



APPROTECH
POROUS PIPE

Pioneers in Sub-Surface Irrigation (SSI)



Your crop is now in your hand...

APPROTECH Porous Pipe (APP) - Sub-Surface Irrigation (SSI)

System Saves Electricity, Fertilizer & Water up to 70%

- Eco Friendly Product, made from **Recycled Rubber**
- Works on **Low Flow / Low Pressure**
- Installed under the ground 6 - 18 inches deep
- Water is applied Directly to the **Root Zone** to encourage **Deeper And Extensive Root Development**
- Selected **Nutrients** and **Soil Additives** can be applied through **APP-SSI** to provide an optimum benefits
- Continuous Moisture **Level** eliminates shocks of **Wet / Dry Cycles**
- **Increases Crop, Vegetables & Fruits Yields**
- In dramatic contrast with surface watering there is minimal **Loss of Moisture to Evaporation or Runoff**
- No standing water to support **Weeds, Fungus, Moulds or Rot**
- No need to remove and / or relay during harvesting and rotation of crops

Breakthrough in Agricultural Irrigation Technology with APPROTECH Porous Pipe (APP-SSI)

- **Environment Friendly Product.**

APP-SSI is made from **Recycled Rubber of vehicle tyres** and polymers - thus highly **Eco-Friendly**. It is an extruded, continuous cylindrical membrane that allows **water and/or air** to pass through pores of the wall at low pressure. Since these tiny openings are pores (not mechanically made holes) there is no intrusion of roots or soil particles into the pipe.



- **Saves Energy & Water up to 70% ...**

APP-SSI works on the principle of **Low Flow/Low Pressure** thus eliminates continuous energy requirement to deliver water to crops at high pressure. This flexible pipe provides a consistent network of capillary pathway through the pipe walls, allowing a steady and uniform leak rate creating a moisture band at the root zone. It introduces moisture to the soil at a rate that allows the soil to absorb the water at its natural rate, thus eliminating evaporation and run off loss associated with conventional systems. Water thus, applied directly to the root zone encourages deeper and extensive root development.

- **No Loss Of Moisture To Evaporation Or Runoff**

Designed to be installed below the soil surface 6-18 inches, **APP-SSI** applies water directly where it is needed, at the root zone. Flood irrigation is notorious for wasting water and contribution to pollution. Sprinkler systems and drip systems are a step in the right direction but, despite the advancement of these methods, they still apply water to the soil surface. Much of this water is lost to evaporation; run-off and/or percolation past the root zone. All surface moisture (from flood irrigation, sprinkler, drippers, etc.) is subject to evaporation loss due to many factors - mainly high temperature, low humidity and wind. Unfortunately, these three factors are most dominant in arid areas that have the greatest need for irrigation.

- **Eliminates shocks of Wet/Dry Cycles**

More accurate and continuous moisture level made available to plants through **APP-SSI** eliminates the shock effect of the **Wet / Dry** cycles common with conventional irrigation.

The root zone can be kept at the desired moisture level without cutting off the

oxygen supply. Without such stress, the plant can devote all its effort to producing foliage, flowers, and fruit and enhance the shelf life of such produce. Selected nutrients and soil additives can be applied through the **APP- SSI** system to provide an optimum and continuous level of benefits.

- **Low on Maintenance**

Maintenance for **APP-SSI** is minimal, with no sprinkler heads to repair or replace, no surface pipe damaged by machines or animals and no emitters to unclog. As it is a Low Pressure System there would be minimal leakages in the network of supply pipes. All normal activities can take place on the surface while the roots are being watered. Water is not sprayed or dripped on surface where evaporation occurs, leaving stains and residues. **APP-SSI** can be used in variety of ways to meet virtually any irrigation needs. It is not affected by freezing temperature and its flexibility prevents it from being damaged by expansion and contraction of the soil. Also as **APP-SSI** is laid under the ground, it does not have to be re-laid or taken off during harvesting and sowing of crops.



