

CENTER-PIVOT SPRINKLER EVALUATION

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Name of Land User _____ Date _____

SCS Office _____ Technician _____

Hardware Inventory

Brand Name and Model _____

Is Design Available? _____ No. Towers _____

Nozzle: Type _____ Pattern _____ Position _____

Spacing _____ ft. Height above ground _____ ft.

Is pressure regulated on each nozzle? _____

System Design Capacity _____ gpm Design Operating Pressure _____ psi

Type of Tower Drive _____

If water type - Distribution pattern of drive water _____

End Gun Capacity _____ gpm Operating Pressure _____ psi

Design Wetted Diameter of Nozzles No. _____ No. _____ No. _____ No. _____

Ft. _____ Ft. _____ Ft. _____ Ft. _____

Field Data Inventory

Wind: Speed _____ mph Direction (from) _____

Line Direction: From center to outer tower _____ Moving _____

Time of Day _____ Humidity _____ %

Air Temperature: Upwind _____ Downwind _____

Type Crop _____ Height of Crop _____ In.

Soil Type _____ Net Water Needed _____ In.

Field Slope _____ % Water Supply Source _____

Distance from pivot to: End Tower _____ ft. Wetted Edge _____ ft.

System Capacity _____ gpm How obtained _____

Days since last irrigation _____ Estimated Consumptive Use _____ In./Day

Operating pressure at: Booster _____ psi Pivot _____ psi End Tower _____ psi

End Tower Speed _____ ft./hr.

Wetted Diameter of Nozzles No. _____ No. _____ No. _____ No. _____

Ft. _____ Ft. _____ Ft. _____ Ft. _____

Type and size of catch can used _____ Height above ground _____ in.

Setting of the speed indicator _____

Cost Per Unit of Fuel \$ _____ Total Dynamic Head _____ ft.

Cost Per Acre-Foot of Depth \$ _____ (Attach Comps.)

Evaluation

Circumference of End Tower _____ ft.

Hours per Revolution _____ hr.

Area Irrigated _____ acres

$$\text{Gross Application} = \frac{\text{Hours per Revolution} \times \text{gpm}}{453 \times \text{acres}} = \frac{x}{453 \times} = \text{_____ in.}$$

Weighted System Average

Sum of Factors _____ Sum of (catch x factor) _____

$$\text{Weighted Average} = \frac{\text{Sum of (catch x factor)}}{\text{Sum of Factors}} = \text{_____ cc.} = \text{_____ in.}$$

Weighted Low 25% Average

Sum of (Low 25% Factors) _____ Sum of (catch x factor for low 25%) _____

$$\text{Weighted Average} = \frac{\text{Sum of (catch x factor for low 25%)}}{\text{Sum of Low 25% Factors}} = \text{_____ cc.} = \text{_____ in.}$$

$$\text{Pattern Efficiency} = \frac{\text{Weighted Average (low 25\%)} \times 100}{\text{Weighted Average (System)}} = \text{_____ \%}$$

$$\text{Application Efficiency} = \frac{\text{Weighted Average Catch (System)} \times 100}{\text{Gross Application}} = \text{_____ \%}$$

$$\text{System Efficiency} = \frac{\text{Pattern Efficiency} \times \text{Application Efficiency}}{100} = \frac{x}{100} = \text{_____ \%}$$

Field Observations

Crop Uniformity _____

Water Runoff _____

Erosion _____

Tower Rutting _____

System Leaks _____

Fouled Nozzles _____

Other Observations _____

Recommendations _____

