

The background of the slide is a light blue gradient. It is decorated with numerous water droplets of various sizes, some of which are in sharp focus while others are blurred, creating a sense of depth. The droplets are scattered across the frame, with a higher concentration in the upper left and lower right areas.

PMDI


Precision Managed Drip Irrigation

By Doug Stanko



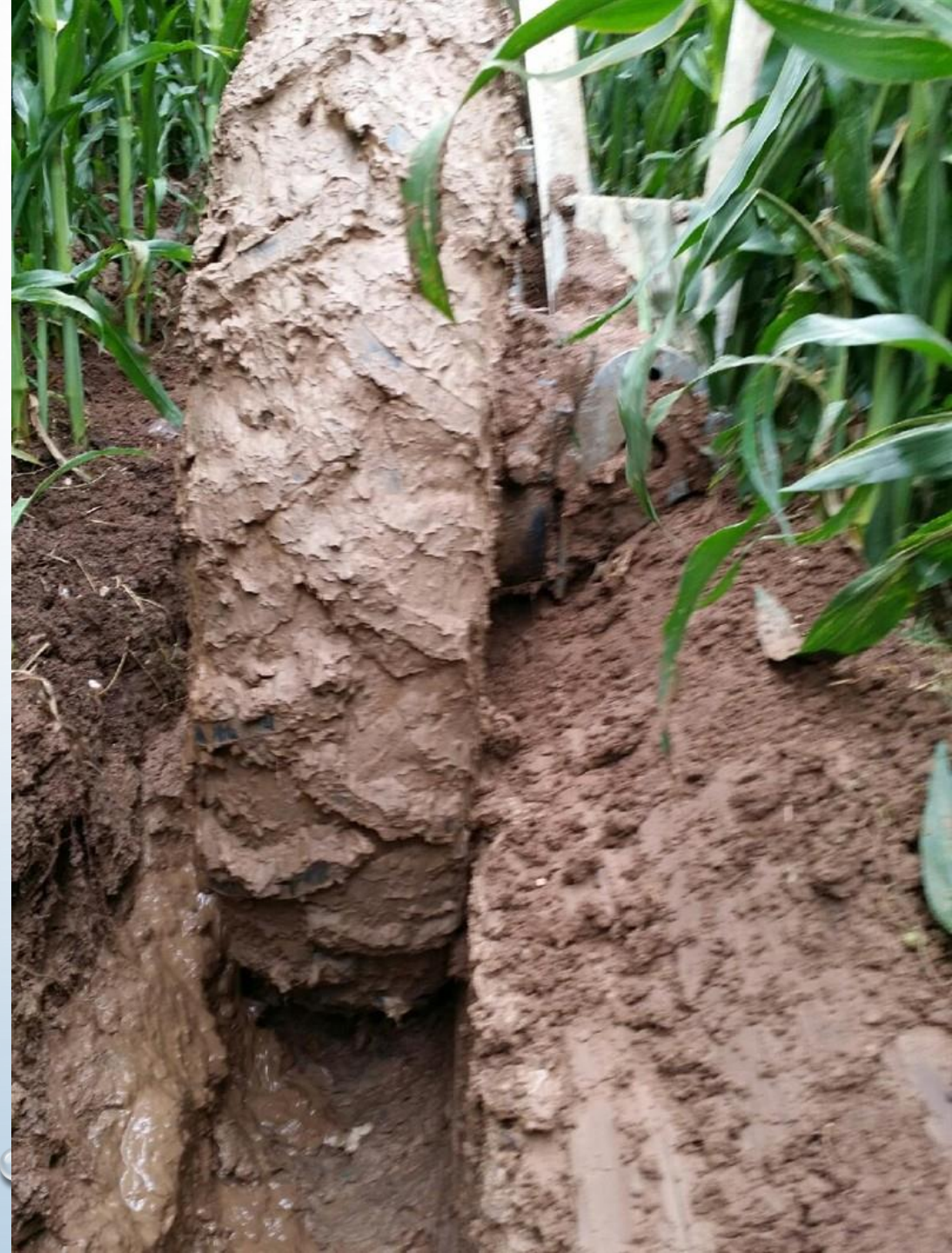
\$5 FARMS

- My Family/Team
- Minimum Till Irrigation Farmer
- Farm in Bow River Irrigation District
- First new Pringle pivot
- Running 4 PMDI Systems



**Trying to understand the
best/economical way
to irrigate**

Win the pivot rut war





- Dry years sprinklers fall behind
- Make big ruts
- Big rains affect irrigation
- House plants are watered differently

PMDI System

1/2 inch Hose

Tie half to the pivot

Drag the rest on the ground



We start by bringing hoses off the outlets to the truss rods.



