

Bio-Data of Dr. A. Thangasamy

Name : Dr. A. Thangasamy

Designation : Scientist (Sr. Scale), Soil Science: Soil fertility/Chemistry/Microbiology

Contact : ICAR–Directorate of Onion and Garlic Research,
Rajgurunagar, Pune-410505
Maharashtra
Phone: +91-2135-222026
E-mail: astsamy@yahoo.co.in;
a.thangasamy@icar.gov.in



Higher Degree : Ph. D. (Soil Science and Agricultural Chemistry)

Birth Date : January 5, 1978

Research Interest : Soil Science and Plant Nutrition

Projects : **Research Projects completed**

- Integrated nutrient management in onion and garlic (**PI**)
- Assessment of nutrient requirement of onion and garlic crops during the crops growth period (**PI**)

Ongoing research projects

In–house project:

- Integrated water and nutrient management and physiological manipulation for improving productivity of onion and garlic (**PI**)
- Improving knowledge and skill of stakeholders for improving production of onion and garlic (**CO-PI**)
- All India Network Project on Onion and Garlic -Crop Production trials (2009 to till date) (**PI**)

Externally funded project

- National Innovations on Climate Resilient Agriculture (**NICRA**) (**PI**)

Research achievements :

- Developed integrated nutrient management (INM) modules for sustainable onion and garlic production.
- Assessed the nutrient requirement pattern of onion bulb and seed crop and garlic
- Developed sulphur management technology for onion and garlic
- Developed micronutrient management technology for onion and garlic.

Publications :

1. Research papers

- **Thangasamy, A.**, Dhyani Singh, B. S. Dwivedi, D. Chakraborty, R. K. Tomar and Meena, M. C. (2017). Soil organic carbon, hydraulic properties and yield of maize and wheat under long–term fertilization in an *Inceptisol*. *Journal of the Indian Society of Soil Science*. 65(2). 189-198.
- Govindasamy, V., Priya George, L. Aher, S. Ramesh, **A. Thangasamy**, S. Anandhan, S. Raina, M. Kumar, J. Rane, K. Annapurna and P. S. Minhas. (2017). Comparative conventional and phenomics approaches to

assess symbiotic effectiveness of Bradyrhizobia strains in soybean (*Glycine max* L. Merrill) to drought. *Scientific Reports* 7 (1). doi:10.1038/s41598-017-06441-3.

