

Brief Curriculum Vitae



1. **Name** : Dr. A.V.M.Subba Rao
2. **Position held** : Scientist SG (Agro meteorology)
3. **Date of birth** : 15th August, 1967
4. **Address** :
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5. Academic qualifications

Examination passed/degree obtained

| Examination/ Degree/diplo ma | Year | Name of the university Institute/Board | Class/divisi on | Subject with major field of specialization |
|--|------|---|-----------------------------|--|
| Ph.D | 2017 | Andhra University, Visakhapatnam, AP | --- | Some studies of climatic variability and their impacts on Indian Agriculture |
| Certificate course in “Application of GIS and RS in Agriculture and soils” | 2000 | Indian Institute of Remote Sensing, Dehradun, India | ----- | Cropping systems analysis and Agro climatic zonation using GIS&RS |
| Master of Technology | 1993 | Andhra University, Visakhapatnam, AP | I class with distinction | Atmospheric Science |
| Master's degree | 1991 | Andhra University, Visakhapatnam, AP | I class with distinction | Meteorology with Agricultural Meteorology Spcl. |
| Bachelor's degree | 1988 | Andhra University, Visakhapatnam, AP | I class | Physics , Mathematics and Electronics |
| Intermediate | 1984 | Board of Intermediate Education, Hyderabad | II class | Physics, Maths, Chemistry, Languages |
| SSC | 1982 | Board of Secondary Education, Hyderabad | I class | Maths, Science, SST, Languages |

6. Participation in Refresher Courses/Summer Institute/training in India

| S.No. | Title of Course | Duration | Name of organizing Institution |
|-------|---|--|---|
| 1. | 61 FOCARS Training | 1 October 1997 to 31 January 1998 | NAARM, Hyderabad |
| 2. | A short-term training course on "Intergraph GIS software" | 7-12 June 1999 | Rolta India Ltd., New Delhi |
| 3 | " Application of GIS and Remote Sensing in Soils and Agriculture" | 6 March-7 July, 2000 (4 months) | Indian Institute of Remote Sensing (ISRO), Dehradun |
| 4 | "Database Management in Oracle and Arc/Info GIS" | May 25 to June 25, 2002 (33 days) | IASRI, New Delhi under NATP project INARIS |
| 5. | "Leica GS5 GPS and its utilities in precision farming". | April 29 to April 30 2003 (two days) | M/S Elcome Technologies Pvt.Ltd. Gurgoan, conducted at PDCSR, Modipuram |
| 6. | One day training on " Local Area Network Management" | 12 July, 2001 (One day) | CMC, New Delhi conducted at ARIS cell, PDCSR, Modipuram. |
| 7. | In house training program on "Windows XP ^R ," | 28 th February to 5 th March, 2002 (Six days) | ARIS cell, PDCSR, Modipuram. |
| 8. | Winter School on Remote sensing and linking of crop models | 22 March to 15 April 2006 (21 days) | Division of Agricultural Physics, IARI, New Delhi |
| 9. | GIS short course-2006 Applications in land resource management | July 31-Aug 4, 2006 | Jointly organized by ICRISAT and University of Florida, USA at ICRISAT, Hyderabad |

6.a. Participation in International training

| | | |
|--|-------------------------|--|
| Climate Change impact assessment using CSM model DSSAT | April 18 -July 14, 2011 | At University of Florida, Florida, USA |
|--|-------------------------|--|

7. Professional experience

| Employer/Institution | Designation | Duration |
|----------------------------------|---|-------------------------------------|
| ICAR, CRIDA HYDERABAD | Scientist SG (Agro-meteorology) | 28/8/2011- Till date Rs. 9000 GP |
| ICAR, CRIDA HYDERABAD | Scientist SG (Agro-meteorology) | 28/8/2008- Till date Rs. 8000 GP |
| ICAR, CRIDA HYDERABAD | Scientist senior Scale (Agro-meteorology) | 28/08/2003- Till date |
| ICAR, PDCSR MODIPURAM, MEERUT | Scientist (Agro-meteorology) and Officer In-charge (GIS) | 28/08/1997- 24/10/05 |
| ICAR, CRIDA HYDERABAD | Research Associate (Agro-meteorology) | 18/01/1994 to 26/08/1997 |

