

Proptec™ Rotary Atomization Spraying Systems



What is a Proptec™ Atomizer?

-Precision Application

Proptec is a combination of two concepts:

- 1) Rotary Atomization, a process where drops of spray are expelled from the center of a rotating hub, into a screen at the perimeter of the atomizer, where the high speed impact pulverizes the drops into a uniform spectrum of droplets, similar to hitting a water balloon with a tennis racket;
- 2) Even Penetration. As the droplets form, they mix with a highly turbulent airflow generated by an axial fan that is an integral part of the atomizer's hub. The airflow is directed into the foliage canopy, where the turbulent air ruffles the leaves, wrapping around to reach the front **and back** surfaces of the plant, from the top leaves all the way to the ground!

-Dependable, Flexible Performance

The Proptec Atomizer is a highly reliable and flexible piece of

Air Assisted Rotary Atomization

Small, Controlled Droplet Size

Variable Air Flows to Match Conditions

High-Speed Application

Superior Foliage Penetration and Under Leaf Coverage

Reduced Water Usage

equipment. Because rotary atomization does not require nozzles, orifices are not necessary and there are no concerns about clogging or tip wear. Proptec Sprayers typically apply at rates from 2 to 25 gallons per acre, but your atomizers have the ability to apply at almost any rate- from ounces, to over 100 gallons per acre!

Ground speeds range from 2 to 8 miles per hour. The stainless steel, aluminum, and chemical resistant polymer construction means your Proptec heads will give you economical, worry-free performance, season after season. Propeller blades come standard as variable-pitch, allowing you to tailor airflow to the crop conditions. Color-coded, pre-angled blades are also available for users who want the security of always knowing what pitch their blades are at, at a glance.

-Broad Range of Applications

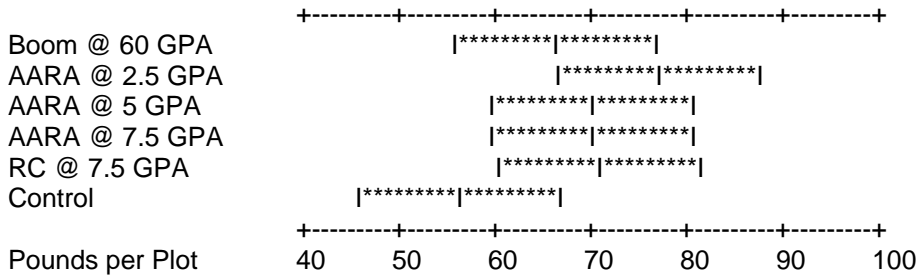
The high, adjustable air flow, consistently fine droplets, and ability to angle the heads to any position, allow Proptec Atomizers to adapt well to many difficult spraying tasks. Proptec has proven itself in **bushes, vineyards, small citrus, cotton, tomatoes, potatoes, celery, onions, bush beans, carrots, ornamentals, and a host of other crops**. Because Proptec Sprayers are generally designed to spray in a horizontal or downward orientation, **Drift is reduced**.

Proptec™ Rotary Atomizers

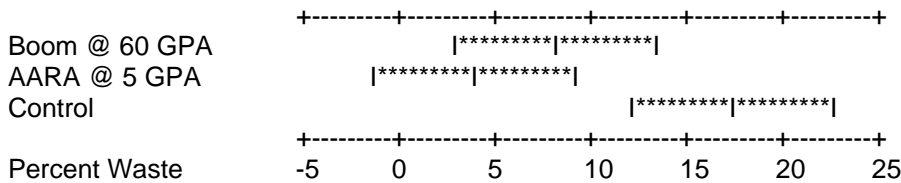
The following tables are field results showing some of the ways that Air-Assisted Rotary Atomization (Proptec) has increased yields, decreased inputs, and reduced disease pressures. All research conducted at Michigan State University.

AARA = air-assisted rotary atomizers Boom = conventional sprayer RC = rotary cup atomizers Control = no spray

Onion Harvest Weights (w. 95% confidence interval bars)



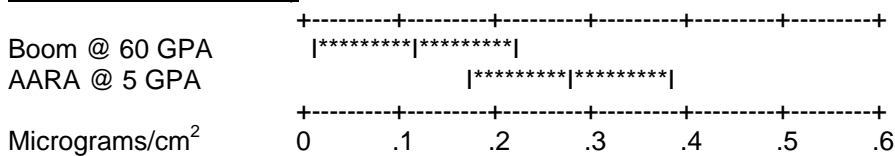
Cranberry Bush Bean, Percent Cull (w. 95% confidence interval bars)



Tomato Market Yields (w. 95% confidence interval bars)



Average Spray Deposition in Celery, Actual Weight of Chemical Deposited per Surface Area (w. 95% confidence interval bars)



Proptec Rotary Atomizers are supplied with high efficiency hydraulic gear motors for ample power and dependability. Applications requiring only 1 or 2 heads may be able to run off of tractor hydraulics, but most sprayers incorporating a Proptec System require a PTO powered hydraulic pump, sized to fit the number of Proptec heads. Compatible Chemical metering systems range from simple pump/orifice combinations to state-of-the-art peristaltic pump metering systems. Complete Proptec Sprayers are available from manufacturers across the country, or as refit kits to existing sprayers. For more information, contact your local dealer or Ledebuhr Industries- they will be happy to help assess your needs, offer design tips, provide a complete machine, or assemble a matched system to your existing one.

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