

CataPult® - General Recommendations



RELEASE & CATCH TECHNOLOGY

CataPult Inoculum is now available in three formulations, CataPult SuperFine (new), CataPult Power Inoculum and CataPult Power Seed Dressing.



CataPult SuperFine is a fully re-formulated version of CataPult Power Inoculum that is guaranteed not to block any delivery system, including liquid injection systems.

All three contain four selected Vesicular Arbuscular Mycorrhizae (VAM) species, plus two Bacillus species that have been selected from our R&D program to work synergistically with the VAM species. The inoculum is used in a wide variety of crops and is applied for a number of good reasons.

- **To increase general crop nutritional status.** The combination of the VAM and Bacillus formulation provides **Release and Catch Technology™** to increase crop nutrient status. The Bacillus microbes act to release and make available bound nutrients, particularly phosphorous (they are P-solubilisers). That's the **Release** component. They also stimulate, via production of Plant Growth Factors, development of strong secondary and fine root hair systems that collect nutrients very efficiently. The VAM form an extremely extensive network of hyphae (fine filaments) that spread through the soil, collect nutrients and deliver them back into the plant root system. That's the **Catch** component. CataPult improves P and Zn status particularly, but also N plus other nutrients and micronutrients. The rapid growth of the VAM hyphal collecting system means that early crop growth is accelerated faster than if it is serviced by root growth alone. CataPult can be used to decrease P fertiliser requirements, or to ensure adequate P status in P binding soils.
- **To replenish VAM after canola or fallows.** Brassica crops, such as canola, do not support VAM colonisation and so VAM numbers in the soil are very depleted after these crops. This is called 'biofumigation'. For crops such as wheat, following in rotation after Brassicas, replenishment of VAM is by application of CataPult is important to get the crop off to a fast start. Fallow seasons also deplete VAM numbers.



CataPult treated fabia beans in the Coleambally district, NSW, August 2016, recovering after very wet conditions. Note strong nodulation despite waterlogging.

- **To provide resilience against water stress.** VAM collect soil moisture very efficiently and from a much larger soil volume than crop roots. This means CataPult crops have a greater capacity to keep growing through short dry spells without a check, or to survive longer dry spells while waiting for rain. This can be very important in young crops that don't have a large root system developed.
- **To maximise consistency of yields.** In most cropping systems farm profitability is greatly affected by the capacity to produce strong yields over the years in the face of varied seasonal conditions. CataPult is a useful tool to provide high likelihood of high yields across varying seasons.
- **To assist recovery from water logging.** Crops often suffer from root damage after short-term waterlogging. This can lead to nitrogen and other deficiencies and CataPult can help drive faster recovery of roots and also help collect nutrients while roots are re-growing. VAM and other beneficial soil microflora are heavily depleted by prolonged waterlogging so an application of CataPult is important after any water logging event. A healthy soil microflora is vital to crop health.
- **To stimulate nodulation.** CataPult Power Seed Inoculum is used to stimulate nodulation and growth in any legume field crops and also in lucerne where it is used to prevent loss of nodulation during the season. See the photos of the fabia bean crop above where CataPult application has stimulated strong nodulation despite quite severe water logging of the crop.
- **To accelerate the early growth of tree crops.** A mixture of CataPult and NitroGuard is used in tree crops such as almonds, walnuts, various fruit trees and vine crops to speed early growth and shorten the time to initial harvests. It also helps tolerance of the dry spells that Australian farmers have to deal with periodically.
- CataPult formulations can be tank mixed with many agrochemicals. Contact MAB or visit www.vanadisbioscience.com for a list of compatible chemicals.
- CataPult combines very well with NitroGuard which boosts N nutrition.
- CataPult can be applied by any method that delivers the inoculum to the root zone including fertigation, liquid injection and many other methods.

Contact MAB for information on which CataPult formulation will suit your needs.



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Visit www.mabiotec.com for more information.