

## Tour Report of Training on Hydroponic Agriculture

We were four nominees who visited PMS-University of Arid Agriculture Rawalpindi for getting on hands training on installation and management of Hydroponic unit. We started our journey from Multan to Rawalpindi on 5-02-2017. On 6-02-2017 we attended the inauguration ceremony of training on hydroponic agriculture addressed by Prof. Dr. Rai Niaz Ahmad (V.C. PMS-UAAR) and Prof. Dr. Safder Ali (P.D. Hydroponics). Twenty five participants attended the training. Prof. Dr. Safder Ali said that in 2002 Holland Embassy transfer five acre hydroponic unit to PMS-University of Arid Agriculture in free. In 2013 when Prof. Dr. Rai Niaz Ahmad joined university as vice chancellor tried his best to transfer hydroponic technology to farmers in an economical way for that he work hard day and night to develop indigenous hydroponic units. According to project, 12 hydroponic units are approved to install in different locations of Punjab Province. The university received 164 applications against advertisement in national newspaper and selected sixteen locations for its installment.



Prof. Dr. Rai Niaz Ahmad (V.C. PMS-UAAR): said that university has honor to commercialize hydroponic Punjab. According to him hydroponics is not a rocket science even illiterate will run this unit if he has proper training. According to him one acre of hydroponic unit will produce production equal to hundred acres. He said that it is better to take hydroponic instead of medicines. He asked that hydroponic is like one wheeling on motorbike that it should be handled with great care to prevent from loss. PMS-University of Arid Agriculture Rawalpindi is getting 150 ton yield of vegetables per acre instead of international market that are getting 500-600 tonns per acre. If one ingredient in our nutrient recipe is adulterated then our yield will come to 100 tonns from 500 tonns per acre. He said that our aim is to feed the world. Hydroponic Agriculture increase yield as well as of produce. If we consume hydroponic crops we will make society healthy. From one kanal we will take production of one acre. Need of the

time is to create awareness among peoples about healthy food in order to establish market demand for hydroponic vegetables. Future is of hydroponic agriculture. He said that during this training trainees will practically performed;

- Nursery Raising
- Transplanting
- De-leafing
- Harvesting
- Packaging



On next day 7-02-2017 we visited foreign and indigenous hydroponic units installed at rawat, Rawalpindi. In tunnel structure for hydroponic farming we should keep the height of Vines up to 5 ft. or we should keep the height of plant up to the height of cooling pad. In vines we should also do de-suckering to improve fruit size. Hygrometer is also installed in hydroponic units to maintain the humidity.

### **Nursery Raising for Hydroponic crops**

For All hydroponic crops we will first raise nursery on rock wool round macro plugs and after that we will transplant the seedling on rock wool blocks and after certain time when plant height is more than one foot we will transplant plants with rock wool block on coco slabs which are used as growing media.



