

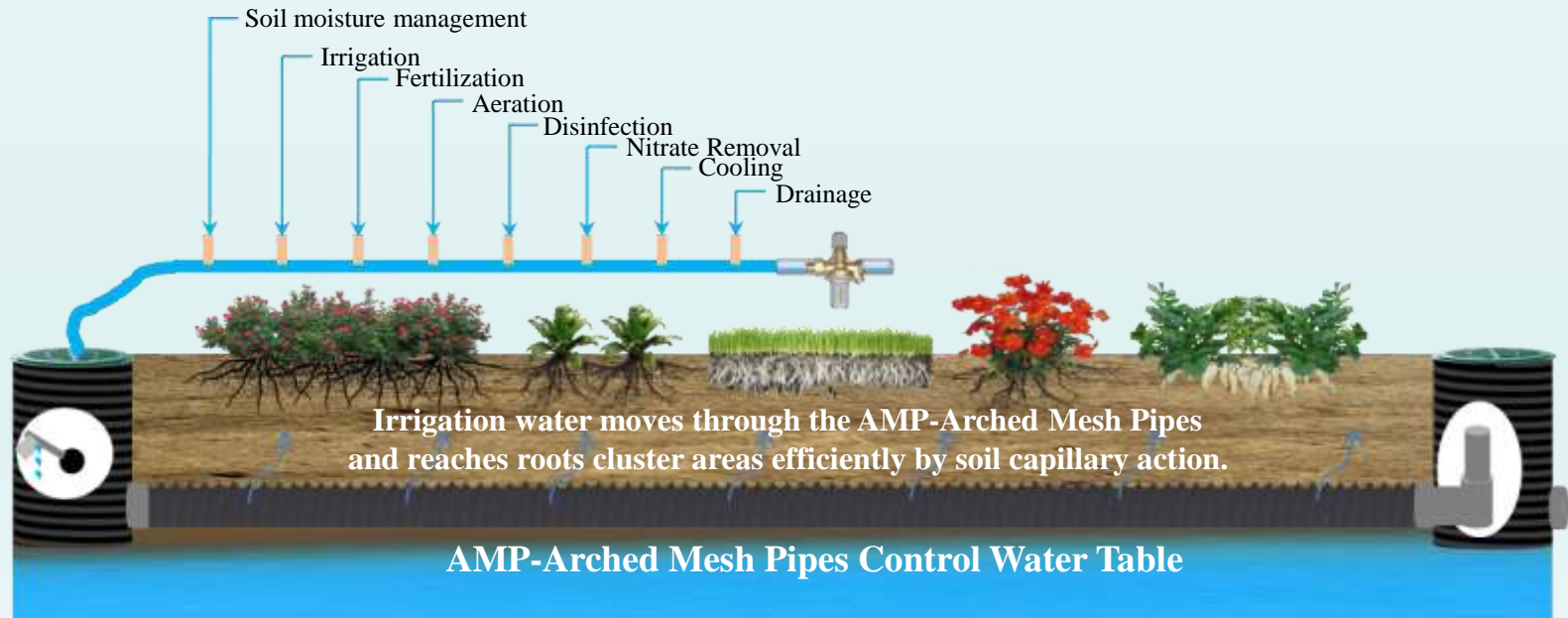


ECO-MESH

Water saving underground irrigation facility

AMPS-Arched Mesh Pipe System

Create a Comfortable Plants Environment



