



SOLUTIONS
FOR **CROPS**

BANANA NURSERY IRRIGATION AND CLIMATE CONTROL

SAVES TIME, MONEY, EFFORT AND MANPOWER,
WHILE REDUCING PLANT LOSSES.

NAANDANJAIN

A JAIN IRRIGATION COMPANY

INTRODUCTION

The banana is one of the most highly produced and commercialized fruits in the world. According to the FAO (Food and Agriculture Organization of the United Nations), approximately five million hectares were harvested in 2012, and production was roughly 102 million tons. Brazil, India and the Philippines are the leading producers in terms of cultivated area, representing 722, 481 and 454 thousand hectares respectively. In 2011 international commercialization of banana resulted in approximately 19 million tons of product.

Most of the intensive farming of banana plants is done via tissue culture. The final stage of the propagation takes place under a net house in pots or bags. Nurseries using these practices sometimes produce millions of plants per cycle. The common practice today is irrigating the pots with drippers, or with sprinklers positioned between the pots on the ground.

The labor costs of managing the drippers and the driplines are high. It's extremely time-consuming to get the pots and the drippers in position at the beginning of the cycle, and then remove the pots at the end of the cycle. The constant monitoring, maintenance and replacing of drippers is a major expense. Damage done to the irrigation equipment by the workers themselves is also considerable. The result is plant mortality, insufficient uniformity and eventually loss of income, both directly and indirectly.

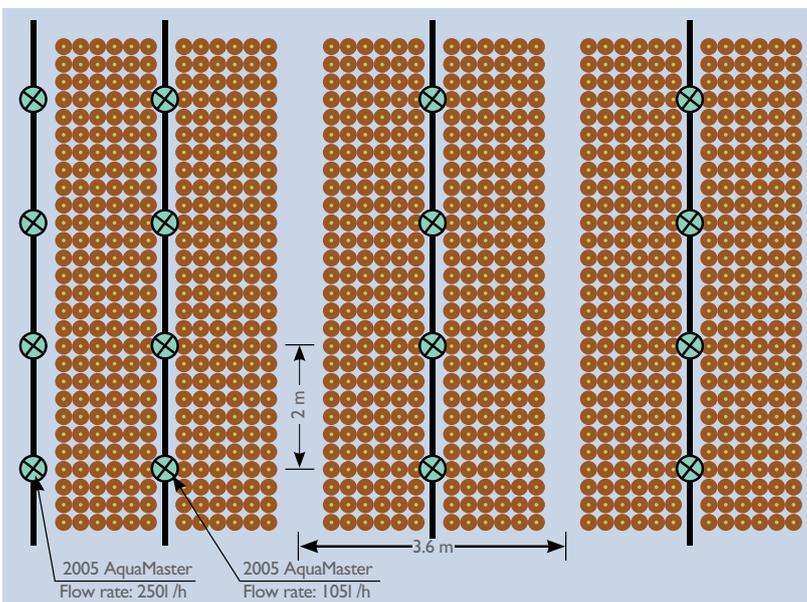
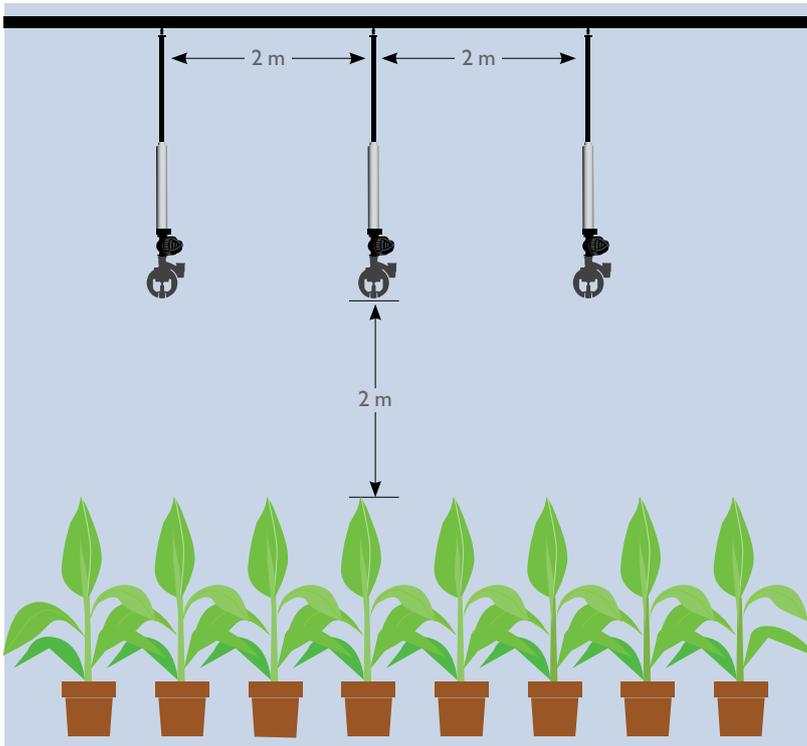


We at NaanDanJain have come up with the perfect solution to these problems. Our solution saves time, labor, space and costs, whichever way you look at it.