**Rock Wool Round Macro Plugs**



**Nursery of Hydroponic crops raised on rock wool as growing media**



**Rock Wool Blocks used for growth and transplantation of seedling in coco-slabs**



**Coco slabs used as media for growth of crop seedlings till its harvest**



**Foreign Installed Hydroponic unit**





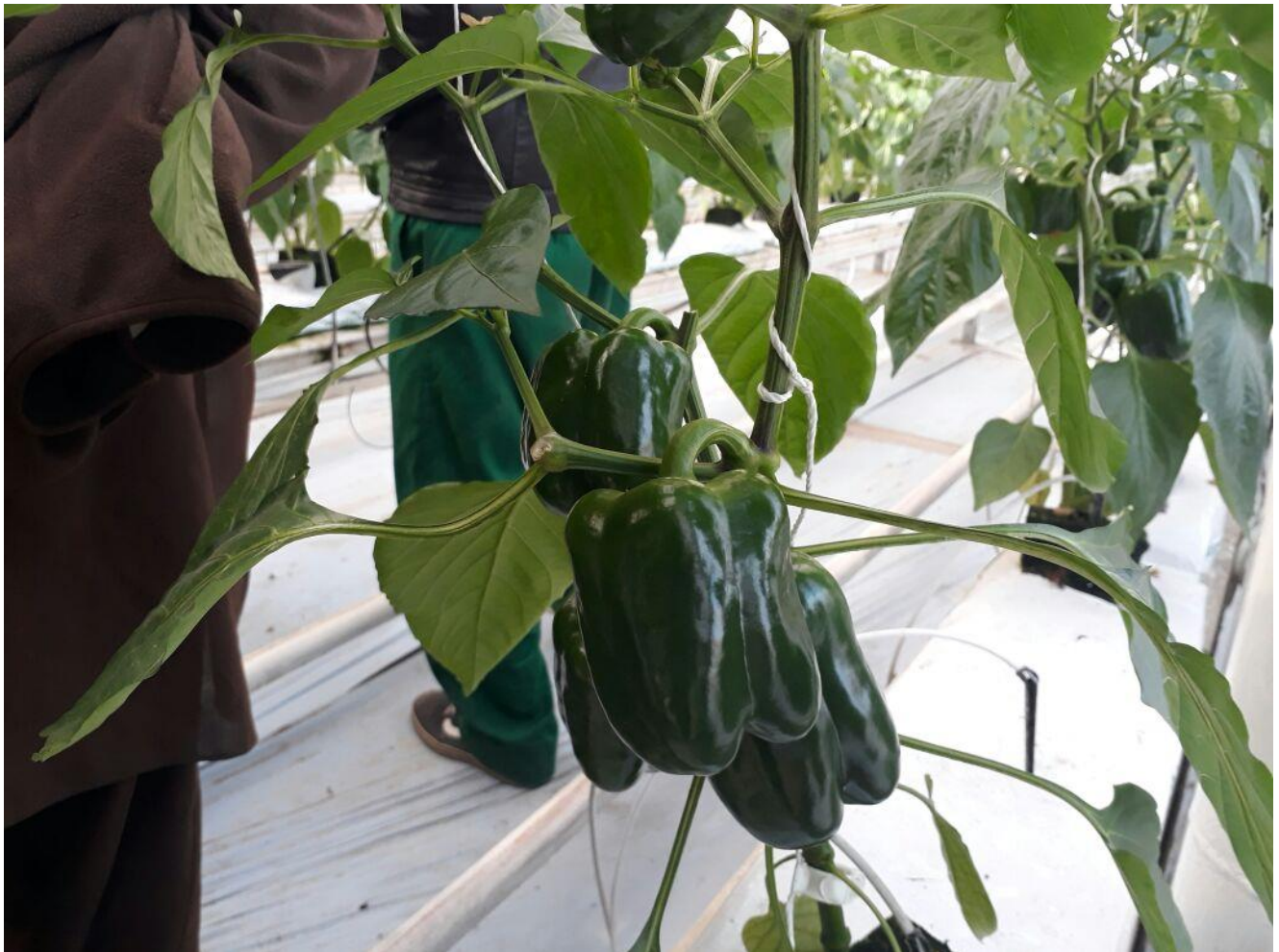
### **Maintenance of Plant Height in Hydroponic unit**

In both foreign and indigenous Hydroponic unit J-shaped hooks are used to provide support to bunch of fruits like in tomato, bell pepper etc. Clips are used to provide support to the plant on the hanging rope.





**Foreign Installed Hydroponic Unit**



## **Indigenous Hydroponic unit**



**One indigenous hydroponic unit will be installed at MNS- UAM.**





## **Indigenous Hydroponic unit**



**Ventilation system in indigenous hydroponic unit**



**Color full sticking tape used as insect trap in indigenous hydroponic unit**



**Heating system for indigenous hydroponic unit, it uses the university solid waste for heating the unit.**





**Appearance of Tomatoes in Indigenous hydroponic unit**