

Desert Tree Planting Project

KOKAN CO.,LTD.
G&F Corporation

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G : Green

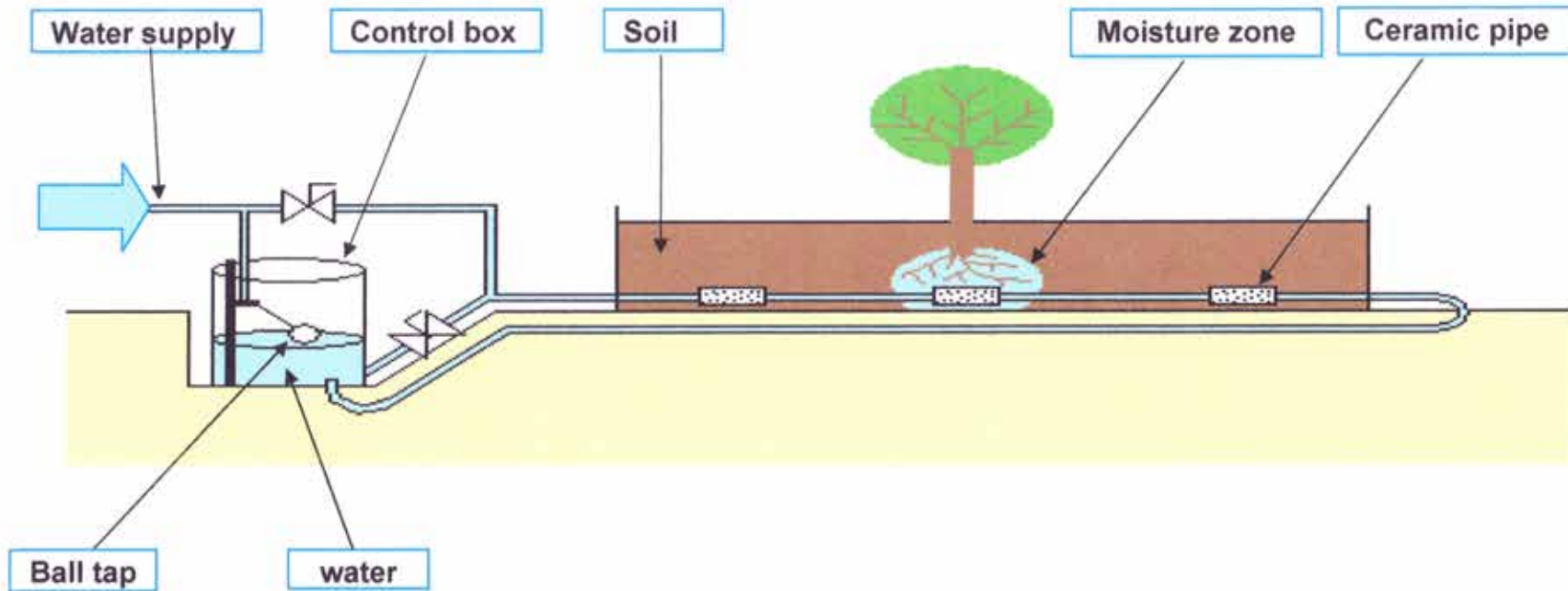
F : Food (Flour)

- We have developed a new, excellent water saving irrigation system .
(called “Water Life System”)
- Very useful especially in arid regions such as Saudi Arabia.