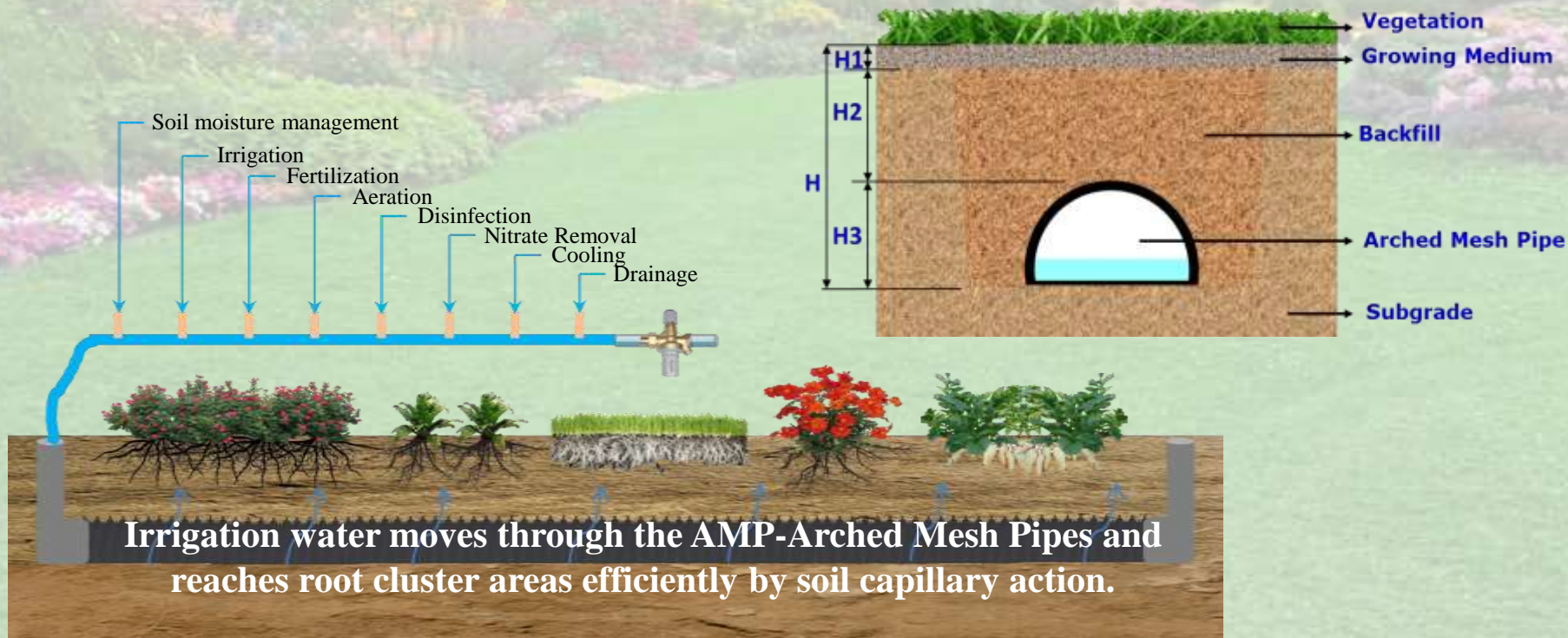


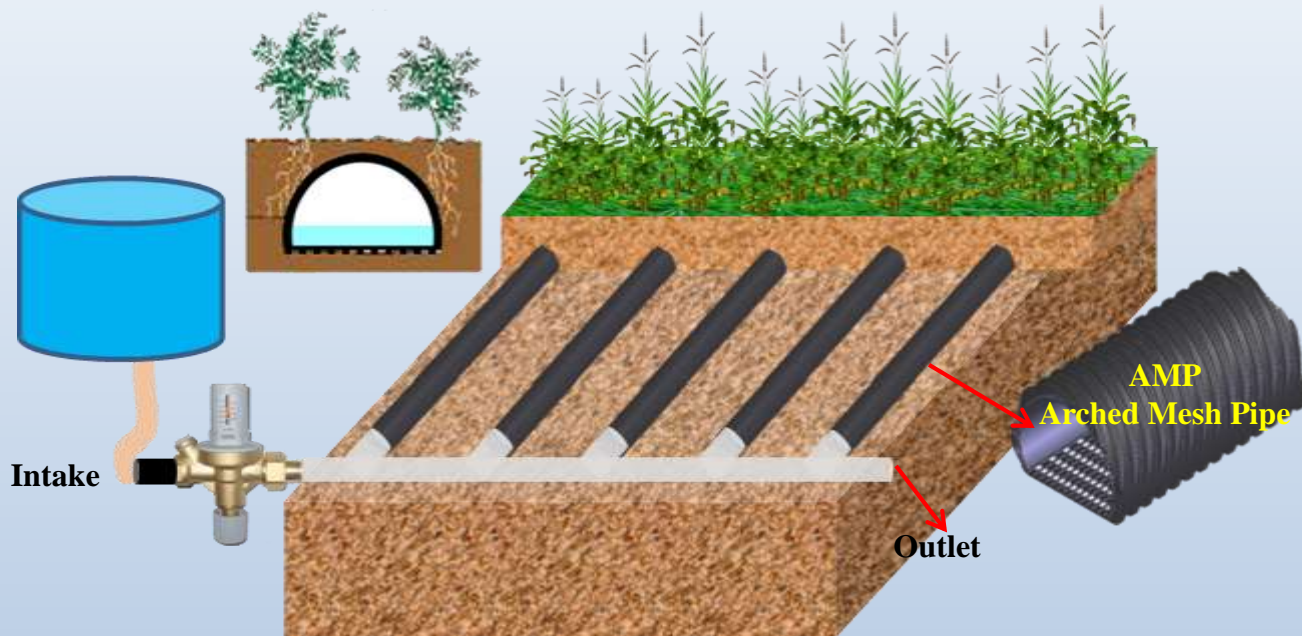
AMPS-Arched Mesh Pipe Sub-Irrigation and Drainage System

