

## FACULTY PROFILE

|                        |   |  |
|------------------------|---|--|
| Name                   | : | Dr. MOHAN RAMALINGAM                                       |
| Designation            | : | Professor of Agronomy                                      |
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| Mobile                 | : | +91 9442131178   |
| Area of Specialization | : | Organic farming<br>Irrigation Agronomy<br>Cropping systems |
| Years of Experience    | : | 25 years as on 17.07.2020                                  |

| Research Articles<br>(International) | Research Articles<br>(National) | Research Notes |
|--------------------------------------|---------------------------------|----------------|
| 1                                    | 29                              | --             |

| Conference/<br>Seminar/<br>Symposium<br>Papers | Poster Papers | Manuals<br>(Teaching/<br>Training/ E-<br>Courses) | Popular Articles/<br>Pamphlet/ Leaflet |
|--|---------------|---|--|
| 45   | --            | 15  | 22                                     |

| Students guided | UG | PG | PhD |
|-----------------|----|----|-----|
|                 | -- | 13 | --  |

### Awards:

| Sl. No. | Name of the award  | Year      | National/ State / University / College / Local |
|---------|--|-----------|--|
| 1       | ICAR – JRF award in Agronomy   | 2003 - 04 | National                                       |
| 2       | Prof. S. SUBRAMANIAN and Dr. K. K. SUBBIAH Award for the best Ph. D student in Agronomy (Gold Medal) | 2005      | University                                     |

## RESEARCH PROJECTS/ SCHEMES COMPLETED

| Sl. No. | Name of the scheme/ Project  | Year/ Period           | Position | Salient findings  |
|---------|--|------------------------|----------|---|
| 1       | Suitability and performance of pre samba black gram and green gram cultivars at different time of sowing and varied levels of gypsum | One year<br>1996 - 97  | PI       | The July 1 <sup>st</sup> sowing immediately after the southwest monsoon shower recorded a good crop and increased yield of both pulse crops. Among the cultivars, ADT 3 black gram & PS 16 green gram were found to be suited for July 1 <sup>st</sup> sowing with the highest yield of 866 & 800 Kg ha <sup>-1</sup> respectively.   |
| 2       | Quantification of N top dressing based on LCC for some medium duration rice cultivars  | One year<br>1999 - 00  | PI       | There exists an increasing trend in the grain yield when the leaf colour was maintained towards greenness upto LCC 4 and thereafter declines slightly. It is concluded that maintaining leaf colour at LCC 4 for ADT 39 and CO 43 was found to provide increased yield and greater NUE.   |
| 3       | Quantification of N top dressing based on LCC for some medium duration rice cultivars (II year confirmative trial)                   | One year<br>2000 - 01  | PI       | The previous experiment was repeated for confirmation of the results. The results of the previous experiment were confirmed for all the three varieties tested. ADT 38 found to record highest yield under LCC 4.   |
| 4       | Evaluation of cropping system for the Coastal deltaic region of Karaikal (Ph. D. thesis)   | Two years<br>2003 - 05 | PI       | Brinjal - rice during I year and grain sorghum - rice during II year was found to be highest in terms of Rice yield equivalent. Sesame - rice sequence had involved the lowest total variable cost and it could be adopted by those farmers with poor capital resource. Without the rainfall or failure of south west monsoon to the <i>khariif</i> season crops, the Returns Above Variable Cost (RAVC) was highly assured by the grain sorghum - rice sequence. |
| 5       | Testing the suitability of bore well water of Karaikal region for irrigation to crops  | One year<br>2003 - 04  | PI       | The pH of water has been at neutral in all the categories of depth. In about 90.9 per cent of the deep bore well samples, the EC ranges between 0.751 - 2.250 dSm <sup>-1</sup> . Most of the bore wells irrespective of depth comes under the S <sub>1</sub> (Low sodium water) category. Similarly, almost all of the deep, 64.3 and 50 per cent of the shallow and filter point bore wells comes under the C <sub>3</sub> (High salinity water) category.      |
| 6       | Computation of reference crop evapo transpiration (E <sub>t0</sub> ), Climatic and crop specific water balance for Karaikal region   | One year<br>2004 - 05  | PI       | The magnitude of water deficit was found to be higher during May to July and September i.e. during summer and monsoon transition periods. Rainfall during the south west monsoon is also not sufficient to bring a positive water balance in the soil. The effective cropping season with least reliability on irrigation water during khariif season will be between 28 <sup>th</sup> to 43 <sup>rd</sup> standard weeks.  |
| 7       | Evaluation of suitable tropical sugar beet hybrids and optimum time of sowing  | One year<br>2006 - 07  | PI       | As evidenced from the rainfall data, the region experiences continuous heavy rainfall during the crop growing period and moreover owing to the contiguous plain, quick drainage for the crop would be hampered in the entire Karaikal region. Hence, suitability of sugar beet crop during September or October sowing is not feasible  |