7.a. Handling of collaborative/externally funded projects:

| Title of the project | Sponsoring/ Collaborating agency | Duration | Budget (lakh Rs.) | Worked/ Working as |
|---|-------------------------------------|--|-------------------------|--------------------------|
| 1. Precision Farming | NATP | 2001-2003 (03 years) | 89.25 Lakh | Co-PI |
| 2. Integrated National Agricultural Resources Information Systems | NATP | 2001-2003 (03 years) | 60.00 Lakh | Co-PI |
| 3. "Characterizing agro-climate and assessing potential yields using DSSAT simulation models for enhanced productivity of major cropping systems in the area domain of Cropping Systems Research Centers" | APCess fund | 2001-2003 (03 Year) | 6.91 lakh | PI |
| 4. Cropping systems analysis using Remote sensing data, GIS and ground based survey | SAC (ISRO) Ahamadabad | 2004-06 (Two years) Due to transfer I have handed over the project to co-PI | 25.0 Lakhs | PI |

| | | | | |
|---|----------------------------------|---------------------|--------------|-------|
| | | on 22 OCT 2005. | | |
| 5. Network project on climate Change | ICAR project | 2004-2007 | 300 | Co-PI |
| 6. NICRA | ICAR | 2011-till date | 350 Lakhs | Co-PI |
| 7.Monsoon Mission _II | Ministry of Earth Sciences | Dec 2018 onwards | 101 lakhs | Co-PI |

8.Computer Proficiency: Worked on **WINDOWS 10** Platform and dealt with the following software:

STANDARD SOFTWARE : MS office 2013

GIS SOFTWARE: ARCGIS 9.0, ARC VIEW 3.2 , ILWIS 3.2, ENVI 4.2

DATABASE MANAGEMENT SOFTWARE: ORACLE 9x, PL/SQL, FORMS 2000, MS ACCESS

STATISTICAL SOFTWARE: WATBAL, SX, SYSTAT,

CROP SIMULATION MODELS :CROPWAT, DSSAT,INFO-CROP,APSIM

LANGUAGES KNOWN : FORTRAN and C (not proficient but manageable)

9. Honors/Awards/Professional recognitions

- Dr. D.N.Desai Medal, Indian Meteorological Society (Visakhapatnam) prize.
- N.Melanchthon Philip Memorial prize for meritorious performance in M.Sc.
- Dr. C.V.S.Ratnam prize for meritorious performance in Agricultural Meteorology specialization.
- Consolation prize in English service quiz on the subject of "Global Warming" Conducted by RADIO DEUTSCHE WELLE, Germany.

10. Scientific Publications: (List enclosed)

BRIEF LIST OF PUBLICATIONS

1. C. A. Rama Rao, B. M. K. Raju, **A. V. M. Subba Rao**, K. V. Rao, Josily Samuel, Kausalya Ramachandran, K. Nagasree, R. Nagarjuna kumar and K. Ravi Shankar. 2017. Assessing Vulnerability and adaptation of Agriculture to climate change in Andhra Pradesh. *Ind. Jn. of Agri. Econ.* vol.72, No.3. PP. 375-384
2. Vijaya Kumar, P., **Subba Rao, A. V. M.**, Sarath Chandran, M. A., Venkatesh, H., Rao, V. U. M. and Srinivasa Rao, Ch. 2017. Micro-level Agromet Advisory Services using block level weather forecast – A new concept based approach. *Current Science* 112: 227-228.
3. C. A. Rama Rao, B. M. K. Raju, **A. V. M. Subba Rao**, K. V. Rao, V. U. M. Rao, Kausalya Ramachandran, B. Venkateswarlu, A. K. Sikka, M. Srinivasa Rao, M. Maheswari and Ch. Srinivasa Rao. 2016. A district level assessment of vulnerability of Indian agriculture to climate change, *Current Science*, Vol. 110, No. 10, 1939-1946
4. Sarath Chandran, M. A., **Subba Rao, A. V. M.**, Sandeep, V. M., Pramod, V. P., Pani, P., Rao, V. U. M., Visha Kumari, V. and Srinivasa Rao, Ch. 2016. Indian summer heat wave of 2015: a Biometeorological analysis using half hourly automatic weather station data with special reference to Andhra Pradesh. *International Journal of Biometeorology*. DOI 10.1007/s00484-016-1286-9.
5. **A.V.M. Subba Rao**, , Arun K. Shanker, V. U. M. Rao, V. Narsimha Rao, A. K. Singh, Pragyana Kumari, C. B. Singh⁵ & Praveen Kumar Verma⁶ & P. Vijaya Kumar , B. Bapuji Rao, Rajkumar Dhakar, M. A. Sarath Chandran, C. V. Naidu, J. L. Chaudhary, Ch. Srinivasa Rao and B. Venkateswarlu. (2015). Predicting Irrigated and Rainfed Rice Yield Under Projected. Climate Change Scenarios in the Eastern Region of India. *Environmental Modeling & Assessment*, DOI 10.1007/s10666-015-9462-6 ISSN 1420-2026.
6. Raju, B.M.K., M. Osman, B. Venkateswarlu, **A.V.M. S. Rao**, K.V. Rao, P.K. Mishra, C.A. Rama Rao, K. Kareemulla, Anil Rai, V.K. Bhatia, Prachi Misra Sahoo, P.K. Malhotra, A.K. Sikka, N. Swapna and P. Latha (2015). Prioritization of rainfed areas in India based on natural resource endowments. *Journal of the Indian Society of Agricultural Statistics*. 69(1): 83-93
7. Raju, B. M. K., Rao, K.V., Venkateswarlu, B., **Rao, A. V. M. S.**, Rama Rao, C.A., Rao, V. U. M., Bapuji Rao, B., Ravi Kumar, N., Dhakar, R., Swapna, N. and Latha, P. (2013). Revisiting climatic classification in India: a district-level analysis. *Curr. Sci.*, 105, No. 4, 492-495.
8. A.V.M.Subba Rao, M. Jaypal, V.U.M. Rao, V. Narsimha Rao and N.S. Raju (2013). Mandal-wise analysis of dry spell probability during different growth