2005 AQUAMASTER

The 2005 AquaMaster with inverted configuration is positioned every 2 meters on the lateral above the head and every 3.6 meters between laterals, thus providing perfect cover. Along the lateral we deploy a 2005 AquaMaster with a flow rate of 105 l/h, and at the end of the line a 2005 AquaMaster with a flow rate of 250 l/h is deployed. This way, the desired uniformity is ensured.



For every 0.1 hectares of nursery, there are roughly 105 units of 2005 AquaMaster, making the deployment and operation of the system much easier.

2005 AquaMaster Flow rate of 105 l/h and 250 l/h



SUPER LPD

Each 2005 AquaMaster comes with a unique leakage prevention device (Super LPD) that prevents water from draining out of the sprinkler at the end of the irrigation. The Super LPD allows the sprinklers to all start watering simultaneously. It also prevents excess water from draining down on a single pot. The Super LPD contributes to uniform growth rate of the plants and provides excellent climate control conditions, thanks to immediate short-term activations.



The 2005 AquaMaster solution allows workers to roam freely along the surface of the nursery without accidentally tackling any irrigation equipment, thus preventing harm to the plants. With no component of the irrigation system on the ground, the nursery surface is clean of obstacles. This allows for more pots per meter and great time-saving because the equipment doesn't need to be deployed and disassembled again every few months. It therefore goes without saying that by using the 2005 AquaMaster solution, the expense of having to replace broken and damaged drippers is avoided.

Banana plant growing with **Drip irrigation** after 28 days



Banana plant growing with 2005 - **Micro irrigation** after 28 days



Banana nursery in Israel

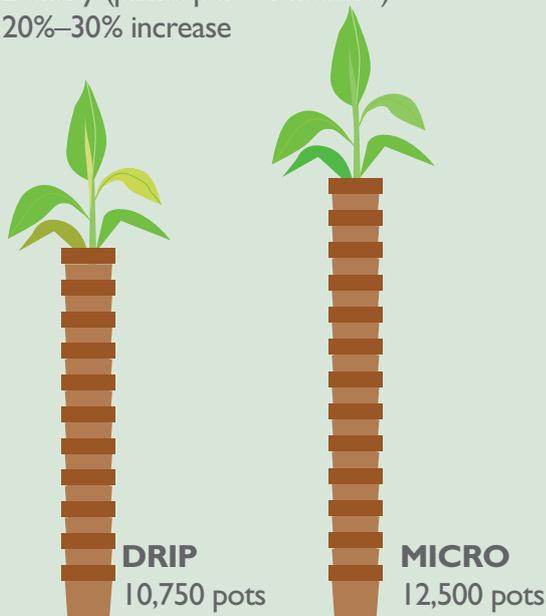
Banana nursery in Malaysia

QUANTIFIABLE ADVANTAGES COMPARED TO CONVENTIONAL METHODS:

1 Duration (days per cycle): 20% decrease



2 Density (plants per 0.1 hectare):
20%–30% increase



3 Money saved on maintenance and damaged equipment: \$2,800 per hectare



4 Time saved on labor: 80% of the time clearing out the plants



5 Money saved per pot: 40%

Total cost of 1 pot



Thanks to the **2005 AquaMaster** solution and the excellent water distribution uniformity, the physiological conditions of the plants are improved. As a result, the growing period is significantly shortened and the plants come out strong, healthy and identical in size.

The inverted **2005 AquaMaster** solution saves time, money, effort and manpower, while reducing plant losses. Over all, it seems that the world is ready for the next step in Banana nursery irrigation and climate control. Are you?

For better results and a much smaller investment, try the inverted 2005 AquaMaster solution



SOLUTIONS FOR CROPS

NaanDanJain solution for Banana nursery saves time, money, effort and manpower, while reducing plant losses. Over all, it seems that the world is ready for the next step in Banana nursery irrigation and climate control. **Are you?**

For better results and a much smaller investment, try our solution for Banana nursery!

Contact us via email mkt@naandanjain.com or visit our website – www.naandanjain.com