

Applying Pollen

Allow pollen to thaw for at least 2 hours before applications begin. It isn't necessary for it to come to room temperature, but using directly out of the freezer can result in unwanted condensation of water that can hamper blower applications.

Filling the Hopper

Put only as much pollen in the hopper at 1 time as you can apply in ≤ 1 hour. A typical load for the hopper would be around 1-2Kg. Many situations will require smaller loads. Large scale applications may require larger loads.

Application

Proceed with the applications as methodically as possible per the above specifications, leaving no pollen in the hopper at the end of the day.

Clean out the conical feed tube with a bottle brush or compressed air at the end of each application session. Be aware that compressed air can introduce moisture into the unit, which must be allowed to dry before additional applications are carried out.

Technical Support

Antles staff are available 24/7 during the pollination season for phone support, or can visit your location for assistance by arrangement.

Antles maintains a complete inventory of spare parts for all application units. Contact us to obtain replacement parts from our inventory, or we can provide you with a local source that can offer an off-the-shelf replacement.

Specs

Dimensions (without delivery tubes):34"x17"x20"
Weight:65Lbs
Blower Motor:Mixed gasoline (40:1)
Auger Motor:12V DC (from quad battery, other)
25, 40 and 80 rpm motors are available

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*Limitation of Liability: Under no circumstances shall Antles or its affiliates, partners or suppliers be liable for any indirect, incidental, consequential, special or any other damages arising from the use of this equipment.
The user assumes all risks of use.*

Antles Model 150 Pollen Application Unit

Operation Manual



Antles BRAND
POLLEN SUPPLIES, INC.
EST. 1929

Introduction

The Antles Model 150 Pollen Application Unit is a pollen application system using constant air flow and auger metering to disperse pollen into the canopy of various fruit and nut orchards.

The 150 is easily mounted to the rack of a quad, or in the bed of a side-by-side orchard vehicle or pickup.

The modular ABS delivery tubes can be oriented for use with most tree heights and training styles, including overhead for kiwifruit orchards*.

*With Kiwi Expansion Kit – not included.



Antles Pollen Kiwi Expansion Kit
Please call for Information & Pricing.



Model 150
(Standard Configuration)
Antles Pollen Application Unit

Application Frequency and Timing:

With most tree fruit and nut crops, plan on doing applications a minimum of 3 times during the peak bloom cycle of the tree. A good rule of thumb is 30%, 60% and 90% open bloom.

Some years, weather and other factors may limit your ability to carry out 3 applications. Reducing to 2 applications in these circumstances is acceptable.

Pollen should be applied when bee activity will redistribute the pollen through the orchard quickly. So your applications should start around the time bees become active in the morning, or just before.

Applications should stop mid-afternoon with roughly 2 hours of bee flight remaining.

Ideally, air temperature should be above 50 degrees Fahrenheit during applications with wind less than 5 mph, and no rain in the immediate forecast.

Mounting the 150 to your vehicle

Using Tie-down straps, or U-bolts (included), secure the unit to the vehicle so that it will remain stationary during travel over the terrain conditions in your orchard. Common methods are listed below.

Quad: Use supplied U-bolt kit to secure the unit to the front or rear rack.

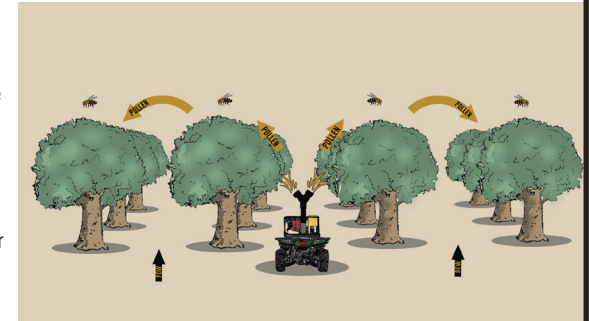
Side-by-side: Place the unit in the bed and secure with tie-down straps. Or secure the unit to a pallet with u-bolts, and place pallet in bed.

Pickup Truck/Ute: Secure the unit to a pallet as above, and place in the bed.

These are only examples of possible mounting options. Whatever method you use, make sure the unit is secure from bouncing or shifting that may result in personal injury, damage to the unit, or affect the flow rate of pollen.

Route the cable for the Remote Auger On/Off Switch from the unit to a position convenient for the operator (handle bars, near steering wheel, other). Make sure the cable is out of the way of feet, etc., and that the switch is securely fastened with supplied hardware.

Connect power using the supplied alligator clips to the battery of the vehicle. This may seem obvious, but be sure to connect Red-to-Positive, and Black-to-Negative. The DC auger motor will run either way, but it will turn backward if polarity is reversed, and pollen will not flow properly through the hopper. After power is connected, check to see that the auger is turning according to the rotation arrow on the unit (located under the hinged side panel near the sprockets).



Application Pattern

Remember, application of pollen using this platform is a form of cooperation with good bee activity. We are placing pollen into the canopy of the tree which the bees will redistribute to the flowers in the orchard, enhancing pollination via their normal foraging activity. So let the bees be your guide to when to start the applications in the morning. Applications should start around the time bees begin to fly. In light of this cooperation with bee activity, in most orchards it is acceptable to travel every other row during your pollen applications. Alternate the starting row for the second application, and go back to the original starting row for the 3rd application. *See diagram.*

Getting Started

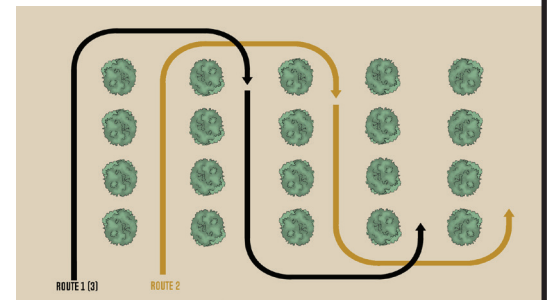
Calibrating the unit (This will require 1 operator and 1 observer)

Locate the supplied package of calibration material. Place the contents of this package into the machine hopper. Set the auger speed control to position '1' – the slowest speed. With the blower unit on 50% throttle, travel the distance of 1 acre at roughly 7 mph while the observer watches from behind.

Have the observer confirm that the material is penetrating the canopy and blowing to just above the height of the tree, and continues to deliver without stopping until 1 acre is covered. Switch off the auger during turns at the end of each row.

Adjust the blower throttle as needed to obtain proper penetration into the canopy.

At the end of 1 acre, observe how much material (if any) remains in the hopper and adjust ground speed or auger speed accordingly. Ground speed should be kept below 10 mph if possible.



Rough Guidelines for delivering 3 applications of 80 grams/acre total material:

Auger Speed 1: 5-7mph Auger Speed 2: 8-10mph Auger Speed 3: 10-12mph