Create a comfortable plants environment

During a rain shower or irrigation application, the soil pores will fill with water, soil moisture content 20~30% in volume. Irrigation water moves through the Arched Mesh Pipes and reaches root cluster areas efficiently by soil capillary action. Irrigation water requirements and irrigation manpower are reduced, Plant growth increase are equivalent to reduce in fertilizer.

AMP-Arched Mesh Pipe provides soil moisture management, drainage, irrigation, fertilization, temperature control, disinfection and other functions.





AMP-Arched Mesh Pipe

- Nitrate Removal
- High efficiency
- Fertilization
- Irrigation

↓

Water, fertilizer, and micro-organisms are irrigated from the ground up through AMP-Arched Mesh Pipe

Soil moisture management

- Soil ventilation
- Control soil temperature
- Soil air supply
- Drainage

↓

Exclude surface water
Excluding soil saturated water
Reduce excessive water table

Soil disinfection

- Interplant disinfection
Non-phytosanitary insecticide and plant insecticide soaking solution for inter-plant soil disinfection through AMP-Arched Mesh Pipe
- Pre-plant hot air disinfection
The AMP-Arched Mesh Pipe into the hot air, so that the hot air directly infiltrates into the soil layer of 20cm~30cm deep for disinfection. When the temperature reaches 50~80°C for 30 minutes, the disinfection work of the next zone can be performed.



AMPS-Arched Mesh Pipe Sub-Irrigation and Drainage System

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Advantages of underground irrigation and Drainage

- They are water-efficient, use between 40 and 50% less water than a conventional garden bed.
- Watering from the bottom up prevents evaporation of surface water
- Harder for weeds to establish as the soil on the surface is drier.
- Very labor efficient, they are self watering, watering is automatic, so it is possible to go away for two or three weeks at a time without your garden bed drying out.
- Can be watered by a low pressure water system, meaning it can be directly connected to a water tank without the use of a pressure pump.
- They provide a lot of drainage in the event of a large downpour.
- Large reservoir of water reduces need for frequent watering.
- Evaporation reduced to a minimum with thick mulching.
- Harder for weeds to establish as the mulch covered surface is drier.
- Improve soil life. Nutrient is not lost to the subsoil when the garden bed is watered.
- No salting. No evaporation means no minerals left behind in the soil.
- No permanent stale water, so no mosquito larvae or anaerobic conditions.





AMPS-Arched Mesh Pipe Sub-Irrigation and Drainage System

Create a comfortable plants environment

Landscaping & Agriculture

AMPS-Create a comfortable environment for the growth of plants

Advantage :

