

Low Energy Precision Application (LEPA) in the Pacific Northwest

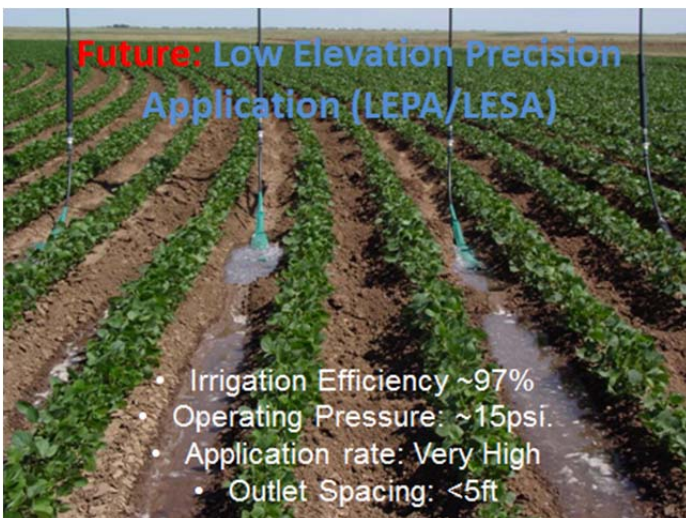
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Low Energy Precision Application (LEPA) – Dribbles on.



Low Energy Spray Application (LESA) – is sprayed on.



Additional hardware costs can be offset by the pumping power savings due to lower pumping pressure requirements and improved irrigation efficiency (less water is required).

Costs/year. (5 year life span)		
	LESA	Control
Equipment	\$ 902.16	\$ 768.85
Labor/Maintenance	\$ 617.72	\$ 284.15
Annual Pumping Costs	\$ 3,344.17	\$ 5,115.60
Total/year	\$ 4,864.05	\$ 6,168.60
Difference/year	\$ 1,304.55	

LESA gives less time for water to infiltrate into the soil. Therefore it may not be suitable to tight soils or steep slopes where infiltration and runoff can be an issue.



Inadequate outlet spacing can be overcome with simple attachments and large hose clamps.



Double goosenecks and truss-rod hose slings also decrease drop spacing.



Double Goosenecks and truss-rod hose slings spread the water out to help offset shorter infiltration times.



The sprinkler head can irrigate below the top of the canopy without problems. However, it can limit the ability to chemigate.



LESA worked well in corn. The narrow spacing eliminates typical uniformity issues on wider spacings due to the canopy disrupting the application pattern. It didn't hang up too much in the canopy. No need to plant in a circle.



LEPA/LESA sprinklers are easy to maintain. You don't get as wet!



We can test your field to determine if LEPA/LESA will work for you. Please contact us (see below) if you are interested in having us come test your infiltration rates.



It works! So far, *all* demonstration field owners are expanding its use on their farms.



Overview of LEPA/LESA Challenges

- **High application rates.** If you have no trouble getting water into the soil, then you might benefit!
 - If you have tight soils and/or steep slopes, the LEPA/LESA is probably not for you.
- **Chemigation.** The sprinklers can go into the canopy. The canopy won't get wet when this happens.
 - Can raise the drops slightly.
 - Can switch to chemigation spray plate that sprays upwards. This is inexpensive and easy to do..
- **Smaller nozzle sizes.** This may lead to additional plugging if you have dirty water.
 - Finer filter screens may be required.

Overview of LEPA/LESA Advantages

- **Irrigation Efficiency** is much higher. You will need less water.
- **Low pressure!** Save pumping energy.
- **Less variation in application efficiency** (less day-night differences in applied depths, less difference between windy vs. calm days.
- **Less lodging.** Heavy and wet crops can fall over.
- **Wheel tracks.** It's easier to keep them dry.
- **Dry canopy.** Possibly less crop diseases.
- **Maintenance is easier.** No ladders. Stay drier.
- **Better uniformity in corn.**
- **Inexpensive sprinklers** (about \$1.82/head vs. \$17.06)

Contact Us for More Information!

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