- **Thangasamy, A.**, Kalyani Gorrepati, Ahammed Shabeer T. P., Kavita R. Savalekar, Kaushik Banerjee, Sankar, V., Kishor M. Chavan (2017). Comparison of organic and conventional farming for onion yield, biochemical quality, soil organic carbon, and microbial population. *Archives of Agronomy and Soil Science*. dx.doi.org/10.1080/03650340.2017.1341045.
- **Thangasamy, A.** and K. M. Chavan (2017). Assessment of dry matter accumulation and nutrient uptake pattern of garlic. *Indian Journal of Horticulture*. 74(1): 80-84.
- **Thangasamy A.** (2016). Quantification of dry matter accumulation and nutrient uptake pattern of short day onion (*Allium cepa* L.). *Communications in Soil Science and Plant Analysis*. 47 (2):246–254.
- **Thangasamy, A.** and K. E. Lawande (2015). Integrated nutrients management for sustainable onion production. *Indian Journal of Horticulture*. 72 (3):347-352.
- **Thangasamy, A.**, V. Sankar, and K. E. Lawande, (2013). Effect of sulphur nutrition on pungency and storage life of short day onion (*Allium cepa*). *Indian Journal of Agricultural Sciences*. 83 (10):1086-9.
- Chakraborty, D., R. N. Garg, R. K. Tomar, B. S. Dwivedi, P. Aggarwal, R. Singh, U. K. Behera, **A. Thangasamy**, and D. Singh (2010). Soil Physical Quality as Influenced by Long-Term Application of Fertilizers and Manure under Maize-Wheat System. *Soil Science*. 175 (3): 128-133.
- **Thangasamy, A.**, M. V. S. Naidu, N. Ramavtharam and C. Raghava Reddy (2005). Characterisation, classification and evaluation of soil resources in Sivagiri micro-watershed of Chittoor District in Andhra Pradesh for sustainable land use planning. *Journal of the Indian Society of Soil Science*. 53(1): 454-461.
- **Thangasamy, A.**, M. V. S. Naidu and N. Ramavtharam (2004). Clay mineralogy of soils in the Sivagiri micro-watershed of Chittoor District, Andhra Pradesh. *Journal of the Indian Society of Soil Science*. 52(4): 454-461.
- **Thangasamy, A.**, V. Sankar, K. E. Lawande (2010). Integrated nutrient management in onion and garlic. *Indian Journal Fertilizers* 6(11): 100–107.
- **Thangasamy, A.** (2016). 4R stewardship approach for onion in India. *Better crops-South Asia*. X (10). No. 1: 8-12.
- **Thangasamy, A.**, Dhyani Singh, B. S. Dwivedi and Krishan Kumar (2007). Availability of DTPA-extractable micronutrients in soils at different growth stages of maize and wheat crops under long-term experiment. *Pusa Agriscience*. 30:56-60.
- Sankar, V., **A. Thangasamy**, and K. E. Lawande (2015). Effect of drip irrigation on onion (*Allium cepa* L.) seed production under western Maharashtra condition. *International Journal of Tropical Agriculture*. 33(2):621-625.
- Sankar, V., **A. Thangasamy**, and K. E. Lawande (2015). Weed management studies in onion (*Allium cepa* L.) cv N-2-4-1 during *rabi* season. *International Journal of Tropical Agriculture*. 33(2):627-631.
- Jayanthi Mala, B. R, P.S. Srinivas, **A. Thangasamy** and Pratibha Nighot (2014). Role of different nutrients on attack of thrips (*Thrips tabaci* Lindeman) in onion. *Current Biotica*. 8(1):72-75.
- Kalyani Gorrepati, **A. Thangasamy**, Yogesh Bhagat and A. A. Murkute (2017). Curing of Onion: A Review. *Indian Horticulture Journal*. 7(1): 8-14.

2. Book Chapter/Conference paper/ Technical article

- Ganeshamurthy, A. N. and **A. Thangasamy** (2016). Micronutrient management in onion and garlic. Second National Symposium on Edible *Alliums*: Challenges and future strategies for sustainable production to be held on 7-9 November, 2016 at Jalna.
- Aziz Qureshi, A. and **A. Thangasamy** (2016). Nutrient management in onion and garlic. Second National Symposium on Edible *Alliums*: Challenges and future strategies for sustainable production to be held on 7-9 November, 2016 at Jalna.
- Sankar, V., K. E. Lawande, **A. Thangasamy** (2016). Organic farming in onion and garlic. Second National Symposium on Edible *Alliums*: Challenges and future strategies for sustainable production to be held on 7-9 November, 2016 at Jalna.
- **Thangasamy, A.** and G. Kayani (2016). Organic farming for improved onion quality and sustainable soil health. International Seminar on Emerging Trends in Organic Farming and Sustainable Agriculture held at Mahatma Gandhi University, Kottayam from December 29-31, 2016. Page 22-23.
- Palaniappan, R. and **A. Thangasamy** (2015). Nutrient management. In: Onion Monograph. Krishna Kumar, N. K., Jai Gopal and V. A. Parthasarathy (Eds.). ICAR-DKMA, Indian Council of Agricultural Research, New Delhi.
- Jai Gopal and **A. Thangasamy** (2014). Status of garlic production and research in India. Brainstorming session on Crop improvement, production technology, seed production and processing of garlic. National Horticultural Research and Development Foundation, Nashik. November 29, 2014.
- **Thangasamy, A.** (2014). Integrated nutrient and water management in onion and garlic. **In:** Compendium of short training course on Production technology in onion and garlic. Edited by Gopal J and Gadge SS. DODR, Rajgurunagar, pp. 49-60.
- **Thangasamy, A.** (2014). Weed management in Onion and Garlic. **In:** Compendium of short training course on Production technology in onion and garlic. Edited by Gopal J and Gadge SS. DODR, Rajgurunagar, pp. 61-79.
- **Thangasamy, A.** (2013). Improved INM module for *Rabi* onion. *DOGR News*. 17:pp2.

