

Low Pressure Drip Irrigation - Alternative Irrigation System to Flood/Furrow Irrigation in California – “Water Savings with No Increase in Energy Useage”

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California irrigators have been cautioned regarding the adoption drip or micro irrigation. A recent state funded study concluded that the adoption or conversion from flood/furrow to drip or micro irrigation may result in some water savings but will increase overall energy usage. The study found that when farmers converted from flood/furrow to drip or micro irrigation they ultimately used more energy per acre due to the higher system operating pressures and the switch, in many cases, from surface water to ground water. The savings of one limited resource, water, may increase the use of another –energy.

Dr. Claude J. Phene's Paper #1060 detailed a new concept of Low Pressure Systems (LPS). LPS provides the water saving benefits of drip or micro irrigation and does not increase the system operating pressure since it operates at the same field inlet pressure as flood/furrow systems. LPS is a solution to California's water/energy dilemma.