**Manifolds wired to truss
Spacing are 15" to 18"**





Attach 20' solid hoses to the tees to get to the ground and behind the pivot



Attach drip hose



Solid Hose

Drip Hose

**76' at the end
3' at the point**

**1 gallon/hour
Emitters every 6"**

Manifold	15" Centers	1,300'	\$0.09	\$117
Solid Hose	1040 lines at 20'	20,800'	\$0.09	\$1,872
Drip Hose	700 gpm system	21,000'	\$0.45	\$9,450

Total Hose	Hose Cost
8 plus miles	\$11,439

**Wind bar
holds hoses
in place**



**Helps when
reversing the
pivot**







- Framed screen pressure compensating emitter
- Flushes easily
- Smooth outer surface
- 1 gallon/hour

With no filtration anything goes
You can tap on hose to clean
Check hoses 2 to 3 times a year



Yamit 80 Micron Filter



**Auto Flush Filter - 5 psi differential
small screen surface area - flushes often**

Clemons 1/32 inch Filter

A large, horizontal, cylindrical metal filter unit is mounted on a metal frame in a field. The filter is silver-colored and has a blue-handled valve on the left end. It is supported by a metal frame that is part of a larger structure, possibly a wellhead or pump assembly. The background shows a grassy field under a cloudy sky.

Manual Flush Filter
5 times bigger screen surface area
Flush less often - 1/3 the price



