HOSE REEL IRRIGATION MACHINE
SEZER AGRI TECHNOLOGIES
What is "Hose Reel Irrigation" System?

- It is a modern, hard-hose reel type machine irrigation system which applies pumped water over a large area with the replaceable boom or gun carriage.

How it Works?
Irrigation Combinations with Hose Reel

1. Irrigation Boom + Carrier
2. Rain Gun + Carrier
3. ALL
Choice 1: Irrigation with Boom

- To irrigate with boom, the required entering pressure of the hose reel must be minimum 2 bar, but for a better irrigation higher pressure is wanted.
- The boom can water larger areas compared to the rain gun
- Completely galvanized construction
Choice 2: Irrigation with Rain Gun

- To irrigate with gun, the required entering pressure of the hose reel must be minimum 5 bar, but for a better irrigation higher pressure is wanted.

- Suitable for irrigating both regular and irregular areas.

- Compared to boom, can be more effected by wind.

- Completely galvanized construction
APPROACH TO SUSTAINABILITY
More than just an irrigation system...

Fertilizer / Pesticide Application
With Automatic Dosaging Machine

Application of Liquid Fertilizer
With Rain Gun
Why should you use hose reel system

ADVANTAGES...

- Low Labor
- Easy to operate
- High Distribution Uniformity
- Suitable for Irregular Areas (gun)
- Water Application over Large Area
- Wide Range of Depths
- Mobility-Easy Transfer
- Low Energy Consumption
- Reliable with Low Maintenance
- Long-Life
LOW LABOR COST !
USER FRIENDLY
MOBILE

- More people needed
- Installation and operation requires high skills
- Shifting takes long time and effort
- Waste of equipment every year
- Fixed

• Only 1 person needed
• Very Easy installation and operation
• Ease of Shifting
• Easy maintanence
• Mobile
- HIGH DISTRIBUTION UNIFORMITY
- WATER APPLICATION OVER LARGE AREAS
ECONOMIC FACTORS

It is extremely important to consider not only initial capital investment but also on-going operating costs when buying an irrigation system and comparing one system with another.

CAPITAL INVESTMENT: The Cost of the System

- Initial Investment
- Water supply
- Wells
- Reticulation
- Pumps
- Mainlines
- Irrigation & Ancillary Equip.
Liquid
Solid
Manure/Fertilizer Application
Nutrients from manure applied to crops

Sustainable & Profitable Life Cycle!

Concentrate
lower footprint
lower protein content

Animal
healthy animals with high production and lower methane emission

Milk and Meat
high quality with low urea content

Manure Storage
Solid Liquid Separation

Manure
straw bedding, lower ammonia emission, higher C/N ratio

Roughage
more structure and sugar, less protein

Soil management
higher N uptake, better soil structure, higher organic matter content, better water retention

Manure/Fertilizer Application
Nutrients from manure applied to crops
Which plants can you irrigate?

- GRAINS
- INDUSTRIAL PLANTS
- FOOTBALL FIELDS
- PASTURE-GRASS PRODUCTION
- FRUIT GARDENS
- VEGETABLES
MAIN COMPONENTS OF HOSE REEL MACHINE

- Big Gear
- Hose Reel
- Hose
- Gearbox
- Stabilizers
- Hydraulic Control Unit
• One piece hose made from raw polyethilene material
• 10 ATM, Highly resistance,
• Long-Life use

• The length and the diameter of the PE pipes so the model of the machine will be chosen depending on the field dimensions and required water amount.
## Water quantity per hour

<table>
<thead>
<tr>
<th>Pipe Diameter</th>
<th>WATER FLOW QUANTITY (flow rate)</th>
<th>m³ / Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lt / Second</td>
<td></td>
</tr>
<tr>
<td>2” - 63</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>2 ½” - 75</td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>3” - 90</td>
<td>10</td>
<td>35-45</td>
</tr>
<tr>
<td>4” - 110</td>
<td>14</td>
<td>52-70</td>
</tr>
<tr>
<td>5” - 125</td>
<td>18</td>
<td>90-110</td>
</tr>
</tbody>
</table>
MODELS

- Ø125 x 400 mt
- Ø63 x 200 mt
- Ø110 x 530 mt
- Ø110 x 500 mt
- Ø75 x 280 mt
- Ø90 x 300 mt
- Ø90 x 500 mt
- Ø90 x 400 mt
# ADJUSTABLE BOOM