- **Minimal Damage**

APP-SSi have no moving parts and it is **buried under the ground** which protects it from most damaging factors like vandals, animals, equipments and activities. Because of its material composition, **APP - SSI** has the **Longest Life Span** than any other irrigation system on the market. After examining the raw materials and manufacturing process, a major university felt very comfortable in predicting a minimum functional life span of 50 years, if the pipe is buried there is virtually **Nothing to Deteriorate or Degrade the Pipe**. Other elements of the system such as valves, pumps etc. would need periodic repair or replacement but our **APP-SSI** should remain serviceable long after other systems have ceased to function.

- **Low on Operating Cost**

Another saving in **APP-SSI** irrigation is in operating cost. Most irrigation systems require high pressure and measured quantity to operate properly. **APP-SSI** is designed to operate with low volume and low pressure. This allows for **Smaller** and **Less Expensive** pumping systems,

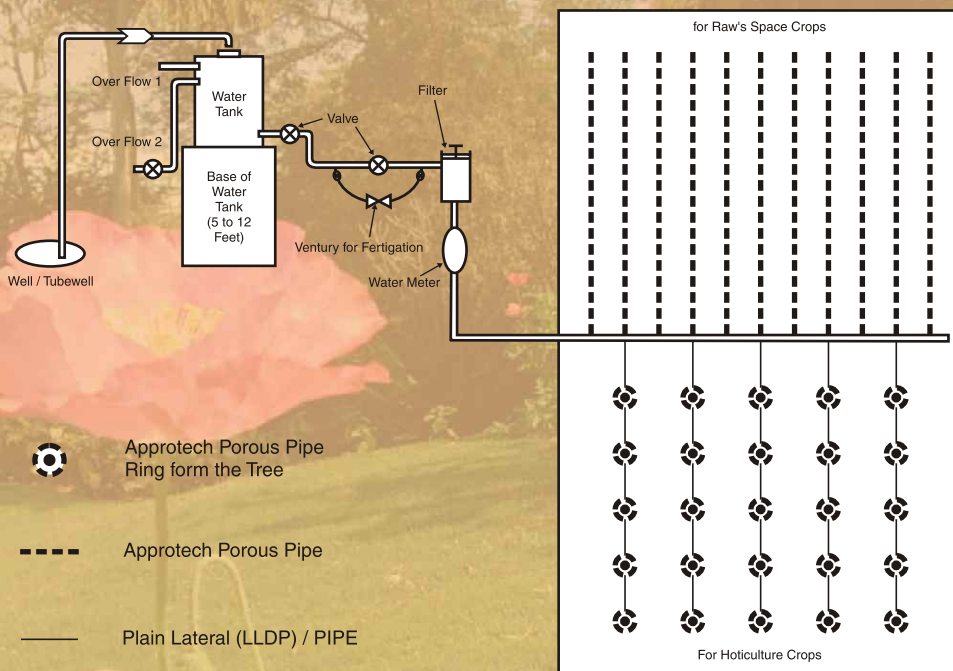
smaller energy demands. It also allows the use of water supplies such as wells, streams and ponds that are inadequate for conventional irrigation.

- **Easy To Use For All**

It is easy for a grower or even a labourer with limited education and experience to understand the basics of watering with **APP-SSI**. Regular inspection of soil and of soil moisture can indicate the need for more or less water. Growers who monitor evapo - transpiration rates can program their irrigation system to maintain a proper level of moisture in the root zone. It is easy to modify or expand the system to adjust to the changes that a grower experiences from season to season and year to year. Totally out of sight APPROTECH also does not interfere with the beauty of the landscape. It can be applied to a total coverage of area such as lawns, athletic fields, forage and hay crops.

APPROTECH is proud to offer a product that contributes to saving our most important natural resource, **water**. We are also proud that our unique manufacturing process can utilize recycled materials otherwise be wasted.

APP - Installation Layout





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