3. Technical Bulletin

- Ganeshamurthy, A. N., **Thangasamy, A.**, V. Mahajan and P. K. Gupta (2017). Soil fertility and crop nutrition in onion and garlic: Delimitation, deficiencies and management of nutrients. Technical Bulletin No. 25. ICAR-DOGR, Rajgurunagar, Pune. p. 61.
- **Thangasamy, A.**, S. S. Gadge and V. Mahajan (2017). Nursery management in onion. Technical folder No. 7. ICAR-DOGR, Rajgurunagar, Pune. p. 6.
- **Thangasamy, A.**, S. S. Gadge and V. Mahajan (2017). Nursery management in onion (Hindi). Technical folder No. 8. ICAR-DOGR, Rajgurunagar, Pune. p. 6.
- **Thangasamy, A.**, S. S. Gadge and V. Mahajan (2017). Nursery management in onion (Marathi). Technical folder No. 9. ICAR-DOGR, Rajgurunagar, Pune. p. 6.
- **Thangasamy, A.**, S. S. Gadge and J. Gopal (2015). Improved Cultivation Practices for Garlic. Technical Bulletin No. 23. ICAR-DOGR, Rajgurunagar, Pune. p. 20.
- **Thangasamy, A.**, Gadge, S. S. and Gopal, J. (2015). Lahsun ki unnat kheti. Technical Bulletin No. 24. ICAR-DOGR, Rajgurunagar, Pune. p. 20.
- Sankar V., **Thangasamy, A.**, Gadge, S. S., Singh, P., Gopal, J. (2015). Unnat vidhiyon dwara pyaj ki kheti. Technical Bulletin No. 21. ICAR-DOGR, Rajgurunagar, Pune. p. 23.

- Sankar, V., **A. Thangasamy** and Jai Gopal (2014). Improved cultivation practices for onion. Technical bulletin No. 21. Directorate of Onion and Garlic Research. Rajgurunagar - 410 505, Dist. Pune, Maharashtra.
- Qureshi, A. A., K. E. Lawande, **A. Thangasamy** (2011). Diagnosis and management of nutrient deficiency in onion and garlic. Technical Bulletin No. 16. Second Edition. Directorate of Onion and Garlic Research, Rajgurunagar, Pune, 410 505, MS, India.