Reduce 50-85% irrigation water

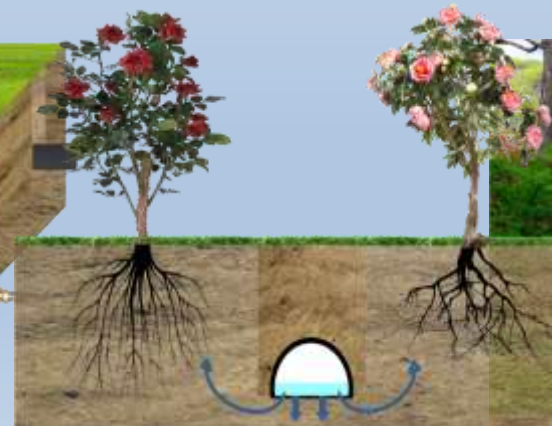
Improve fertilizer efficiency by 40%

Reduce irrigation manpower by 60%

Soil ventilation

Efficient use of irrigation water

Create a comfortable growing environment for plants



Soil improvement

Improvement of nitrate in facility cultivation

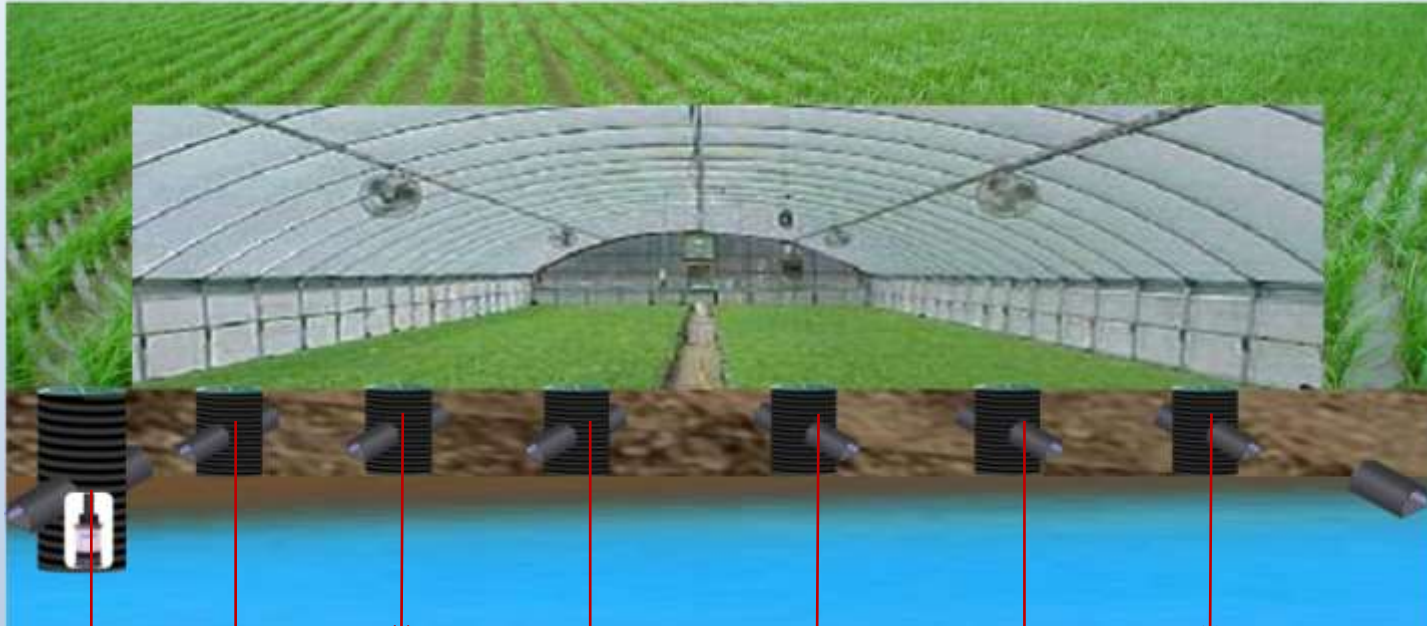




AMPS-Arched Mesh Pipe Sub-Irrigation and Drainage System

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AMP-Arched Mesh Pipe-Greenhouse cultivation