| Sl. No.                           | Name of the scheme/ Project   | Year/ Period          | Position | Salient findings   |
|-----------------------------------|---|-----------------------|----------|--|
| 8                                 | Integrated nutrient management for tropical sugar beet  | One year<br>2006 - 07 | PI       | Owing to the characteristic rainfall and poor drainage feature of the region, it is an unsuitable crop during the monsoon season in Karaikal region.   |
| 9                                 | Research and Promotion of Sweet Sorghum in the coastal deltaic region of Karaikal                                   | One year<br>2008 - 09 | PI       | <p>On an average, the Varieties/ Hybrids like SSV 74, SPSSV 30, CSH 22, PAC 8238 and PAC 8239 had significantly recorded highest sweet sorghum cane yield (34.6, 30.7, 34.3, 36.9 and 32.6 t ha<sup>-1</sup>, respectively) coupled with significantly highest Alcohol yield (2204, 2054, 2059, 2055 and 1908 lit. ha<sup>-1</sup>).</p> <p>Among the months of sowing, February, March, April May and June months are better to record significantly higher cane yield and Alcohol yield.</p> |
| <b>PG student Thesis Research</b> |   |                       |          |  |
| 1                                 | Optimization of sowing date and method of establishment for rice fallow black gram in coastal deltaic region        | One year<br>2006 - 07 | Chairman | The January 3 <sup>rd</sup> sowing had registered the highest seed yield of 719 kg ha <sup>-1</sup> . A gradual reduction in the growth parameters, yield attributes and yield was noticed when the sowing was delayed beyond January 3 <sup>rd</sup> . The line sowing by dibbling had almost increased the seed yield by 1.75 times than broadcasting under rice fallow condition.   |
| 2                                 | Drip Fertigation studies in rice fallow cotton in coastal deltaic region of Karaikal                                | One year<br>2007-08   | Chairman | 75 % RFD (N <sub>2</sub> ) coupled with application of water through drippers at 0.5 and 0.7 ET (I <sub>2</sub> ) or 0.6 and 0.8 ET (I <sub>3</sub> ) could result in higher yield, net return, B:C ratio, water use and nutrient use efficiencies in rice fallow cotton.  |
| 3                                 | Studies on enhancing the productivity and profitability of rice fallow cotton through Agronomic Practices           | One year<br>2008-09   | Chairman | Cotton (Direct sowing) with black gram intercrop under zero tilled drip fertigation system would result in higher total system yield, gross return, net return and B: C ratio. Apart from these economic advantages, environmentally water and nutrient use efficiency was also higher.  |
| 4                                 | Performance of aerobic rice under drip fertigation in the coastal deltaic region of Karaikal                        | One year<br>2011-12   | Chairman | The results of the aerobic rice cultivation were proved successful with nearly equivalent yield of transplanted rice. However, the irrigation water to aerobic rice should be provided as flood irrigation by alternatively maintaining wet and dry soil conditions. Provision of drip irrigation to aerobic rice cultivation is as of now unsuccessful which registered only an average grain yield of 1631 kg ha <sup>-1</sup> .   |
| 5                                 | Agronomic Practices for increasing the productivity of rice fallow pulses in the coastal deltaic region of Karaikal | One year<br>2012-13   | Chairman | Irrigation to 0.3 CPE along with Panchagavya 3 % spray twice was found to be the best agronomic practice to improve the productivity, gross return, net return, B.C ratio and net benefit in rice fallow black gram.   |
| 6                                 | Performance and possibilities of organic rice production in coastal deltaic region of Karaikal                      | One year<br>2013-14   | Chairman | Organic rice farming is feasible and sustainable in all the three sphere of production, environmental and economic perspectives in the coastal deltaic region of Karaikal. The variety IW ponni with either vermicompost application at 1 t ha <sup>-1</sup> or Panchagavya foliar spraying at every 20 days interval can produce a substantial grain yield with profitable returns.   |

