



Snow Fences: A Smart Solution for Moisture Capture

Snow fences are an innovative tool to trap snow. When placed strategically, they have potential to dramatically boost dugout recharge and early-season water availability.

Top Benefits for Producers

- Strategically placed snow fences can multiply snow accumulation severalfold, greatly increasing the amount of snowmelt captured in dugouts compared to unfenced areas.
- Helps fill dugouts earlier in the season, improving water availability for livestock, spraying, and irrigation.
- Installation costs are minimal compared to trucking in water or drilling new wells.



Figure 1: Snow fences slow wind and trap snow, creating deep drifts that release moisture as spring runoff.

Design Tips for Moisture Capture

- Height: Use fences that are at least 8-10 feet tall to maximize snow capture
- Setback Distance: Place the fence 35 times its height upwind of your dugout. For an 8-ft fence, that's about 280 ft.
- Orientation: Align perpendicular to the prevailing winter winds.
- Porosity: Aim for 40–50% open space in the fence material to optimize snow deposition.
- Avoid Obstructions: Trees or other structures upwind can reduce snow transport to the fence.
- Target South or East-Facing Slopes: These tend to melt earlier and direct more runoff into the dugout.

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Case Study: Mappin Farm

Facing dry dugouts and costly water hauling, the Mappin's installed Wyoming snow fences through RDAR's PREP to capture snow and boost spring runoff. Early results show improved dugout recharge. Portable and practical, the fences offer a flexible way to manage water—"And fence is winning, hands down," says Brad Mappin.

