DRIP IRRIGATION IN CORN

Jim Klauzer Agronomist Clearwater Supply 541-889-0007



Were this discussion is going !

Basic Drip Layout

Field Corn

University of Idaho trial, in cooperation with Grasslands Dairy

Full production fields

SweetCorn & PopCorn

Seed Companies

Seed Production Fields



Clearwater Supply PRECISION IN DRIP IRRIGATION

Water Pressurization

Provides the energy to deliver the water to the crop.

Can be of various types:

Diesel Pump

Well

Electric Pump

Gravity





Filter Station

Because of the small emitter size, clean water must be used.

Filter stations also do other functions like Inject fertilizer, and regulate pressure

Several filter types are available :

Sand Media

Disc type

Screen Type

Clearwater Supply



Distribution System

Purpose to move water from the filter station to the various zones,

Then through zone control valves that regulate pressure

Out through the submain delivering water to the tape lines





Drip Tape

The drip tape does the actual watering of the crop.

Drip tape can be installed to accommodate the needs of the grower and his particular crop.

With appropriate design, the uniformity of irrigation is much better than furrow or sprinkler.





University of Idaho Corn Drip Irrigation Study

Conducted at Grasslands Dairy, Kuna

This study was established late, subjected to more limited resources than planned and still provided excellent data on which to identify optimum cropping procedures

water Supply

No crop previous 3 years

- Light tillage for preparation
- Installation of drip tape
 - 30" & 44" between tape lines
 - 0, 6, 9 and 12" depth of install
- Planted with 30" corn planter
- Sprayed Roundup on weeds
- Hookup distribution system
- Fertilized through drip system
- Harvested as silage
- Assess tape recovery (post harvest)











University of Idaho Trial Results

Pivot Yield

- 32.2 tons per acre
- Adjusted to 70% moisture

 All Research conducted by Dr. Howard Neibling **Drip Irrigation Yield**

- 35.2 tons per acre
- Adjusted to 70% moisture
- Planted 3 weeks later
- Harvested in total, not by 44 or 60" spacing tape





SweetCorn & PopCorn Seed

Seed Companies

- Drip is used extensively with the seed breeding companies
- They collectively report increased yields in their plots and reduced issues with detasseling

Seed Growers

- Drip Irrigation is now being adopted slowly by the production seed growers
- Excellent germination and yields have been observed with drip irrigated sweetcorn











Drip Irrigation of Corn

Field Corn

- Proven to increase yield
- Will reduce water use
- Will reduce fertilizer use
- Will reduce erosion
- Can reduce labor costs
- Can be designed for challenging topography
- Can be adopted to any size field, large or small

Seed Production

- Known to provide excellent germination
- Will simplify detasseling
- Will reduce weed issues
- Reduces certain diseases
- Allows for easy isolation with portable drip systems
- Can be automated for zone and fertilizer control