Two boom alternatives according the boom length & carrier height

<table>
<thead>
<tr>
<th>TYPE-1K BOOM</th>
<th>TYPE-3 BOOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>For 75 MODELS</td>
<td>For 90, 110, 125 MODELS</td>
</tr>
<tr>
<td>• Consists of 2x4=8 parts.</td>
<td>• Consists of 2x5=10 parts.</td>
</tr>
<tr>
<td>• Length: 37 m, Irrigation: 42 m</td>
<td>• Length: 46 m, Irrigation: 54 m</td>
</tr>
<tr>
<td>• The end part can be closed (29 m)</td>
<td>• The end part can be closed (38 m)</td>
</tr>
<tr>
<td>• Can be folded easily</td>
<td>• Can be folded easily</td>
</tr>
</tbody>
</table>

Figure: Type-3 Boom
FOLDING

ON THE GO
MULTI-NOZZLES

35 irrigation nozzles on a 46mt boom and

3 set of nozzles are send to customer as spare
MULTI-NOZZLES
<table>
<thead>
<tr>
<th>ADJUSTABLE BOOM CARRIER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TYPE-1K BOOM</strong></td>
</tr>
<tr>
<td>For 75 MODELS</td>
</tr>
<tr>
<td>• 3 Wheels Carrier w/ lifting jack</td>
</tr>
<tr>
<td>• Carrier Height: @ Lowest 1.15 m Can be lifted up to max 1.55 m</td>
</tr>
<tr>
<td>• The distance between carrier wheels is adjustable</td>
</tr>
<tr>
<td><strong>TYPE-3 BOOM</strong></td>
</tr>
<tr>
<td>For 90, 110, 125 MODELS</td>
</tr>
<tr>
<td>• 3 Wheels Carrier w/ hydraulic piston</td>
</tr>
<tr>
<td>• Carrier Height: @ Lowest 1.15 m Can be lifted up to max 3 m</td>
</tr>
<tr>
<td>• The distance between carrier wheels is adjustable</td>
</tr>
</tbody>
</table>
SPECIAL BOOM CARRIER

• Hose Reel Irrigation machine have special carrier accordingly request and plant type especially for specially plant with larger shank such as cotton etc.
Corn irrigation with 3 meter boom
How much decare areas can be irrigated? *

- Boom Length: Min.46m, Max.54m
- Hose Length: Min.280m, Max.530m
- Irrigation Speed: Min.2m/h, Max.100m/h

Irrigated area can change depending on the winding speed of the hose.

- Avarage irrigated area: 15 - 28 decares
- Avarage area per *day: 28 - 36 decares

* 1 day is calculated as 22 hour and average speed is 30 mt./hour
RAIN GUN

Rain Gun Carrier

Nozzle

Rain Gun

Hose

Inlet

Hose Drum

Hose Drum
Rain Gun - Nozzles
Automatic Dosage Unit

User can spray or fertilize plants during irrigation with an optional mechanical and electrical automatic dosing machine that can be added and transported to the system.

• For Maximum efficiency fertilizing and spraying is very important point.

• Automatic Dosage Unit add automatically fertiliz and spray with equal intervals per an hour between 20-500 lt.
Automatic Dosage Unit

Dosage Pump can be used with Drip and Rain Gun Irrigation System.

With this unit you can irrigate and give fertisation and disinfection and protect plant from disease.

Accordingly test on 2016 system working with %100 efficiency.
• On Hose Reel Irrigation System have 4 shift to adjust speed.

• With shift and accelerate adjustment machine can work 2mt. Up to 100 Mt.

<table>
<thead>
<tr>
<th>Gear and Speed Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift 1</td>
</tr>
<tr>
<td>Shift 2</td>
</tr>
<tr>
<td>Shift 3</td>
</tr>
<tr>
<td>Shift 4</td>
</tr>
</tbody>
</table>
The Complete Project... What you need?

- Water pressure
- Tractor
- Water transfer pipes
- Water pump
- 1 person to operate
PROJECT DESIGN

To choose Hose Reel Irrigation Model following information are need:

- Soil structure,
- Field Dimensions,
- Water Source,
- Distance between water source to machine,
- Water Pressure
PROJECT DESIGN
PROJECT DESIGN