I Water Life System

(The first technology in the world)

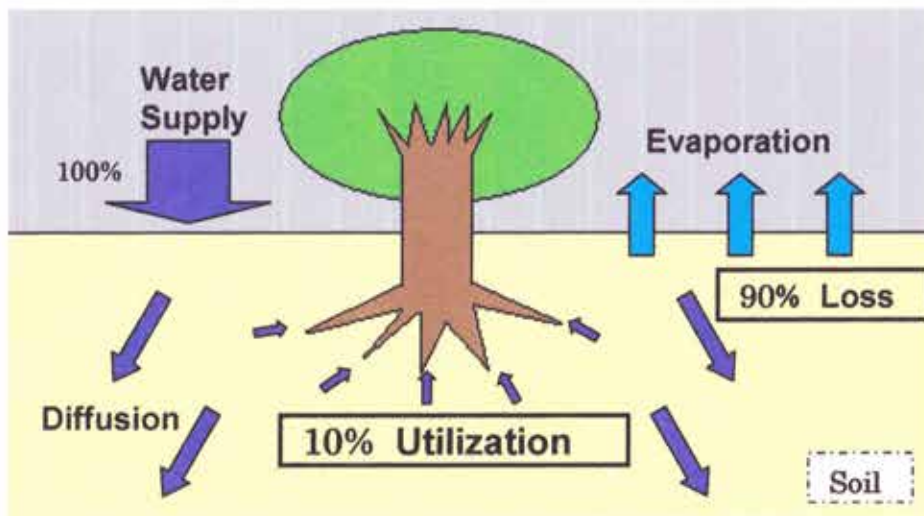
Under ground irrigation system using water permeable porous ceramic pipes



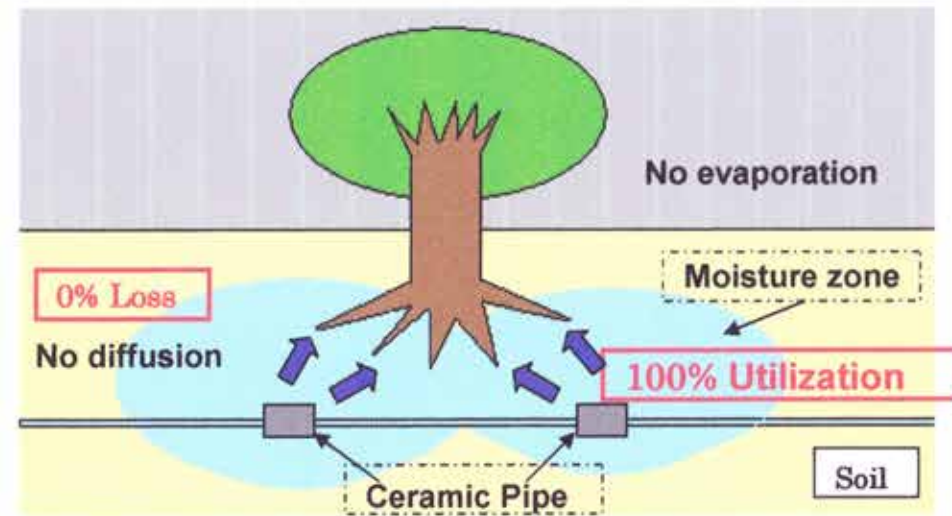
1) Minimum water consumption :

Plants can be grown using **1/10** the amount of water used by ordinary surface irrigation system.