4. Abstracts

- **Thangasamy, A.**, V. Sankar and K. E. Lawande (2011). Impact of excess sulfur application on onion yield and pungency level. National Symposium on Alliums: Current Scenario and Emerging Trends, 12-14 March, 2011, Pune.
- **Thangasamy, A.**, V. Sankar and K. E. Lawande (2011). Integrated nutrient management is prerequisite for sustainable onion production. National Symposium on Alliums: Current Scenario and Emerging Trends, 12-14 March, 2011, Pune.
- **Thangasamy, A.**, V. Mahajan, V. Sankar and K. E. Lawande (2011). Evaluation of biochemical properties of short day onion cultivars. National Symposium on Alliums: Current Scenario and Emerging Trends, 12-14 March, 2011, Pune.
- Sankar, V. **A. Thangasamy**, and K. E. Lawande (2011). Effect of foliar application of water soluble fertilizers on growth and yield of *rabi* onion.. National Symposium on Alliums: Current Scenario and Emerging Trends, 12-14 March, 2011, Pune.
- Sankar, V. **A. Thangasamy**, and K. E. Lawande (2011). Effect of foliar application of silica products on growth and yield of onion. National Symposium on Alliums: Current Scenario and Emerging Trends, 12-14 March, 2011, Pune.
- Sankar, V. **A. Thangasamy**, and K. E. Lawande (2011). Drip irrigation studies in onion seed crop. National Symposium on Alliums: Current Scenario and Emerging Trends, 12-14 March, 2011, Pune.
- Sankar, V. **A. Thangasamy**, and K. E. Lawande (2011). Weed management studies in *rabi* onion under western Maharashtra conditions. National Symposium on Alliums: Current Scenario and Emerging Trends, 12-14 March, 2011, Pune.
- Mahajan, V., **A. Thangasamy**, V. Sankar and K. E. Lawande (2011). Biochemical composition of indigenous and exotic onion and garlic varieties. National Symposium on Alliums: Current Scenario and Emerging Trends, 12-14 March, 2011, Pune.
- **Thangasamy, A.** (2014). Quantification of dry matter accumulation and nutrient uptake pattern of short day onion. Chadha, K.L., Singh, S.K., Srivastav, Manish and Behera, T.K. (Ed.). *Book of Abstracts (Poster Papers)*, 6th Indian Horticulture Congress- An International Event on Horticulture for Inclusive Growth, Tamil Nadu Agricultural University Coimbatore, Tamil Nadu, 6-9, November, 2014, , 518 + XLVI (46).
- **Thangasamy, A.**, Dhyani Singh, B. S. Dwivedi and Mahesh Chand Meena (2015). Changes in soil organic carbon and hydro-physical properties of *Typic Haplustepts* under long-term fertilization manuring. Book of abstracts. Eightieth annual convention of Indian Society of Soil Science. GKVK, Bengaluru, December 5-8, 2015. Abstract number 96. pp.10
- **Thangasamy, A.**, K. E. Lawande and Kishor M. Chavan (2015). Integrated nutrient management for sustainable garlic production. Book of abstracts. Eightieth annual convention of Indian Society of Soil Science. GKVK, Bengaluru, December 5-8, 2015. Abstract number 374. pp.36.
- **Thangasamy, A.** and K. M. Chavan (2016). Assessment of biomass accumulation and nutrient uptake pattern of onion seed crop. *Kalia, P., S. K. Singh, M. Srivastav, R. R. Sharma, J. Prakash, D. V. S. Raju and A. K.*

Goswami (Eds). *Abstracts (Poster Papers)*, 7th Indian Horticulture Congress- An International meet on Doubling farmers income through Horticulture, ICAR-Indian Agricultural Research Institute, New Delhi, November 15-18, 2016. Page 209-210.

- **Thangasamy, A.**, G. Kalyani, T. P. Shabeer Ahammed, R. S. Kavita, Kaushik Banerjee, V. Sankar and M. C. Kishor (2016). Comparison of organic farming with conventional farming for production and quality of onion. Second National Symposium on Edible *Alliums*: Challenges and future strategies for sustainable production held during November 7-9, 2016 at Jalna, Maharashtra.
- Pranjali H. Ghodke, **A. Thangasamy**, A. J. Gupta and V. Mahajan, (2016). Screening of onion germplasm for water logging tolerance. Second National Symposium on Edible *Alliums*: Challenges and future strategies for sustainable production held during November 7-9, 2016 at Jalna, Maharashtra.
- Pranjali H. Ghodke and **A. Thangasamy** (2016). Identification of critical growth stages in onion for water deficit stress. Second National Symposium on Edible *Alliums*: Challenges and future strategies for sustainable production held during November 7-9, 2016 at Jalna, Maharashtra.

