting i.e Ninth July. Finally

Sl. No.	Title of the thesis	Name of the student and year	Salient findings
	coastal region of Karaikal		it can be recommended that for the Kharif season, to obtain maximum remuneration, the right variety ADT 45 has to be planted on fourth June to realise the maximum yield potential of the crop. ADT RH 1 is best suited for delayed planting i.e Ninth July.
4	Validation of CERES-rice model for precise time of sowing and nitrogen management in Rabi rice (CR 1009) at coastal areas of Karaikal region	A.Shanmugam 2009	From the results it can be concluded that planting Rabi rice CR 1009 on September 19th with 112.5 N Kg per ha /150 N Kg per ha/ 187.5 Kg N per ha /225 Kg N per ha is found to be the best for the coastal areas of Karaikal. Also in nitrogen management reducing the dose of nitrogen for earlier planted crop which August 22nd, August 29th and September 05th is recommended. DSSAT model is found to be suitable and satisfactory in predicting the growth and yield characters of rice under coastal delta of Karaikal region.
5	Evaluation of various weed management practices in finger millet in coastal deltaic region of Karaikal	Palla Venkata Subhash 2012	From the present investigation, it is clear that Octofluoren @ 0.100 Kg a.i per ha + hand weeding at 40 DAT is the most effective weed management practice to achieving higher yield and return through effective control of weeds in transplanted finger millet.
6	Studies on crop weather relationship of summer irrigated black gram at coastal areas of Karaikal	Rani Nallabelli 2013	From the study it is understood that during *summer* conditions, the optimum sowing window for VBN 3 and T 9 is March 7th. On slight delay in sowing, both the varieties can be sown upto March 14th to realize certain yield potential.
7	Studies on crop weather relationship of aerobic rice in Rabi season for coastal deltaic region of Karaikal	Kannedi Raju 2014	It can be concluded that for early sowing the rice varieties TRY 1 and ADT 39 are recommended (September 20th), whereas for later sowing TRY 1 alone was the best choice for *Rabi* season under aerobic condition at the coastal deltaic region of Karaikal.
8	Studies on Agronomic practice to mitigate climate change in aerobic rice at coastal deltaic areas of Karaikal	V.Buvanaswari 2015	From this study, it was proved that the early crop of rice achieved the nearly potential yield and the sowing window optimized for aerobic rice during *Rabi* season was September 12th. One per cent KCl hardened treatments was not considered to be effective during *Rabi* season as the treatments did not undergo the water stress condition owing to the rainfall season.
9	Evaluation of suitable establishment techniques for ragi in coastal areas of Karaikal	V.Vijayawalli 2015	From the present investigation it can be concluded that for *Kharif* season at Karaikal region, finger millet can be established through SRgI method at a spacing of 22.5 cm X 22.5 cm (T_8) which is the best

Sl. No.	Title of the thesis	Name of the student and year	Salient findings
			option to obtain maximum remuneration.
10	Evaluation of suitable SRgI for finger millet at Karaikal	A.Alphonse Mary 2016	It can be concluded that for *Kharif* season at Karaikal region, SRgI practice could increase the production strategy of ragi i.e. Single seedling with wider spacing (30 X 30 cm) along with an age of 12 days old seedling (S_2 N_1 A_1) will be the best option to obtain maximum remuneration by the farming community of Karaikal.
11	Studies on the evaluation of seed hardening techniques to mitigate stress in aerobic race during Kharif season at Karaikal	S.Sreelakshmi 2016	Sowing window optimized for aerobic rice during *Kharif* season was June 1st. It was found that in order to cope up with water stress of plant during unexpected drought condition in *Kharif* season, seed hardening with 1% KCl and 1% pungam leaf extract was considered to be effective.
12	Influence of weather factors and seed priming practices on aerobic rice productivity at Karaikal	Mr.Pazhanisamy 2017	Seeds primed with two per cent moringa leaf extract sown on 6th February was found to be more effective for realizing higher productivity of aerobic rice during Navarai at Karaikal, the tail end of Cauvery Delta Zone.
13	Performance of various integrated weed management practices in transplanted finger millet (*eleusine coracana* (l.) gaertn.) for the coastal region of karaikal	Mr.Md.Rehman Khan 2018	Pendimethalin @ 750 g ha^{-1} at 3 DAT + one hand weeding at 30 DAT is the most effective weed management practice for achieving higher grain yield and net returns through effective control of weeds in transplanted finger millet.
14	Studies on seed priming practices and sowing window of gingelly	Ishwarya 2019	From the present investigation, it can be concluded that the sesame treated with two per cent moringa leaf extract may be sown during April 19th to achieve more yield in the Karaikal region.
15	Studies on evaluation of seed priming practices in ragi at coastal areas of Karaikal	Deepa Priya 2020	From the present investigation, it could be concluded that the ragi seeds treated with three per cent panchakavyawas found to be effective for better yield in the Karaikal region.In case of non - availability of panchakavya, ragi seeds can be treated with one per cent pungam leaf extract or one per cent osmium leaf extract or plain water for better yield.