Ordinary Surface Irrigation System



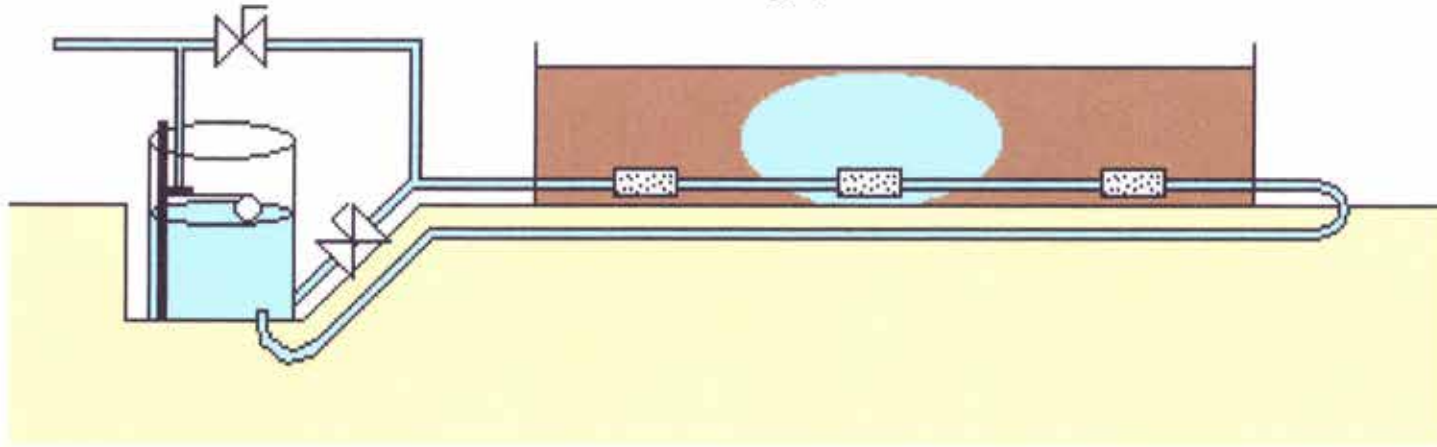
Water Life system



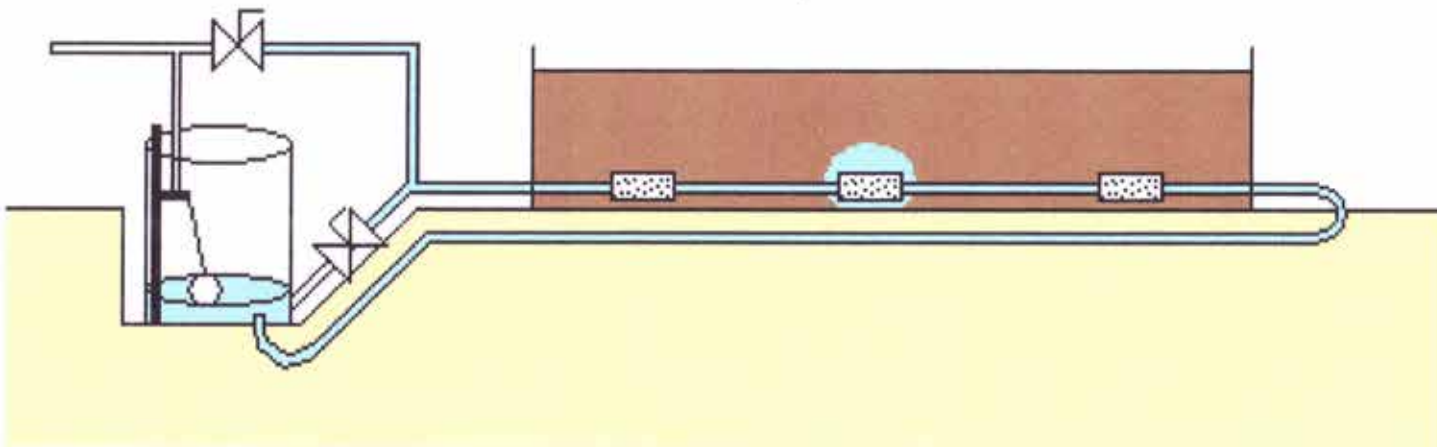
$$10\% : 100\% \Rightarrow 1/10$$

2) High class & high priced farm products.

When the water level of control box is high, the moisture zone becomes bigger.



When the water level of control box is low, the moisture zone becomes smaller.



3) Field test in the UAE

3 years tests from 1998 to 2000 near Abu Dhabi.



