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Smart Water Tech Conference Report

As a part of co-curricular activity I, Dr. N. Mahesha, Department of Civil Engineering attended Two days (06/03/2019 to 07/03/2019) “*Smart Water TechConference*” conducted by Indian Technology Congress Association at Sir. M. V. Auditorium, FKCCI, Bengaluru. 6th semester students (10 students) of our Department were also participated in the conference under my guidance. The prime objective of this conference was to understand “Futuristic Farmer-led Irrigation: Pressurized Pipe Network and Automation Technologies for Enhanced water use efficiency”. About more than 200 delegates from Government agencies, Policy makes, Industry leaders, University of Agricultural sciences, Farmer associations, FPOs, FPCs, project consultants, Contractors, Banking sector etc. were participated in this conference.



In this workshop nearly 20 keynote speakers from different organization like Acharya N G Ranga University, Sai Sanket Enterprises Private Limited, Farmer’s association - Israel, Water Resources Department - Government of Karnataka, University of Agricultural sciences - Dharwad, Raichur, Bengaluru, Bank of India, Directorate of agriculture – Government of Karnataka, Visvesvaraya Jala Nigam Limited, Indian Institute of Horticulture Research – Hesaraghatta gave a talk on the following topics:

- Water accounting and valuing are keys for sustainable water use.
- Challenges in operating Micro-Irrigation in CHAKS of large pressurized irrigation systems.
- Irrigation automation.
- Community Agriculture in Israel.
- Case studies on contemporary water distribution projects: Mohanpura Micro Irrigation and Kundaliya Micro Irrigation.
- Optimization of Energy costs in pressurized pipe irrigation pumping systems.
- Pressurized pipe irrigation case studies: Nagalwadi and Balwada Lift irrigation projects.
- Manapadale-Kolhapur project of Hanuman and Jugaidevi Pani Purvatha Sansthe Micro-Irrigation scheme on 500 acres.
- Pressurized pipe irrigation network in agriculture row crops.
- Emerging paradigm: Farmer producer organization (FPO) – driven projects.

- Smart air management in pipe networks.
- Smart integrated micro-irrigation tank project.
- Capacity building and community agriculture.
- Insights to Israel technology based farming in Karnataka
- Pressurized Irrigation systems in upper Bhadra project
- Canal Irrigation Network to Pressurized Irrigation Network for enhanced water use efficiency.
- Digital farming in India.
- Irrigation network and fertigation techniques in greenhouse vegetables.
- Interlinking of River basins: an overview.
- Participatory irrigation management - farmer's perspectives.
- Pressurized Irrigation Systems for Agriculture and Horticulture crops and Engineered wetland systems.

From this conference we learnt lot of things as follows:

- How to implement and use Pressurized Pipe Network Irrigation facilities to grow two or three crops in a year which will enhance agricultural production and productivity.
- How to overcome from challenges like agriculture dependency on unpredictable rain, increasing frequency of natural disasters, food and water insecurity.
- How to adopt farmer-led irrigation development methodology, where farmers are empowered to drive the establishment, improvement, expansion of irrigated agriculture, often in partnership with external agencies including Government/NGO's and Universities.
- How to use and monitor the state of art of automation that deploys wireless sensors for real time sensing of agricultural parameters like temperature, humidity and soil moisture can help the farmers in achieve the twin objectives of more crops per drop and enhancing the farmer's income.
- How Pressurized Pipe Irrigation Network enhances water use efficiency to the order of about 70-80% by curtailing irrigation water demand without impacting the net irrigation requirement.
- Field truths related to interlinking of river basins.
- How best the participatory irrigation management will increases the farmer's prosperity.
- How to use Irrigation network and fertigation techniques in greenhouse vegetables.