Sl. No.	Title of the thesis	Name of the student and year	Salient findings
16	Studies on the effect of seed hardening and clipping management over different sowing window of sesame at Karaikal region	S.Aruna 2021	The present study concluded that the TMV-7 variety of sesame performed superior when sown on 15th February along with two per cent MLE seed hardening followed by clipping practice during summer season under irrigated conditions in Karaikal region.

Training Undergone

Sl. No.	Title of the training	Place	Period		Sponsor
			From	To	
01	Mushroom training course	TNAU, Killikulam	11.10.1993	-	TNAU
02	Recent advances in weather forecasting and dryland management **(ICAR)**	TNAU, Coimbatore	10.04.1996	23.04.1996	ICAR
03	Rice Based Cropping system	DRR,Hyderabad	11.08.1998	25.08.1998	ICAR
04	Integrated Nutrient Management	GB Pant University	17.11.1999	24.11.1999	ICAR
05	Methods on Agro-climatic analysis **(ICAR)**	CRIDA, Hyderabad	22.05.2000	01.06.2000	ICAR
06	Industrial harmony	Karaikal	17.12.2000	-	Govt. of Puducherry
07	Capturing the benefits of seasonal climate forecast in Agricultural management **(ICAR)**	TNAU, Coimbatore	10.06.2001	29.06.2001	ICAR
08	Training on "Bio Informatics"	Barathiar University, Coimbatore	15.10.2004	04.11.2004	UGC
09	Training on " Strategies for production , processing & development of bio fuels" **(ICAR)**	FC &RI,Mettupalayam	01.12.2005	21.12.2005	ICAR

List of best papers with NAAS ratings:

Authors name	Title	Year	Publishers name	ISBN No.	NAAS ratings
NARAYANAN.AL.	Role of Jatropha for energy production in India. .	2008.	*In Proc. of International Nordic conference on Renewable Efficient energy, Vaasa, Finland,09-07 July 2008.p.15-18*	-	-
Pandiselvi.T, AL.NARAYANAN and R.Karthikeyan.	Evaluation of optimum time of sowing of fingermillet (Eleusine coracona G.) varieties in Karaikal region.	2010.	*Internat.J.agric.Sci., 6(1) Jan.-June,2010 p.94-96.*	-	**4.73**
Narayanan.AL., J.Gokila., V.Chellamuthu and V.Kanthaswamy	Weather forecasting & its implication in climate change at Karaikal region(U.T.of Puducherry). P.46-51.	2016.	Anna University, Chennai	(**ISBN:978-81899-67-0**)	-
Kennadi Raju and AL.Narayanan.	Crop weather relationship in rabi rice under aerobic condition.	2017	Trends in Biosciences 10(38).	ISSN 0974-8431,8020-8022.	-
Kannadi Raju, AL.Narayanan, R.Mohan and S.Nadarajdan.	Response of aerobic rice to Agro meteorological indices.	2017.	The Andhra Agric.J.64 (2).p.281-288.	-	**3.61**
Kannadi Raju, AL.Narayanan, R.Mohan and S.Nadardjan..	Influence of sowing dates on growth and yield of aerobic rice .	2018	International Journal of Chemical studies.	-	-
Buvanaswari.P., Narayanan.AL., Mohan.R and S.Sundaravaradhan	Effect of sowing dates and seed hardening on aerobic rice.	2017	Journal of Agrometeorology Agmet 2016 special issue: 55-59 (October 2017)	-	**6.55**
Pazhanisamy, S., AL. Narayanan, V. Sridevi, A. Singh, and A. K. Singh	Effect of Weather Parameters on Yield and Yield Attributes under Aerobic Rice Cultivation during Navarai Season.	. 2020.	*Current Journal of Applied Science and Technology* 39(7): 115-121	-	**4.71**
Pazhanisamy, S., AL. Narayanan, V. Sridevi, A. Singh, and A. K. Singh.	Effect of seed priming practices on dry matter production, yield and yield attributes of aerobic rice in coastal deltaic region of Karaikal.	2020.	*European Journal of Nutrition & Food Safety* 12(3): 79-83.	-	-
Pazhanisamy, S., AL. Narayanan, V. Sridevi and R.C.Devi.	Correlation regression studies between different weather parameters and yield of aerobic rice.	2020.	*International Journal of Chemical Studies* 8(3): 2357-2360.	-	-

Pazhanisamy, S., AL. Narayanan, V. Sridevi and R.C.Devi.	Crop weather relationships on aerobic rice production under coastal area.	2020.	*International journal of Creative research thought*. 8(5): 1580-1584	-	-
Angel.I., Poonguzhalan.R.,Narayanan.AL and S.Nadaradjan.	Growth and yield of sesame (Sesamum indicum L.) as influenced by plant growth regulators	2022.	*. Int. J.Curr.Microbiol. App.Sci.11(02)190-197.*	-	-
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