Tal-Ya
Water Technologies Ltd

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Advantages of the use of Tal Ya trays in the agricultural system

Saving of water
It saves irrigation water by at least 50% due to reduced soil water evaporation, reduced utilization of water by the weeds and due to collection of dew, thus it increase dramatically the productivity of irrigated farming and mainly rain fed farming and reduces the demand and expenses for irrigation water.

Saving of fertilizers
It saves fertilizers input by at least 30% due to reduced wash of nutrients below the root system and loss of nitrogen to the atmosphere.

Sanitation
Expenses for manual, mechanical and chemical weed control around the plants are reduced as weeds can not grow below the tray. Expenses for pest control, especially soil born diseases, are reduced as well as the conditions for their development under the trays are less favored. It reduces hazards of soil born diseases and contamination by soil particles. In drip irrigation the pipes are placed below the trays and when recycled water is used there is no contact between the fruits and the water.

Enhanced growth
Trees growth is enhanced tremendously as for favored growth conditions under the trays and favored micro climate conditions above it. It also maintains favored conditions for beneficial microorganism's and fauna populations in the soil. The trays reflect sun light into the shadowed part of the trees and plants canopy that accelerate photosynthesis.

Earlier ripening and yield quality
This technology brings accelerated ripening of trees fruits and better quality.

Winter hibernation in orchards
It can reduce winter hibernation period and therefore enhance trees blooming as soil temperatures are little higher under the trays.

Frost and overheat damages
This technology was proved to reduce frost and overheat damages as it regulates soil temperature and micro climate conditions within the crops canopy.

Salinization hazards
Salinization hazards are reduced as evaporation of soil water is controlled and salts cannot reach the soil surface. As we use less irrigation water, less dissolved salts are accumulating in the soil cross section. This technology enables irrigation with brackish water as salts do not concentrate on the soil surface and due to effective collection of dew water that can assist in washing down salts below the root system. Even very short rains of few mm are effective in water supply and wash of salts.

Soil conservation
This technology is excellent for soil conservation as it prevents soil erosion and salinization under the trays and it increases soil fertility.

Farming of residual lands
Taking into consideration all the above mentioned benefits of this technology, we believe that residual lands can be cultivated with reasonable revenues.

Organic farming
All the above mentioned benefits make Tal Ya technology excellent for organic farming.

Environmental aspects
This technology is favorable for healthy environment:

- It saves water consumption.
- It enables the use of brackish and recycled water.
- It saves fertilizers input and contamination of underground and surface water (rivers, springs).
- It saves the use of pesticides and herbicides and therefore it prevents the annihilation of non harmful insect populations, which is excellent for healthy environment.
- The warned up trays can easily be recycled.

All together it brings to sustainable farming system.

Economical aspects
The benefits of this technology for the farming system and a specific farmer are impressive. The expenses for purchasing the trays and placing them (they can last for at least 6 years) can be covered within one or 2 years.