

TECHNOLOGYPROFILE

Baciva™

Baciva is a biological disease-management product based on *Bacillus amyloliquefaciens* strain D747. The documented scope of this defined strain spans selected foliar diseases and root or crown diseases, with control and suppression distinguished for each crop and disease.

1 Product identification

Field	Detail
Product name	Baciva™
Category	Biological crop protection
Principal components	<i>B. amyloliquefaciens</i> D747
Target crops	Tomato · Pepper · Cucumber · Lettuce · Soybean · Common bean · Cowpea · Pigeon pea · Mung bean · Black gram · Peanut · Citrus · Grapes · Strawberry · Blueberry · Alfalfa
Agricultural purpose	Integrated crop-health management

2 Product role and biological basis

Selected foliar disease management

In liquid formulation, D747 is documented for control of grape grey mould caused by *Botrytis cinerea* and grape powdery mildew caused by *Erysiphe necator*. Lettuce *Sclerotinia* is a further crop-specific use of this strain.

Root and crown protection

D747 associates with roots. In liquid formulation, its documented scope for vegetable root and crown diseases covers *Pythium*, *Rhizoctonia*, *Fusarium* and *Phytophthora*. This scope is defined at genus level rather than as a result for every pathogen species.

Suppression within integrated management

Some uses are narrower: for grape and cucumber downy mildew, tomato and pepper powdery mildew, and citrus *Phytophthora* root or collar rots, the documented effect is suppression. This distinction defines the biological input's role within the wider crop-protection programme.

3 Composition and material characteristics

Bacillus amyloliquefaciens D747

D747 is the strain identifier, also described as *Bacillus amyloliquefaciens* subsp. *plantarum* strain D747. Quoting the strain designation keeps each formulation clearly linked to its strain.

Living bacterial activity

D747 formulations contain a living bacterial component, described through strain identity and a viable-count measure. This biological specification is separate from product mass, liquid volume and the composition of formulation materials.

Liquid formulation context

D747 is formulated both as an aqueous suspension and as water-dispersible granules. Sharing the strain does not make these forms interchangeable or establish the same crop uses, stability or compatibility.

4 Biological targets and application evidence

5 Crop programmes and application context

Select biological protection for the identified disease, strain, formulation and growing system. Review the crop information below for the target, treatment and study conditions, then consider the product alongside the existing crop-protection programme.

Tomato, pepper, cucumber and lettuce

Vegetable selection should identify the disease first. Documented examples include root and crown pathogens, lettuce Sclerotinia and cucumber powdery mildew. For pepper, the Phytophthora scope remains genus-level; it does not independently demonstrate activity against Phytophthora capsici.

Grapes, berries and citrus

Grape grey mould and powdery mildew are documented for control, whereas grape downy mildew and citrus root or collar rots are documented for suppression. Berry decisions also distinguish highbush blueberry from strawberry and lowbush blueberry: their grey-mould uses do not carry the same claim strength.

Legumes, peanut and alfalfa

Documented crops explicitly include soybean, common bean, cowpea, pigeon pea, mung bean and urd bean, with peanut listed separately and alfalfa uses. This broad coverage should be narrowed to the locally important disease and the exact crop commodity.

Soilborne & root diseases

Tomato · Pepper · Cucumber · Lettuce · Soybean · Common bean · Cowpea · Pigeon pea · Mung bean · Black gram · Peanut

D747 · Control of damping-off and root and crown diseases involving Pythium, Rhizoctonia, Fusarium and Phytophthora.

Soilborne & root diseases

Citrus

D747 · Suppression of Phytophthora root and collar rot in citrus.

Powdery mildew

Grapes · Cucumber

D747 · Powdery-mildew control in the grape and cucumber crop groups.

Powdery mildew

Tomato · Pepper · Strawberry

D747 · Powdery-mildew suppression in these crops.

Downy mildew

Grapes · Cucumber

D747 · Suppression only; grape and cucumber downy mildews have different pathogens.

Botrytis & grey mould

Grapes · Tomato · Pepper · Blueberry

D747 · Botrytis control; in blueberry, highbush blueberry.

Sclerotinia diseases

Lettuce · Soybean · Common bean · Cowpea · Pigeon pea · Mung bean · Black gram · Peanut

D747 · Control of *S. sclerotiorum*, distinct from southern blight caused by *Sclerotium rolfsii*.

Soilborne & root diseases

Strawberry

D747 · Control of *Rhizoctonia*, *Fusarium*, *Pythium* and *Phytophthora* root and crown diseases in low-growing berries.

Botrytis & grey mould

Strawberry

D747 · Suppression of grey mould in strawberry, as distinct from control in highbush blueberry and grape.

Soilborne & root diseases

Alfalfa

D747 · *Aphanomyces* and *Phytophthora* root diseases in forage crops. Genus-level scope does not establish activity against every pathogen race.

Spring black stem

Alfalfa

D747 · Spring black stem caused by *Ascochyta medicaginicola*.

6 Quality and compatibility

Strain identity and batch linkage

The technical record should identify D747 and connect it with the batch, formulation and supporting documents. A different *Bacillus* strain requires its own evidence, even when the species name is similar.

Viable count and specification basis

A liquid viable-count declaration needs a clear unit, analytical method and product-life reference. Compare release and shelf-life records on the same basis; a granule's declaration cannot simply be transferred to a liquid.

Suspension consistency and stability

Suspension behaviour, redispersibility, pH and packaging integrity complement the biological specification. Storage and compatibility should be supported by records for the exact liquid formulation.

Liquid and granular uses are presented separately and describe the documented scope of strain D747. Crop uses in each target market are confirmed for the exact product and market.

In the granular formulation, efficacy is variable and partial. A documented use, a field-trial result and a commercial supply claim are different forms of information and should be assessed separately.

7 Product questions

Are control and suppression the same across D747 uses?

No. The documented level of effect differs by crop and disease. Some uses are control, while others are suppression or show partial and variable efficacy; those distinctions remain with the corresponding use.

Does a shared D747 strain make liquid and WG formulations equivalent?

No. The liquid and the water-dispersible granules are different finished formulations. Crop scope and supporting results remain tied to the formulation evaluated.

8 References and technical documents

Product specifications and application guidance are provided in the applicable technical data sheet and market label.

Product information and technical support

Contact Huasheng