



ASCEND¹™ PA

VA Mycorrhizal Soil and Root Inoculant²

Auxiliary Soil and Plant Substance, Biotic

READ ENTIRE CONTAINER LABEL BEFORE USING THIS PRODUCT

STATEMENT OF COMPOSITION:

Glomus intraradices 1.00 propagules/cc

“NONPLANT FOOD INGREDIENT”

NET WEIGHT: 8.39 lb./gal. (0.99 kg/l)

GENERAL INFORMATION

First Choice Ascend™ PA is a Vesicular-Arbuscular Mycorrhizal (VAM) soil inoculant designed for use under VAM deficient soil conditions, such as those soils that have been sterilized by prolonged flooded, or fallowing, or those soils that have been solarized, fumigated, pasteurized. Likewise this product is of benefit to artificial media, light textured and low organic matter soils. First Choice Ascend™ PA can also be used following applications of soil pesticides that reduce VAM populations. First Choice Ascend™ PA is labeled for use on all commercially grown Production Agricultural (PA) commodities; except ecto, ecto-endo, and ericodal mycorrhizal plant families. First Choice Ascend™ PA can be applied prior to planting, at planting, or during the growing season. Do not apply First Choice Ascend™ PA prior to soil sterilization. To achieve best results, this product should be used in an integrated management program and early in the plant's development.

MIXING INSTRUCTIONS

First Choice Ascend™ PA is not ready for use until First Choice Ascend™ PA and First Choice Ascend™ Dry Concentrate (DC) are mixed. Your packet of First Choice Ascend™ DC is attached to this container and has further mixing instructions. Mixing should take place just prior to application, and at the quantity to be used. Combine ingredients at the concentrations specified by the First Choice Ascend™ DC label and shake, stir or agitate for five minutes before use. First Choice Ascend™ PA is ready for use after mixing and when the liquid has turned green in color. Do not use First Choice Ascend™ PA if liquid is not green in color.

First Choice Ascend™ PA is compatible with a wide range of fertilizers. To assure compatibility of First Choice Ascend™ PA with new combinations of fertilizer and other soil conditioners, pour the components into a small container in the correct proportions. After a thorough mixing, let stand for 5 minutes. If the combination remains mixed, or can be readily remixed, the mixture is compatible. The following is a short list of incompatibilities: Maintain a pH between 6-8 by avoiding strongly acidic/basic conditions and biocides such as free ammonia, chlorine, and some pesticides. Do not mix with Aqueous Ammonia, Sulfuric Acid, Urea Sulfuric Acid, Phosphoric Acid, Soil Fumigants or Soil Fungicides. When using First Choice Ascend™ PA after pesticide and fumigant treatments make applications after the toxicant has dissipated (Refer to pesticide label for guidelines). There are, at the time of this printing, no other known incompatibilities.

HANDLING

Follow appropriate general safety procedures. In case of accidental exposure, flush with plenty of water. Refer to Material Safety Data Sheet for additional information.

SHAKE, STIR OR AGITATE BEFORE USE.

When handled in bulk quantities, storage in a cone-bottomed tank is recommended to facilitate agitation. When stored in a cone-bottomed tank, agitate 10 minutes prior to use. When stored in a flat-bottomed tank, agitate 1 hour before use. Avoid air blast agitation as foaming may result. If foaming does occur through normal agitation, use an approved agriculture grade defoamer. Agitation is recommended once every month. Storage past the expiration date is not recommended.

First Choice Ascend™ PA is a Vesicular-Arbuscular Mycorrhizal soil and root inoculant, apply First Choice Ascend™ PA to deficient soils in close proximity to the seed and newly developed root system. First Choice Ascend™ PA can be applied via seedline shank injection, drip chemigation, subsoil drip line chemigation, drenching, mixing in the transplant water, or using a soil covering method.

GENERAL APPLICATION GUIDELINES:

Use 15-30 gallons per broadcast acre equivalent early in the growing season, or as needed. See the placement specific guidelines below (Table 1) for further placement efficiency guidelines. As this product is only of benefit to plant roots: *Applications of high placement accuracy will allow lower rates, while low placement accuracy will necessitate a higher rate (See General Rates For Application).*

SOIL MOISTURE:

Applications should be made under “good seedbed conditions”. This includes thorough cultivation of the soil and pre-irrigation to 50 to 75% soil moisture conditions. Soil moisture can be estimated by squeezing a handful of soil into a ball. If the ball holds its shape and then easily breaks up, moisture is generally with this range.

ENVIRONMENTAL FACTORS:

First Choice Ascend™ PA is sensitive to ultraviolet light. First Choice Ascend™ PA should be applied using a subterranean technique or in sufficient water to move the product off the soil surface and into the plant root zone. To get the optimum results from First Choice Ascend™ PA, apply when the soil is between 50 and 100 degrees Fahrenheit.