stages of rice in Medak district of Andhra Pradesh. Journal of Agrometeorology.15 (Special Issue-II): 73-7

9. G.G.S.N. Rao, **A.V.M.S. Rao**, V.U.M. Rao, M. Vanaja, M. Srinivasa Rao, K.V. Rao, S. Desai and Ch. Srinivasa Rao. (2009). Impact, Adaptation and vulnerability of rainfed agriculture to climate change: Research at CRIDA. Indian Journal of Dryland Agricultural Research and Development. 24 (2): 10-20
10. **Rao, A.V.M.S.**, Satyanarayana, T., Rao, G.G.S.N., Rao, V.U.M., Bhaskar Rao, D. V., Manikandan, N., Santhi Bhushan Chowdary, P., Ravikumar, V. and Ramakrishna, Y.S. 2010. Utilization of high resolution short range weather forecast for weather based agro advisory services. Journal of Agrometeorology. 12 (2): 229 – 233
11. P.Vijaya kumar, Y.S.Ramakrishna, B.V.Ramana Rao, U.S. Victor, N.N. Srivastava, **A.V.M. Subba Rao**, (1997) Influence of Moisture, Thermal and photoperiodic regimes on the productivity of castor beans (*Ricinus Communis L.*), Agricultural and Forest Meteorology, 88, 279-289.
12. P.Vijaya kumar, N.N. Srivastava, U.S. Victor, D. Gangadhar Rao, **A.V.M. Subba Rao**, Y.S.Ramakrishna, B.V.Ramana Rao (1996) Radiation and water use efficiencies of rainfed castor beans (*Ricinus Communis L.*) in relation to different weather parameters. Agricultural and Forest Meteorology, 81,241-253.
13. U.S. Victor, N.N. Srivastava, **A.V.M.Subba Rao** and B.V.Ramana Rao (1996) Managing the impact of seasonal rainfall variability through response farming at a semi-arid tropical location, Current Science, Vol.71, No.5, 392-397.
14. U.S.Victor, N.N.Srivastava, **A.V.M.Subba Rao** and B.V.Ramana Rao (1995) El Nino's Effect on Southwest monsoon rainfall in Andhra Pradesh, India, Drought Network News, Vol.7, No.2, 20-23.
15. Srivastava, N.N., Rao, V.U.M., Saikia, U.S., Vijayakumar, P. and **Rao, A.V.M.S.** 2010. Studies on diurnal air temperature pattern from daily maximum and minimum by estimating the parameters of sinusoidal and exponential models on weekly basis under semiarid climate of Hyderabad. Journal of Agrometeorology. 12 (1): 8 – 14
16. **Rao, A.V.M.S.**, Santhi Bhusan Chowdary, Manikandan, N., Rao, G.G.S.N., Rao, V.U.M. and Ramakrishna, Y.S. 2010. Temperature trends in different regions of India. Journal of Agrometeorology.12 (2): 187 - 190
17. P.S.Pandey,**A.V.M.Subba Rao**, A.D.Upadhyay and Divya Prakash (2004), Changes in agricultural land use pattern and its impact on food security of