5. Popular article

- Gadge, S. S., **Thangasamy, A.** and Gopal, J. (2015). Kanda pikanchi ghya adhik kalji. Agrowon. Sakal Media Group, Pune. 18 August 2015. p. 11.
- Gadge, S. S., **Thangasamy, A.** and Gopal, J. (2015). Agro planning-Kanda salla. Agrowon. Sakal Media Group, Pune. 11 September 2015. p. 11.
- Gadge, S. S., **Thangasamy, A.** and Gopal, J. (2015). Avasthenusar kanda pikache vyavasthapan. Agrowon. Sakal Media Group, Pune. 11 October 2015. p. 11.
- Gadge, S. S., **Thangasamy, A.** and Gopal, J. (2015). Kanda va lasun salla. Agrowon. Sakal Media Group, Pune. 11 November 2015. p. 14.
- Gadge, S. S., **Thangasamy, A.** and Gopal, J. (2015). Kanda salla. Agrowon. Sakal Media Group, Pune. 7 December 2015. p. 11.
- Gadge, S. S., **Thangasamy, A.** and Gopal, J. (2016). Kanda va lasun pikakarita salla. Agrowon. Sakal Media Group, Pune. 3 January 2016. p. 11.
- Gadge, S. S., **Thangasamy, A.** and Gopal, J. (2016). Kanda kadhni kartana ghya kalji. Agrowon. Sakal Media Group, Pune. 2 February 2016. p. 11.
- Gadge, S. S., **Thangasamy, A.** and Gopal, J. (2016). Garpit grasta kanda pikat kara yogya upay yojana. Agrowon. Sakal Media Group, Pune. 5 March 2016. p. 11.
- Gadge, S. S., **Thangasamy, A.** and Gopal, J. (2016). Kanda va lasun salla. Agrowon. Sakal Media Group, Pune. 6 March 2016. p. 11.
- Gadge S.S., **Thangasamy A.** and Gopal J. (2016). Piknihaya tagnya salla: Kanda va lasun. Krishiking. September 2016. Krishiking Agotech, Pune. 21.
- Gadge S.S., **Thangasamy A.** and Gopal J. (2016). Piknihaya tagnya salla: Kanda va lasun. Krishiking. October 2016. Krishiking Agotech, Pune. 15.
- Gadge S.S., **Thangasamy A.** and Gopal J. (2016). Piknihaya tagnya salla: Kanda va lasun. Krishiking. November. Krishiking Agotech, Pune. 16.
- Gadge S.S., **Thangasamy A.** and Gopal J. (2016). Kanda salla: Pik sanrakshan. Agrowon. 4 May. Sakal Media Group, Pune. 11.
- Gadge S.S., **Thangasamy A.** and Gopal J. (2016). Kanda salla: Pik sanrakshan. Agrowon. 5 June. Sakal Media Group, Pune. 7.

- Gadge S.S., **Thangasamy A.** and Gopal J. (2016). Kanda salla: Pik sanrakshan. Agrowon. 4 July. Sakal Media Group, Pune. 11.
- Gadge S.S., **Thangasamy A.** and Gopal J. (2016). Kanda ropvatika va punarlagvadiche vyavasthapan. Agrowon. 1 August. Sakal Media Group, Pune. 11.
- Gadge S.S., **Thangasamy A.** and Gopal J. (2016). Rangda kandyachi ropvatika, punarlagvad. Agrowon. 5 September. Sakal Media Group, Pune. 11.
- Gadge S.S., **Thangasamy A.** and Gopal J. (2016). Kara rabbi kandyache niyojan. Agrowon. 8 October. Sakal Media Group, Pune. 11.
- Gadge S.S., **Thangasamy A.** and Gopal J. (2016). Kanda va lasun salla. Agrowon. 7 November. Sakal Media Group, Pune. 11.
- Gadge S.S., **Thangasamy A.** and Mahajan V. (2017). Piknihaya tagnya salla: Kanda va lasun. Krishiking. December 2016-January 2017. Krishiking Agotech, Pune. 20.
- Gadge S.S., **Thangasamy A.** and Mahajan V. (2017). Piknihaya tagnya salla: Kanda va lasun. Krishiking. February-March 2017. Krishiking Agotech, Pune. 23.
- Gadge S.S. and **Thangasamy A.** (2017). Kanda pik salla. 7 January. Agrowon. Sakal Media Group, Pune. 11.
- Gadge S.S., **Thangasamy A.** and Mahajan V. (2017). Agro Planning: Kanda salla. 7 February. Agrowon. Sakal Media Group, Pune. 11.
- Gadge S.S., **Thangasamy A.** and Mahajan V. (2017). Agro Planning: Kanda va lasun salla. 6 March. Agrowon. Sakal Media Group, Pune. 11.
- Gadge S.S., **Thangasamy A.** and Mahajan V. (2017). Kanda sathavnukisathi ek va don pakhi sathvangriha. 25 March. Agrowon. Sakal Media Group, Pune. 11.

6. Membership in scientific societies:

- Life member, Indian Society of Soil Science
- Life member, Indian Society of Alliums
- Annual member, The Horticultural Society of India

7. Awards and fellowships received:

- ICAR-JRF 2000
- IARI Senior Fellowship, 2003
- Best Oral Presentation award-1