NOTE:

The use of First Choice Ascend™ PA may affect crop nutrient response through increased root surface area. Utilize soil and tissue testing to determine nutrient needs. Caution should be exercised when applying First Choice Ascend™ PA with high salt fertilizers to prevent “fertilizer salt” induced phytotoxicity. Where fertilizer salts are the combination of Nitrogen, Potassium, and metal salts, do not exceed 5 lb. of total salt on the seed and/or 10 lb. of salt per inch away from the seed. Where warranted, adjust fertilizer rated and replace with a minimum of a 1:1 ratio of up to 30 gallons of First Choice Ascend™ PA/acre/application.

GENERAL RATES FOR APPLICATION:

Broadcast rates for First Choice Ascend™ PA can be reduced in field grown crops in the following ways: Shank injection, banded, in furrow sprays, soil covering methods, layby, drench, in the transplant water, or by drip chemigation. Means to calculate rates will be elaborated on below. However, the following table gives one an idea of which rates are usually applied per total acre equivalent.

Table 1.

Treatment Method:	Field/Row Crops Gallons per acre	Tree/Vine Crops Gallons per acre
Broadcast	30	30
Sidedress	8-10	10-15
Micro-irrigation	5-8	5-8
Transplant	3-5	3-8
On Seed	3-5	----
Under Seed	3-8	----

BANDING:

For banded (shank injection, band drench, or seedline dribble) applications the treatment area actually is the area covered by the band, not the total cropland planted. Some application recommendations are based on treating in the row and these rates are generally specified as liquid amounts of product per certain row length. Others express rates as amount per treated acre, which means the total area treated with the product. If rates are expressed as amount per treated acre and banded applications are used, the amount of product used will be proportionately less. The following formula can be used to calculate the amount of First Choice Ascend™ PA needed per acre of crop when banded applications are made:

$$\begin{array}{r} \text{Band width in inches} \\ \text{-----} \\ \text{Row spacing in inches} \end{array} \times \begin{array}{r} \text{Broadcast rate/A} \\ \text{-----} \\ \text{per number of} \\ \text{acres in field} \end{array} = \begin{array}{r} \text{Total amt. needed} \\ \text{-----} \\ \text{Per one acre of field} \end{array}$$

DRENCHING METHOD:

Apply First Choice Ascend™ PA in sufficient water or fertilizer to move First Choice Ascend™ off the soil surface and into the root zone, but not beyond. See band application calculations for instructions on calculating the amount of product to apply.

SOIL COVERAGE METHOD

At planting time apply 15 gallons of First Choice Ascend™ PA per acre. Please reference the banding application notes listed above concerning band application calculations. Apply the specified dosage to the soil around the seed and to the covering soils as it fills the furrow. The product should be below the seed as much as possible, with the exception of potatoes where it should generally be above the seed piece.

MICRO SPRINKLER OR DRIP IRRIGATION SYSTEMS

Chemigation Application Guidelines: Apply 15-30 gallons of First Choice Ascend™ PA per acre depending on the crop, depth of application, and water holding capacity of the soil. For proper application:

1. Determine the area (length x width) to be treated, divide by the number of acres and multiply by the rate per the number of acres to be treated. This number is the total gallons of First Choice Ascend™ PA needed to treat the field irrigation block.
2. First Choice Ascend™ PA can be safely metered into drip systems. Determine the amount of water needed to saturate the root zone (0.5" to 1.25" of water), divide this by the time needed to apply the necessary water. Number is the time required to make the application of First Choice Ascend™ PA.
3. Divide the number of gallons from step 1 by the treatment time in Step 2. This number is the rate of First Choice Ascend™ PA per unit of time. Apply first Choice Ascend™ PA at this treatment rate until desired application rate has been reached.

DRIP CHEMIGATION CALIBRATION INSTRUCTIONS

During pre-irrigation check drip tape for uniform distribution (See calibration information below) and repair if necessary. Once the system is calibrated add the amount of First Choice Ascend™ PA required for treatments as calculated above, or generally 3-8 gallons per total treated acre, to the middle third of the irrigation set. Follow these guidelines:

Step-by-Step Instructions

- Each run of the irrigation system must be calibrated separately to determine the time it takes water to move through the system and to make sure all emitters are putting out the same flow of water.
- Before starting to calibrate, operate the system until all emitters are putting out equal flow rates or until the system is operating at full pressure.
- Only pressure injected or venturi equipment is recommended.
- Determine the area to be treated in each irrigation run.
- For calibration, substitute a concentrated detergent or a soluble fertilizer in the injection tank. The detergent will bubble as it leaves the emitters. The time period over which bubbles occur should be checked for both the closest and farthest emitters. If a soluble fertilizer is used, measure the time interval with a salt bridge.
- If the periods of detection of the indicator solution between the emitters are within two minutes of each other,

comparable coverage will be obtained. If they are not, make adjustments to dilution ratio, using more or less water per part First Choice Ascend™ PA or adjust the injector to a slower or faster rate.