| Sl. No. | Name of the scheme/ Project  | Year/ Period        | Position | Salient findings  |
|---------|--|---------------------|----------|---|
| 7       | Performance of different rice production system during <i>rabi</i> season in coastal deltaic region of Karaikal                                  | One year<br>2013-14 | Chairman | Among the different methods of growing rice, the lowest gross income was obtained in dry seeding in aerobic soil and highest gross income was obtained in traditionally followed random planting method. Whereas, the highest net income or profit of Rs. 62,361 ha <sup>-1</sup> was obtained in SRI method followed by random planting (Rs. 62,147 ha <sup>-1</sup> ) with a B : C ratio of 3.84 and 3.67 in SRI and traditional random planting methods, respectively.   |
| 8       | Studies on potential utilization of local vegetation as manure for organic rice cultivation in coastal deltaic region of Karaikal                | One year<br>2014-15 | Chairman | Based on grain yield, gross returns, net returns and Benefit: cost ratio, the IW ponni with <i>Croton sparsiflorus</i> incorporation could be advocated. On the other hand, for high nutrient responsive varieties of recent release, instead of <i>Croton sparsiflorus</i> , it would be better to incorporate <i>Tephrosia purpurea</i> and <i>Sesbania aculeata</i> . It is suggested that the coastal deltaic ecosystem has content with enough species of plant diversity for maintaining the closed nutrient cycle and cohesiveness to function as an independent production ecosystem, which can be better managed without any damage for long term sustainability |
| 9       | Agronomic measures for increasing the productivity of organic rice – rice fallow pulse cropping system in the coastal deltaic region of Karaikal | One year<br>2014-15 | Chairman | Organic rice production with vermicompost 3 t ha <sup>-1</sup> followed by rice fallow black gram with rice straw mulching and <i>panchagavya</i> foliar spray could achieve the production sustainability of the cropping system. However, since economically the control without vermicompost had performed better, it could be suggested to have the vermicompost production from own resources of the farm instead as purchased input for achieving economic sustainability.  |
| 10      | Performance of rice varieties under organic farming to varied levels of vermicompost in coastal deltaic region of Karaikal                       | One year<br>2015-16 | Chairman | Succinctly, either the variety <i>IW ponni</i> or the traditional rice variety <i>Mapillai samba</i> could be chosen depending upon the price of the produce for <i>rabi</i> season to be grown under organic farming with vermicompost application of 3 t ha <sup>-1</sup> preferably produced on-farm in the coastal deltaic region of Karaikal.  |
| 11      | Agronomic and physiological measures to enhance the productivity of aerobic rice in coastal deltaic region of Karaikal                           | One year<br>2016-17 | Chairman | The rice variety KMP 175 could be chosen to grow under aerobic condition either with surface irrigation if water is not a constraint or with drip irrigation if water is constraint coupled with either Brassinosteroids or KCl foliar spray.   |
| 12      | Performance of Organically grown irrigated dry (ID) crops for <i>khariif</i> season at coastal deltaic region of Karaikal                        | One year<br>2017-18 | Chairman | Organic finger millet shall be recommended to be grown in the <i>khariif</i> season at coastal deltaic region of Karaikal as it envisaged economic, production and eco-system sustainability.   |