Soil ventilation

Fertilization

Soil disinfection

Cool down

Irrigation & drainage

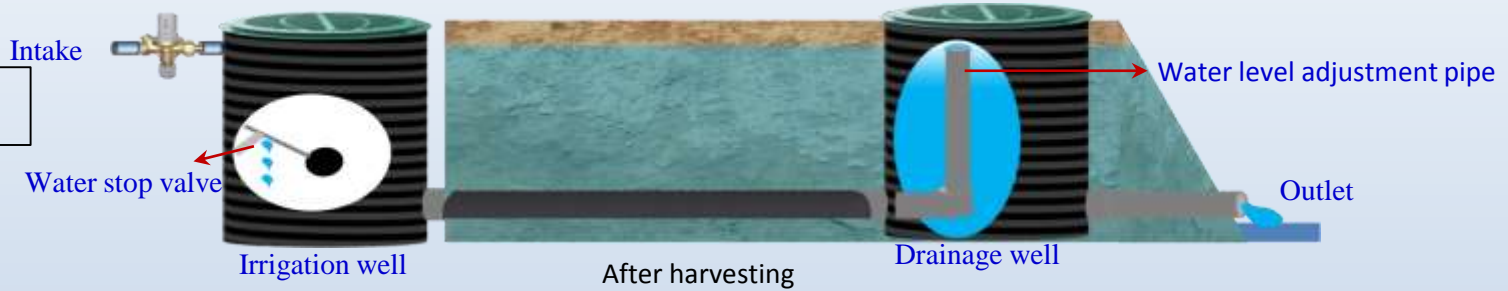
Soil activation

Lower the water table level

Create a comfortable plants environment

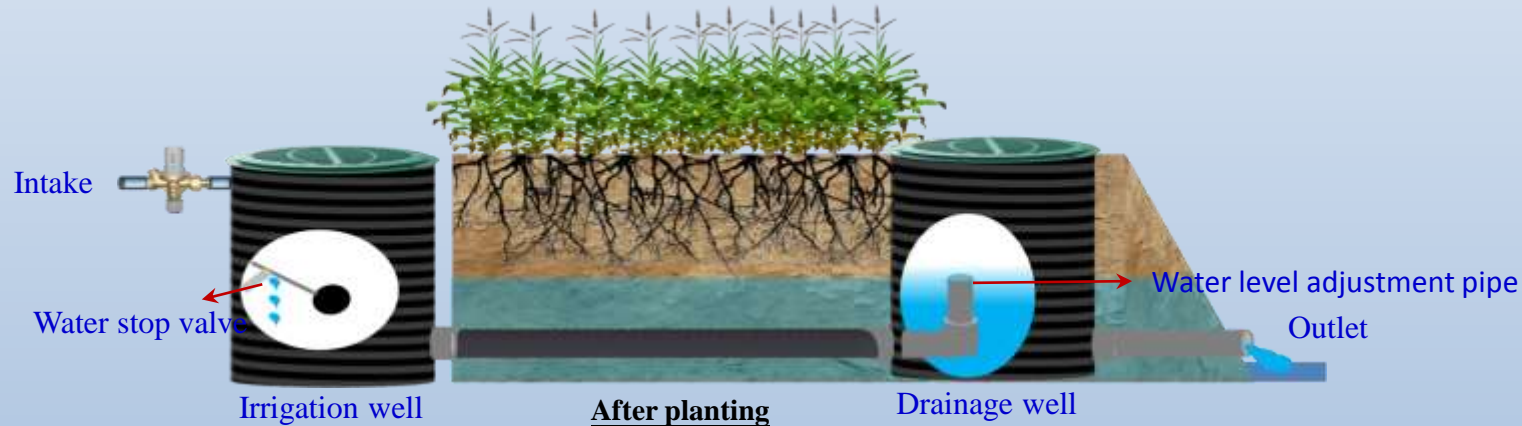
AMPS- Groundwater level control

Reduce nitrate →



Increase the groundwater level after harvest and reduce nitrate residue.

Irrigation →



Adjust the groundwater level to the height of the root that can be absorbed by the planting crop.

The irrigation water uses the capillary action of the soil to absorb the roots.

Drainage →

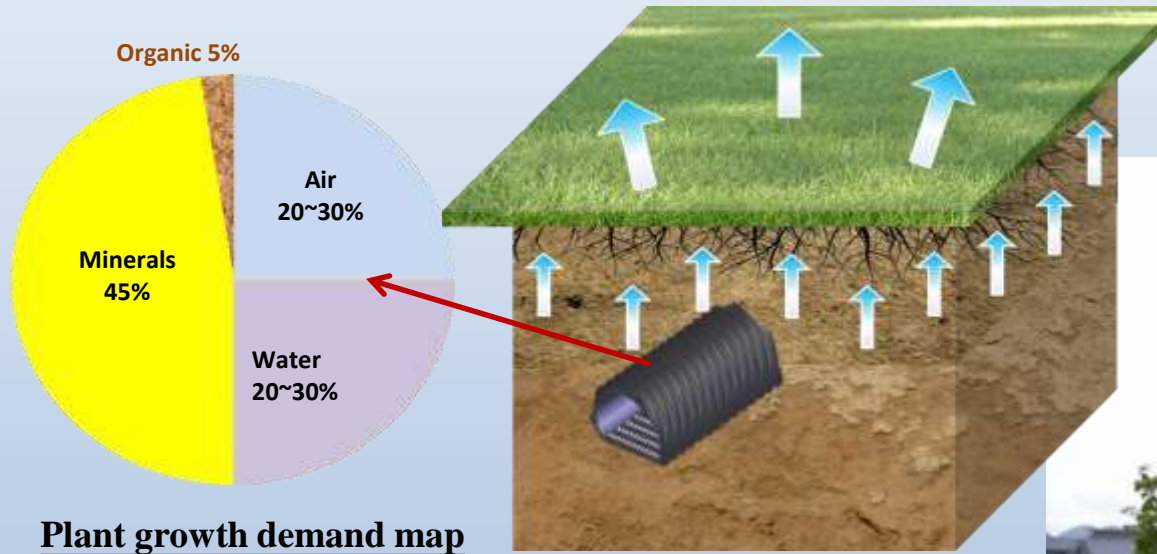


A few weeks before planting and harvesting, lower the water table and allow the water to be fully discharged for profit

Create a comfortable plants environment

Soil Ventilation

AMP-Arched Mesh Pipe Provides Subsoil Ventilation



Increase production

Arched Mesh pipe provides soil ventilation

Soil venting has a large impact on plant growth and microbial activity. Any plant has a certain demand for air in the soil during the growing season.

