

Dew Simulator...

Model 710

For the production of high quality Alfalfa Bales



US Patent #6,233,840 B1

The *Dew Simulator* is pulled as a separate pass 10 minutes before baling with customer-supplied trailer tank.

Our new *Dew Simulator* allows for the precise addition of water to *windrowed* alfalfa. The windrow will be as soft as if it had just received the ideal amount of dew. By spraying into the windrow 10 minutes prior to baling, moisture is added to all of the plant material. The water added softens the hay with the help of a chemical softening agent, giving the hay the appearance and test of hay made with natural dew.

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HARVEST TEC MODEL 710 DEW SIMULATOR:

ARTIFICIAL DEW has been developed by Harvest Tec, Inc. Waiting for natural dew to soften alfalfa before baling has been an age-old problem for producers in arid areas. Many producers have tried to spray over the windrow to bring the moisture content up, only to find that just the top of the windrow becomes soft, but the leaves still shatter off most of the hay. Harvest Tec has developed a unique sprayer that has made simulation of natural dew possible.

The sprayer features a reel with tines that enter into the windrow and spray from the bottom of the windrow up, the same way that natural dew occurs in windrowed alfalfa. The tines are on a cam so they enter into the windrowed hay vertically and do not disturb it. The sprayer operates at 2500 PSI assuring complete and even coverage by a fine mist. The water added with this sprayer penetrates the hay with the help of a chemical softening agent added to the sprayer's tank. This artificial dew simulation has to take place a minimum of 10 minutes prior to baling to obtain the maximum softening effect. Therefore, a separate pass is required. The reel is pulled behind a tractor, folding down and to the right for field operation. Application requires between 10 to 18 gallons of water to one pint of the softening agent per acre, so a larger sized tank (e.g. 1000 gallons) is pulled behind the dew-simulating reel.

Although this process works under high sun and in windy conditions, it is difficult to time the interval between spraying and baling with the windrow drying out quickly. The best results for artificial dew simulation come by starting the sprayer up in the early evening and running until natural dew comes in, and, by starting the sprayer up in the morning as the alfalfa dries and before the sun is too direct. Hay treated with Harvest Tec's artificial dew simulator will look and test as good as hay made under almost ideal dew conditions.



SPECIFICATIONS:

1. 65 TINES 18" LONG PENETRATE THE WINDROW.
2. Tines are on a cam reel so that they enter and leave the windrow in a vertical position and the hay is not disturbed.
3. The rows of tines are actuated by valves so that water is delivered only when the tines are within the hay.
4. High pressure (2500 psi) delivers a fine mist into the windrow. Tines are on 5 inch spacing so that the water is added evenly to all the hay.
5. PTO driven piston pump delivers up to 15 gallons per minute. This pump delivery allows up to an 6-point increase in moisture added at a treatment rate of 1 ton per minute.
6. A chemical softening agent, HARVEST TEC HSL2002 is added to the water to help it enter the hay for a complete softening effect.
7. Heavy-duty hitch on the back of the *DEW SIMULATOR* reel frame allows for the trailering of tanks for water supply of up to 1200 gallons capacity.
8. Reel is folded down to the right. The tractor is then driven along side the windrow.
9. Treatment rates are adjusted by an easy valve trip that adjusts for windrow depth and yields variations between ½ ton and 3 ton per acre (assuming between 32ft and 48 ft are raked together to form a windrow.)