Uttaranchal State. Published in the J.Farming Systems Research & Development 10(1&2): 78-83

18. Namrata Jain, **A.V.M.Subba Rao**, S.S.Ray and Sushma Panigrahy (2004) Use of IRS P6 LISS IV data to study the crop and soil variability of village published in the Scientific Report on ' IRS-P6 Early Evaluation Studies', SAC/RESIPA/SR-02/OCT2004, Remote Sensing Applications and Image Processing Area, Space Applications Center (ISRO), Ahamadabad-380015.
19. Pandey, P.S., Koshal, A.K., Jawahar Singh and **Rao, A.V.M.S.** (2006). Geographic information system application in cropping systems analysis of Indo Gangetic plains using ground based survey. Journal of Farming Systems Research and Development 12(1-2): 54-58.

Technical Bulletins

1. Rao, V.U.M., **Subba Rao, A.V.M.**, Bapuji Rao, B., Ramana Rao, B.V., Sravani, C. and Venkateswarlu, B. (2011). El Niño Effect on Climatic Variability and Crop Production : A Case Study for Andhra Pradesh, Research Bulletin No. 2/2011. Central Research Institute for Dryland Agriculture, Santoshnagar, Hyderabad, Andhra Pradesh, India. 36 p.
2. Rama Rao C A, Raju B M K, **Subba Rao A V M**, Rao K V, Rao V U M, Kausalya Ramachandran, Venkateswarlu B and Sikka A K (2013) Atlas on Vulnerability of Indian Agriculture to Climate Change. Central Research Institute for Dryland Agriculture, Hyderabad P 116.
3. Rao, V.U.M., Bapuji Rao, B. Sikka, A.K., **Subba Rao, A.V.M.**, Rajbir Singh and Maheswari, M. 2014. Hailstorm threat to Indian Agriculture: A historical perspective and future strategies. Central Research Institute for Dryland Agriculture, Hyderabad -500059, 44pp.
4. Rao, V.U.M., **Subba Rao, A.V.M.**, Sarath Chandran M. A., Prabhjyot Kaur, Vijaya Kumar, P., Bapuji Rao, B., Khandgond, I.R., and Srinivasa Rao, Ch., 2015. District level crop Weather Calendars of Major crops in India. Central Research Institute for Dryland Agriculture, Hyderabad – 500059, 40pp.

Books

1. Rao, V. U. M., **Rao, A. V. M. S.**, Vijaya Kumar, P., Bapuji Rao, B. and Sastry, P.S.N. (2013). Agrometeorological Aspects of extreme weather events. Central Research Institute for Dryland Agriculture, Hyderabad-500 059, India, pp.303

Book chapters

1. **Rao, A. V. M. S.**, Rao, V. U. M. and Bapuji Rao, B. (2013). Agroclimatic analysis for climate variability assessment, In: Adaptation and Mitigation Strategies for Climate Resilient Agriculture (Eds. Ravindra Chary, G., Srinivasa Rao, Ch., Srinivas, K., Maruthi Shankar, G. R., Nagarjuna Kumar, R., and Venkateswarlu, B),

- Central Research Institute for Dryland Agriculture, Santoshnagar, Hyderabad, pp.43.
2. **Rao, A. V. M. S.** (2013). Database management of Extreme Agrometeorological Events, In: Agrometeorological aspects of Extreme Weather Events (Eds. Rao, V. U. M., Rao, A. V. M. S., Vijaya Kumar, P., Bapuji Rao, B. and Sastry, P. S. N.). Central Research Institute for Dryland Agriculture, Santoshnagar, Hyderabad, pp.12-15.
 3. GGSN Rao, **AVMS Rao** and VUM Rao, 2009 Trends in rainfall and temperature in rainfed India in previous century, in Global climate change and Indian Agriculture-case studies from ICAR Network Project, (Edited by P.K.Aggarwal) published by Indian Council of Agricultural Research, New Delhi. Chapter- 16, pp71-73