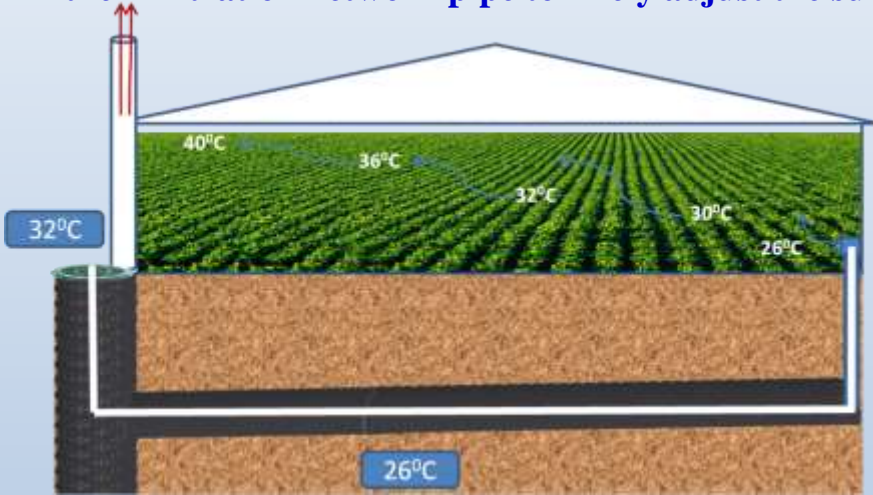
Soil Ventilation

The same period of planted beech, after 10years, The size of the trees showing amazing difference.

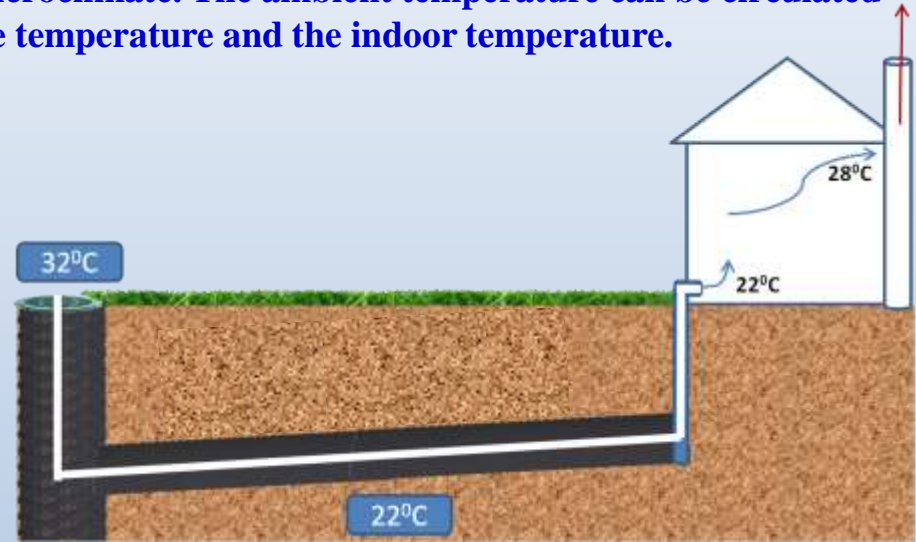
Create a comfortable plants environment

Surface cooling-Slow down the heat island effect

The underground irrigation and drainage system of the AMP- Arched Mesh Pipe has the functions of drainage, water retention, irrigation, etc., and can also adjust the microclimate. The ambient temperature can be circulated in the infiltration network pipe to finely adjust the surface temperature and the indoor temperature.