Taking out equipment and material shipped from Japan



Installation of a control box



Water life system is completed



Soil being carried in



Planting scene A bed



Planting scene B bed



These tomatoes were very
sweet and juicy



The harvest of Chinese cabbage

The result of past three year period

	Irrigation Water Volume (L/80m ² -day)	Rainfall Equivalent (mm/day)	Plant Growth Condition
FY 1	20-30	0.3-0.4	Poor
FY 2	40-50	0.5-0.6	Fairly good
3 FY	90-100	1.1-1.2	Very good

1) Irrigation amount : 1mm/day → 1/5---1/10
(Conventional : 5-10mm/day) →

2) Growth & yield : almost same as in Japan

3) Larger scale tests for future commercialization



Jan. 6 1999



Feb. 10 2000



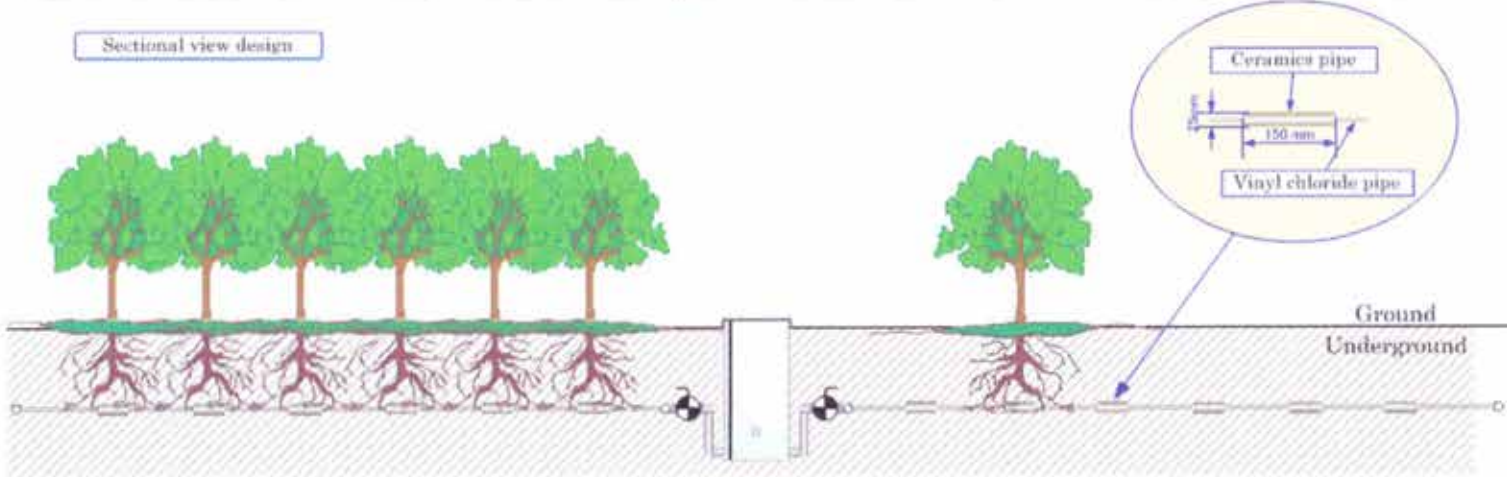
Jan. 8 2001

4) Rice cultivation

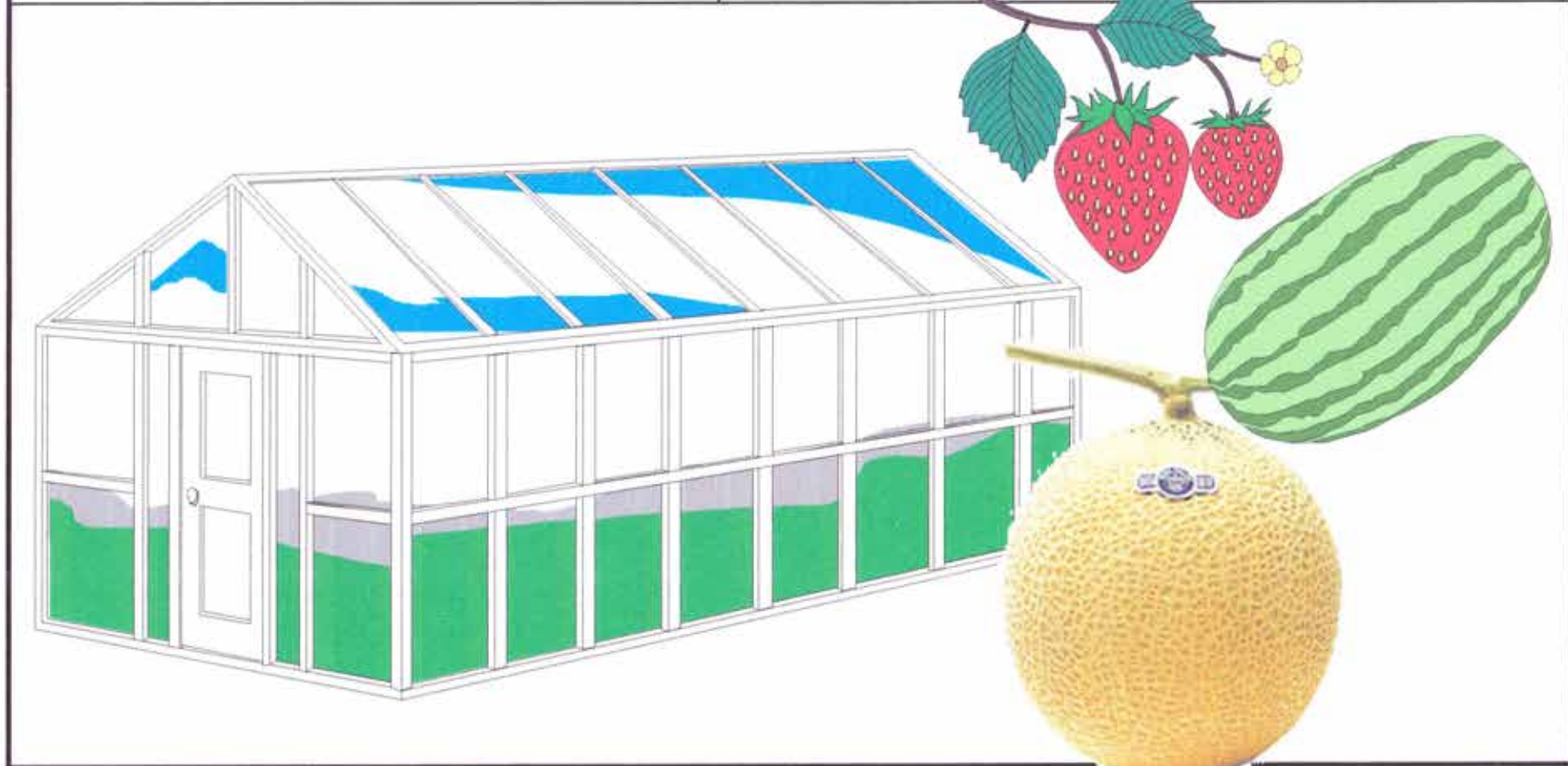
Rice cultivation was succeeded by this system with a little of water in Japan.



II Our proposal of three projects

Project	Remarks
<p>1. Tree planting in the city or suburbs</p>	<ul style="list-style-type: none"> ▪ Investigation of climate, soil, etc. ▪ What kind of trees ▪ Source of water supply
<div style="text-align: center;">  </div> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p style="text-align: center;"><u>When the tree planting is done by using the "Water life system", there are following merits</u></p> <ol style="list-style-type: none"> ① Since water is directly supplied to underground roots of plants, the loss of water such as evaporation does not occur. ② Since the supplied water is absorbed by plants according to a capillary phenomenon, the water utilization is about 100%. (In case of ordinary irrigation system, the water utilization is about 10%. ⇒ The loss has occurred about 90%) </div>	

Project	Remarks
2. Cultivation of high class vegetables and fruits in a green house	<ul style="list-style-type: none">• Strawberry, tomatoes, melon, etc.• For domestic markets and exports• Research for the best cultivation's condition



Project	Remarks
3. Rice cultivation	<ul style="list-style-type: none">• What kind of rice• What kind of soil• Pre-experiment and field test (about one year ?)
