

## SCIENTIST PROFILE



1. Name & Designation : Dr. Onkar Nath Singh, Head  
Crop Improvement
2. Date of Birth : 1<sup>st</sup> February, 1961
3. Date of joining ICAR : 31<sup>st</sup> January, 2001
4. Date of joining the present post : 15<sup>th</sup> November, 2010
5. Qualification (highest degree) : Ph.D
6. Post Doctoral Research Experience/Training: General Management Programme for Scientists, Administrative Staff College Of India Bella Vista, Hyderabad September 17-28, 2012 (2 Week)
7. Area of Specialization/research interest: Genetics & Plant Breeding
8. Significant Contribution including products and patents (Five bullets):
  - As Head Crop Improvement instrumental for varietal improvement of rice and most significantly 15 varieties were released during the last two and half years for various ecosystems viz. Upland, Aerobic adaptation, Shallow lowland, Aromatic, Hybrid, deep water, and irrigated. Altogether more than 18 varieties were released in professional career.
  - Division of Crop Improvement is champion in producing nucleus and breeder seed of CRRI bred varieties and producing (60 ton/ha) 50 % higher against targets every year.
  - Hybrid seed production of CRRI bred Hybrids was initiated in farmers' fields in public private partnership (PPP) mode by entering into MOU with private seed companies. It is important to mention that most of the hybrid seed in rice is being produced in 2 districts of AP i.e. Karim nagar and Warangal. Our efforts have resulted in initial success of hybrid seed production in Odisha which will help in identifying alternate areas for hybrid seed production in the country.
  - New Generation Rice developed with a yield potential of 12 ton/ha (8-10 g/panicle, 6-8 tillers, 400 grains/panicles, 32g/1000grain weight) for shallow land situation 30cm.).
9. Awards/Honours:
  - Elected Fellow Indian Society of Genetics & Plant Breeding New Delhi (1989). Worked as Council (2 times), Reviewer and life member of the society.
  - Selected as Best Worker Award of Central Rice Research Institute, Cuttack in the year 2009 during Foundation day of the institute.
  - Best Poster Award (2013-as Collaborative member and 1997-Individually) in the International Symposium organized by the Association of Rice Research Workers, ORYZA, Cuttack
10. Publications:
  - i. Behera L, Mohanty S, Pradhan SK, Singh S, **Singh O N**, Sahu RK, Sahu SC, Dash SK and Mohapatra T (2013). Assessment of genetic diversity of rainfed lowland rice genotypes using microsatellite markers. **Indian Journal of Genetics and Plant Breeding** 73(2): 142-152.
  - ii. Swamy BPM, Ahmed H, Henry A, Mauleon R, Dixit S, Vikram P, Ram T, Verulkar SB, Perraju P, Mandal NP, Varirar M, Robin S, Chandrababu R, **Singh ON**, Dwivedi JL, Das SP, Mishra KK, Yadaw RB, Aditya TL, Karmakar B, Satoh K, Moumeni A, Kikuchi S, Leung H and Kumar A (2013). Genetic, physiological, and gene expression analyses reveal that multiple QTLs enhance yield of rice mega-variety IR64 under drought. **PLOS ONE** 8(5): e62795.
  - iii. Raman A, Verulkar S, Mandal N, Variar M and **Singh ON** (2012). Drought index to select high yielding rice lines under different drought stress severities. **Rice** (Springer) 5: 31.

- iv. Behera L., Patra BC, Sahoo RK, Nanda A, Patnaik A and **Singh ON** (2012). Assessment of genetic diversity in medicinal rices using microsatellite markers. **Australian Journal of Crop Science** 6(9): 1369-1376.
- v. Kumar A, Verulkar SB, Mondal NP and **Singh ON** (2012). High-Yielding, drought tolerant, stable rice genotypes for shallow rainfed lowland drought-prone ecosystems. **Field Crops Research** 133: 37-47.
- vi. Ghosh A, Dey R, and **Singh ON** (2012). Improved management alleviating impact of water stress on yield decline of *tropical aerobic rice*. **Agron. J.** 104: 584-588.
- vii. Verulkar SB, Mandal NP, Dwevedi JL, Singh BN and **Singh ON** (2010). Breeding resilient and productive genotypes adapted to drought-prone rainfed ecosystem of India. **Field Crops Research** 117(2-3): 197-208.
- viii. Ghosh A. and **Singh ON** (2010). Determination of threshold regime of soil moisture tension for scheduling irrigation in tropical aerobic rice for optimum crop and water productivity. **Experimental Agriculture** 46(4): 489-499.
- ix. Courtois B, Bartholome B, Chaudhary D, MacLaren G and **Singh ON** (2001). Comparing farmers and breeders rankings in varietal selection for low-input environments: A case study of rainfed rice in eastern India. **Euphytica** 122: 537-550.