Greenhouse cooling



Indoor cooling



Surface cooling

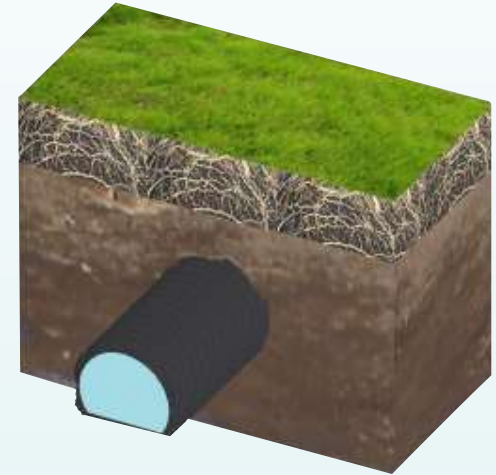
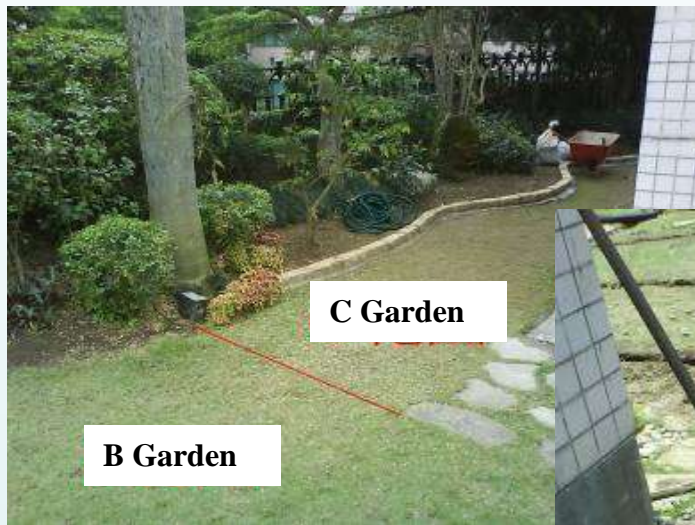


AMPS-Arched Mesh Pipe Sub-Irrigation and Drainage System

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AMP-Arched Mesh Pipe- underground irrigation experiment for lawns

lawn



Water diffuses into the soil by capillary action

The underground AMP-Arched Mesh Pipe provided drainage, irrigation, and ventilation allowing the lawn to thrive.



AMP-Arched Mesh Pipe- Underground irrigation experiment for potatoes

potato



Experiment area

AMP-Arched Mesh Pipe



Experiment area



Control area

The number of potatoes in the experimental area with the AMP-Arched Mesh Pipe was double the one the number in the control area without the Arched Mesh Pipe. The potatoes from the experimental area were better in quality and had less skin disease than those from the control area without the AMP-Arched Mesh Pipe. The market price of the former was twice that of the latter.



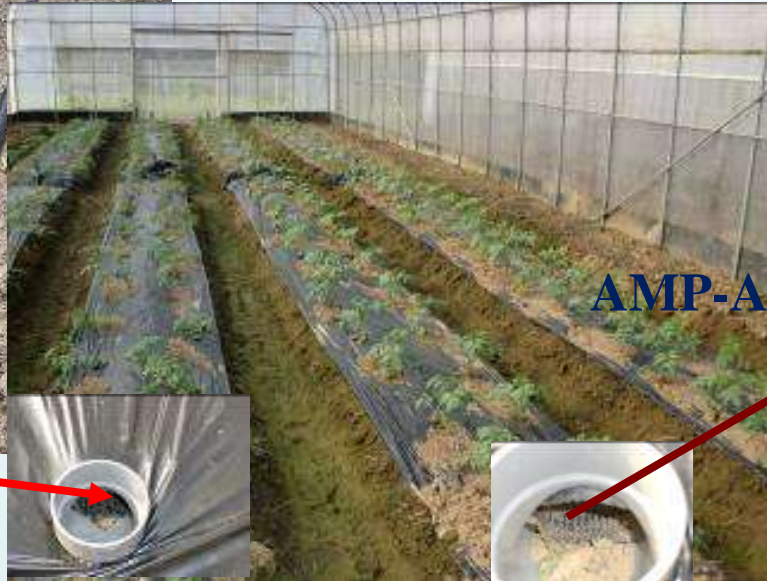
AMPS-Arched Mesh Pipe Sub-Irrigation and Drainage System

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AMP-Arched Mesh Pipe- Underground irrigation experiment for vegetable



Leafy vegetables



AMP-Arched Mesh Pipe



Water and liquid fertilizer inlet

The liquid fertilizer penetrates through the AMP-Arched Mesh Pipe, the soil is ventilated, and the roots of the plant are well absorbed. The next day, the color change of the leaf surface can be known.