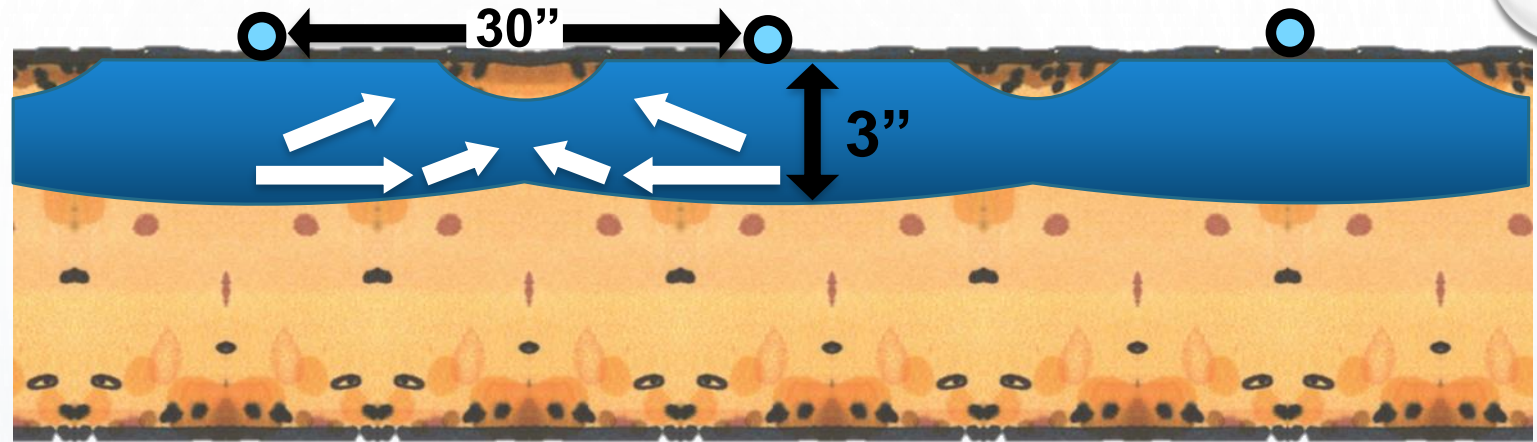


Self Flushing

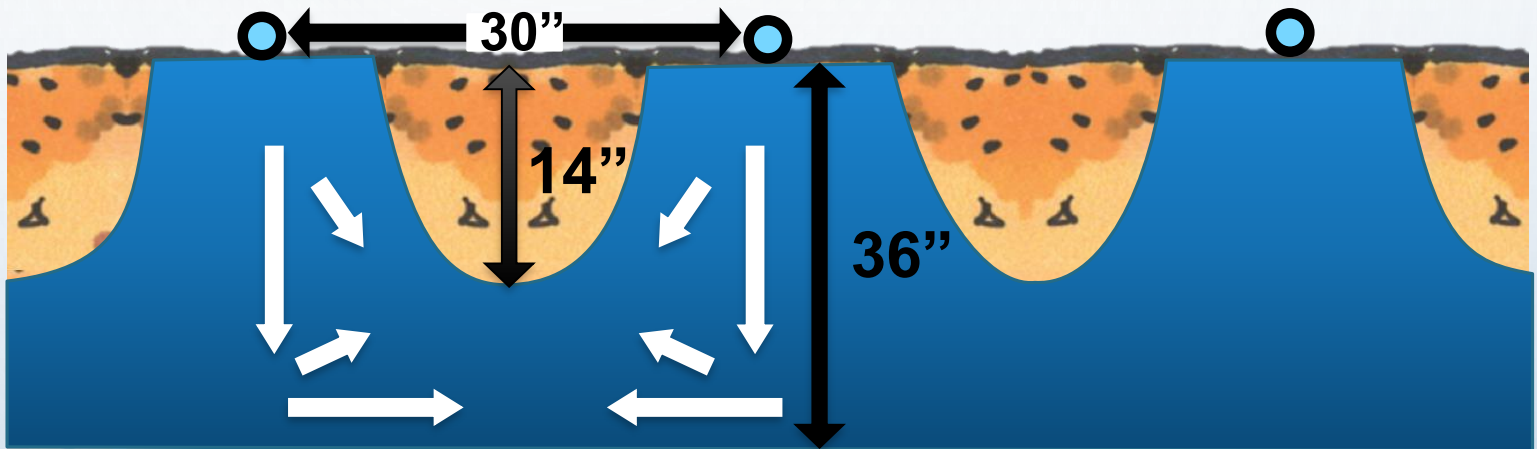




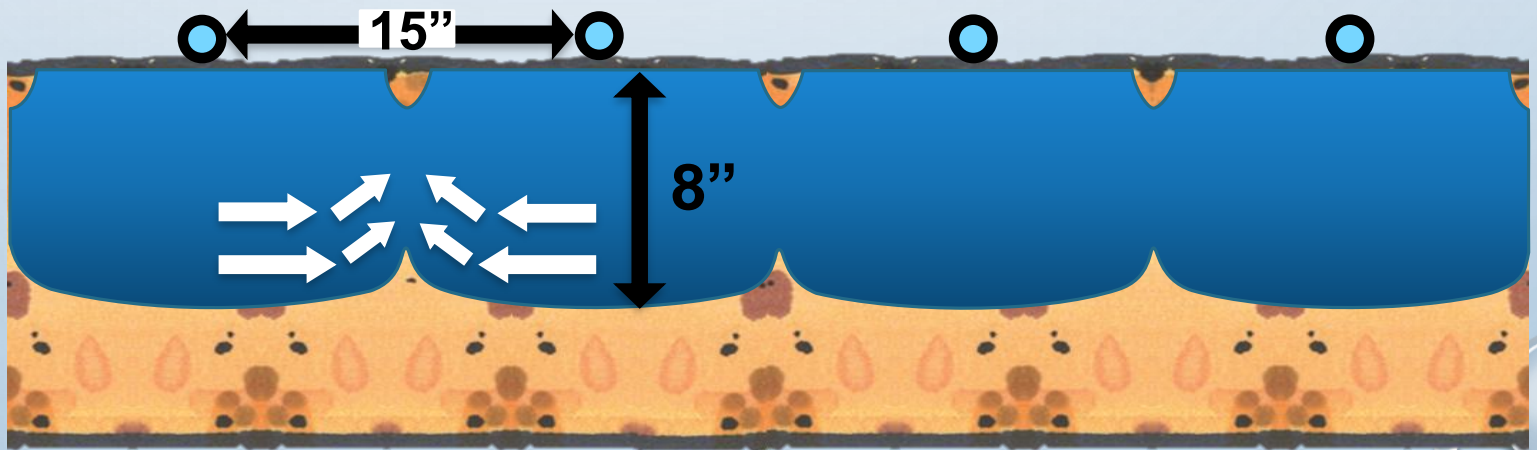
Application
Rate 0.3 inch



Application
Rate 1.0 inch



Application
Rate 0.6 inch



















Disadvantages

- **OVERALL COST**
- **WATER FILTRATION**
- **COYOTE DAMAGE**
- **HANGING THE HOSES FOR WINTER**
- **WHIPPING HOSES IN THE WIND WHEN PIVOT IS OFF**
- **PARKING THE PIVOT TO SWATH**



Advantages

- **WATER EFFICIENCY**
 - **HIGH WATER EFFICIENCY WHEN WATERING ON WINDY OR HOT DAYS**
 - **BETTER WATER INFILTRATION**
 - **EVEN WATERING IN ALL TERRAIN = LESS NEED FOR VRI**
 - **LESS WATER REQUIREMENT**
- **SOIL STRUCTURE COMPROMISED LESS**
- **LESS WATERING = LOWER ENERGY COST**
- **BETTER WATER MANAGEMENT FOR THE POSSIBILITY OF MORE WATER RIGHTS**
- **FERTIGATION EFFICIENCIES**
- **PIVOT RUNNING ON DRY GROUND**
- **WATERING DURING FLOWERING**
- **BETTER OVERALL PLANT HEALTH**

Questions?



May 25, 2017
30-50 km winds
25°C