### List of best papers with NAAS ratings:

| Authors name  | Title   | Year | Publishers name  | ISBN No.        | NAAS ratings |
|---|---|------|--|-----------------|--------------|
| N. A. Kiranmai, R. Mohan, R. Poonguzhalan and S. Nadaradjan             | Performance of rice varieties, irrigation methods and foliar spray on growth attributes of aerobic rice   | 2020 | Int. J. Agric. Sci.,                                       | ISSN: 0973-130X | 4.82         |
| N. A. Kiranmai, R. Mohan, R. Poonguzhalan and S. Nadaradjan             | Agronomic and physiological measures to enhance the yield and water productivity of aerobic rice in coastal deltaic region of Karaikal                | 2020 | Int. J. Agric. Sci., Hind Agrl. edn and training Institute | ISSN: 0973-130X | 4.82         |
| Raju K, AL. Narayanan, R. Mohan and S. Nadaradjan                       | Influence of sowing dates on growth and yield of aerobic rice.  | 2018 | Int. J chemical studies                                    | ISSN: 2349-8528 | 5.31         |
| Raju K, AL. Narayanan, R. Mohan and S. Nadaradjan                       | Response of Aerobic Rice to Agrometeorological Indices  | 2017 | The Andhra Agric. J  | ISSN: 0003-2950 | 4.14         |
| P. Bhuvanaswri, AL. Narayanan, R. Mohan and S. Sundaravarathan          | Effect of sowing dates and seed hardening on aerobic rice   | 2017 | J Agromet.   | ISSN: 0972-1665 | 6.64         |
| Pandiaraj, T and R. Mohan   | Study of relationship between water use and yield characters under drip fertigation and furrow irrigated cotton in coastal deltaic region of Karaikal | 2016 | Adv. In Life sciences                                      | ISSN: 2278-3849 | 3.15         |
| Pandiaraj, T and R. Mohan   | Comparative study on productivity and profitability of Cotton ( <i>Gossypium hirsutum</i> ) under Drip fertigation and surface irrigation             | 2016 | Adv. In Life sciences                                      | ISSN: 2278-3849 | 3.15         |
| Pandiaraj, T and R. Mohan   | Optimization of irrigation water and nutrients to cotton through drip fertigation   | 2013 | J. Cotton Res. Dev. CRDA, Haryana                          | ISSN: 0972-8619 | 4.69         |
| Pandiaraj, T and R. Mohan   | Performance of yield attributes and cotton yield under the influence of drip fertigation in coastal deltaic region of Karaikal                        | 2012 | Green Farming Int. J. Jodhpur                              | ISSN: 0974-0775 | 4.38         |
| Mohan, R., L. Aruna, J. Ram Mohan, and R. Poonguzhalan                  | Lock-lodging technology for rice ratooning  | 1998 | IRRN, IRRI, Philipines                                     | --              | --           |
| Mohan, R, N. Balasubramanian, L. Aruna, J. Rammohan and R. Poonguzhalan | Effect of methods of ratooning on the performance of rice   | 2000 | Oryza, ARRW, Cuttack                                       | ISSN: 0474-7615 | 4.44         |
| Aruna, L., N. Duraraj Muthiah and R. Mohan                              | Zinc Release characteristics of major rice soil series of Tamil Nadu  | 2001 | J. Indian Soil Sci. ISSS, New Delhi                        | ISSN: 0019-638x | 5.23         |

| <b>Authors name</b>  | <b>Title</b>  | <b>Year</b> | <b>Publishers name</b>   | <b>ISBN No.</b>    | <b>NAAS ratings</b> |
|--|---|-------------|--|--------------------|---------------------|
| Mohan, R.,<br>P. Muthukrishnan,<br>and L. Aruna  | Suitability of bore well water of Karaikal region for irrigation to crops                                       | 2008        | Madras Agric. J.<br>MASU, TNAU   | ISSN:<br>0024-9602 | <b>3.98</b>         |
| Mohan, R.,<br>P. Muthukrishnan,<br>V. Chellamuthu and<br>L. Aruna  | Evaluation of cropping systems for the coastal deltaic region of Karaikal                                       | 2008        | Madras Agric. J.<br>MASU, TNAU   | ISSN:<br>0024-9602 | <b>3.98</b>         |
| Mohan, R.,<br>N. Balasubramanian,<br>L. Aruna and<br>AL. Narayanan                                       | Economic viability of ratooning rice  | 2000        | Madras Agric. J.<br>MASU, TNAU   | ISSN:<br>0024-9602 | <b>3.98</b>         |
| Narayanan, AL.,<br>R. Poonguzhalan,<br>R. Mohan, J.<br>Rammohan,<br>E. Suburayalu and<br>A. Mohd. Hanifa | Chemical weed management in transplanted rice in Karaikal region of Pondicherry Union territory                 | 2000        | Madras Agric. J.<br>MASU, TNAU   | ISSN:<br>0024-9602 | <b>3.98</b>         |
| Aruna, L.,<br>G. Selvakumari and<br>R. Mohan   | Nitrogen release pattern of green manures in sodic soil   | 1999        | Madras Agric. J.<br>MASU, TNAU   | ISSN:<br>0024-9602 | <b>3.98</b>         |
| Rammohan, J,<br>AL. Narayanan,<br>R. Poonguzhalan,<br>R. Mohan and<br>A. Mohd Hanifa                     | Efficacy of pre-emergence herbicides for weed control in low land transplanted rice in the coastal saline soils | 1999        | Indian J. Weed<br>Sci.,<br>Indian Society<br>of weed science,<br>Hisar | ISSN:<br>0253-8040 | <b>5.17</b>         |