- Once the system is calibrated, dilute the needed amount of First Choice Ascend™ PA with water using a minimum of 5 parts water/fertilizer solution to 1 part First Choice Ascend™ PA.
- Do not begin to inject First Choice Ascend™ PA into the system until all emitters are producing equal flow rates, or until the system is at full pressure.
- Inject First Choice Ascend™ PA into the system in the middle of the irrigation set of a ½ - 1 inch of irrigation water. With at least ¼" of additional water to move product off the surface.

CROPS THAT CAN BE TREATED WITH FIRST CHOICE ASCEND™ PA:

Below is a partial list of the agricultural plants that can be treated with First Choice Ascend™ PA. For a listing of nursery, turf and ornamental plants refer to the First Choice Ascend™ NTC label:

Alfalfa	Currant	Pecan
Almonds	Date Palm	Pepper, All
Apples	Eggplant	Pigeon Peas
Apricot	Fescue	Pineapple
Artichoke	Fig	Pistachio
Asparagus	Garlic	Plum
Avocado	Grapes, all	Poplar
Banana	Grapefruit	Potato
Barley	Grass family	Prunes
Basil	Honey dew	Raspberry
Bayberry	Jojoba	Redwood
Beans, All	Kiwi	Rice
Blackberry	Lemon	Russian Olive
Brazil, Rubber Tree	Lettuce	Rye
Bulbs, All	Lentil	Soybeans
Cactus	Leek	Squash, All
Cantaloupe	Mango	Strawberry
Carrot	Maple, All	Stone Fruit, All
Cassava	Melon, All	Sudan Grass
Cedar	Millet	Sugar Cane
Celery	Oil Palm	Sugar Maple
Cereal Grains, All	Okra	Sunflower
Cherry	Olive	Sweet Potato
Chick pea	Onions	Tea
Chili, All	Orange	Tobacco
Citrus, All	Passion Fruit	Tomato
Clover	Papaya	Walnut
Coconut Palm	Peach	Watermelon
Coffee	Peanut	Wheat
Corn	Pear	Yam
Cotton	Peas, All	
Cowpeas		
Cucumber		

Do not use First Choice Ascend™ PA on these plant families:

Some plant families do not become colonized successfully by the endomycorrhizal fungus even in the most favorable growing conditions. The following lists are plant families, and examples of each:

Betulaceae (Birch)
Brassica (Broccoli, Cabbage, Cauliflower, Turnip & Mustard)
Cruciferae (Melon, Pumpkin, Squash, & Zucchini)
Ericaceae (Blueberry, Cranberry, Heath, Rhododendron, & Azalea)
Juncaceae (Rush)
Orchidaceae (Cattleya, Orchid, & Phalaenopsis)
Proteaceae (Protea)
Caryophyllaceae (Carnation)
Chenopodiaceae (Beet and Spinach)

CONTINUED NEXT PAGE→

**Do not use First Choice Ascend™ PA
on these plant families (cont'd)**

Cyperaceae (Sedge)
Fagaceae (Beech, Oak)
Myrtaceae (Eucalyptus)
Pinaceae (Pine, Fir, and Spruce)
Salicaceae (Willow)

Manufactured for:
WESTERN FARM SERVICE, INC.
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NET CONTENTS: _____ gal. (_____ l)

STORAGE AND DISPOSAL

STORAGE: Store Dry Concentrate packets in a cool dry place out of the sun. Although not necessary, storage between 40 to 70 degrees Fahrenheit will extend the products potency. First Choice Ascend™ PA should not be allowed to freeze. Keep containers tightly closed when not in use.

LOT NUMBER: _____

CONTAINER DISPOSAL: Triple rinse (or equivalent), then puncture and dispose of in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

1. Ascend™ is the trademark of BioScientific, Inc.
2. "With Mycorise inside"

FIRST CHOICE® is a registered trademark of Western Farm Service, Inc.

SALES AND WARRANTY INFORMATION

Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes referred to in the directions for use when used in accordance with the directions under normal conditions. Buyer assumes the risk of any use contrary to such directions. Seller makes no other warranty of representation of any kind, expressed or implied, concerning the product, including NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OF THE GOODS FOR ANY OTHER PARTICULAR PURPOSE. No such warranties shall be implied by law and no agent of the seller is authorized to alter this warranty in any way except in writing with a specific reference to this warranty. The exclusive remedy against seller shall be a claim for damages not to exceed the purchase price of the product, without regard to whether such a claim is based upon breach of warranty or tort. Any controversy of claim arising out of, or relating to this contract or breach thereof, shall be settled by arbitration in accordance with the commercial arbitration rules of the American Arbitration Association, and judgment upon the award rendered by the Arbitrator (s) may be entered in any court having jurisdiction thereof.

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