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AMP-Arched Mesh Pipe- Underground irrigation experiment for cucumber

Cucumber



Cucumber experiment results

Summer is equal to winter production.

The cucumber shape has grown significantly.

Growth period increase.

Intake



AMP-Arched Mesh Pipe- experimental base

Create a comfortable growing environment for plants



AMP-Arched Mesh Pipe Water Saving Irrigation

Conclusion

Save more than 50% of water

Increased production: 50% increase in potato experiment

Reduce fertilizer use: use soluble fertilizers

Ventilation: Plants grow healthy and fast, good quality

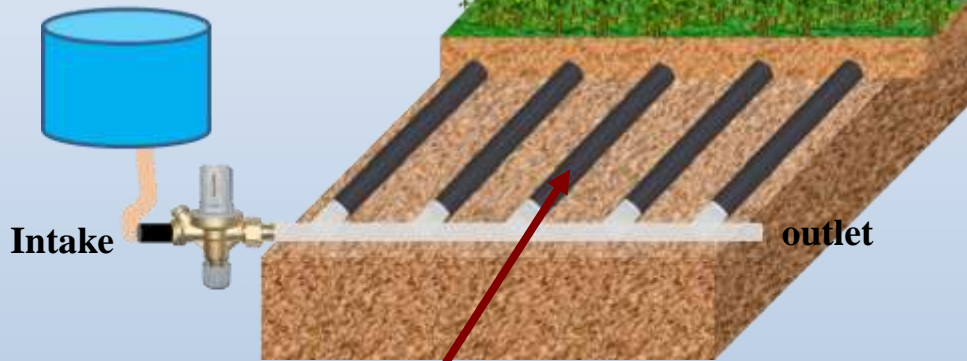
Drainage: discharges soil with saturated water

High efficiency: use automatic irrigation control system

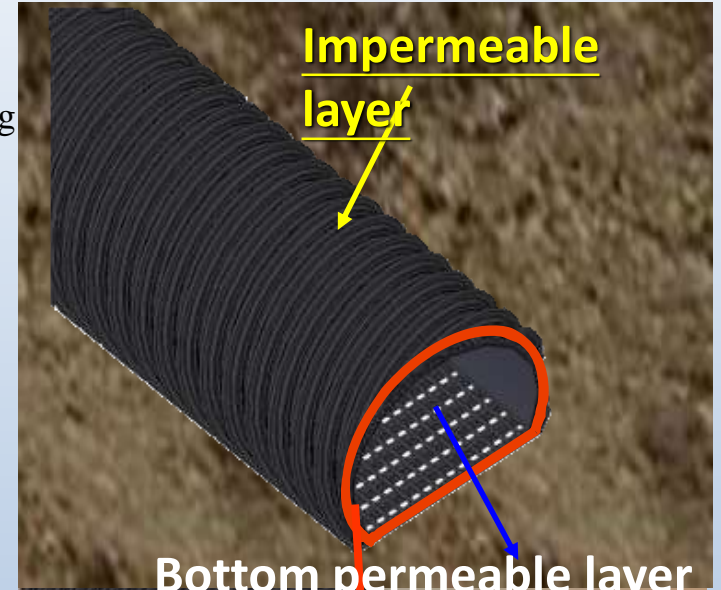
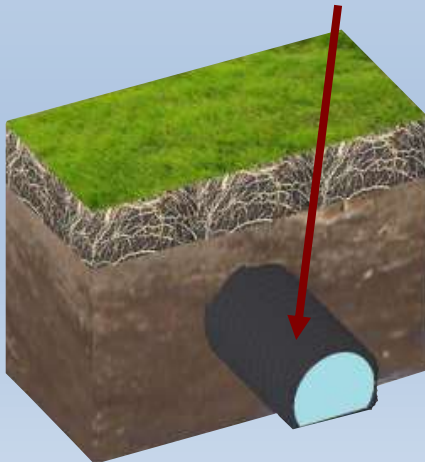
AMP-Arched Mesh Pipe description

The AMP-Arched Mesh Pipe does not need to use gravel, grading, non-woven fabrics, etc.

The AMP-Arched Mesh Pipe is not blocked, and the ecological engineering method is the best underground collection and drainage material.



AMP-Arched Mesh Pipe



Half round design

Principle

Soil density higher than water
 Natural sink of soil particles due to gravity
 water chamber obstruction is prevented

Filter Material-Free

Clog-resistant