

Actagro Liquid Humus[®] enhances native soil microbial activity and improves CEC and water holding capacity to improve the soil health and function for your crop. This in turn brings plant and root stimulation effects to grow more roots, finer root hairs, increases root exudates, and improves mineralization of carbon and nutrients in the root zone. These positive effects of Actagro Liquid Humus[®] have been proven by replicated science and in field results for over 35 years.

Enhances Production of Beneficial Microbial Exudates in the Soil Extracellular Enzymes



Production of N-acetylglucosaminidase (NAG) in Soil

N-acetylglucosaminidase (NAG) is an extracellular enzyme produced by various microbes and contributes to the decomposition of cellulose. Science has shown that NAG levels can be an effective measurement of overall soil health.

By stimulating microbial growth, Actagro Liquid Humus has the effect of stimulating both microbial enzyme production and other by-products of microbial growth. The sum of all these activities has a positive impact on soil health, which in turn benefits crop production.

Activity of N-acetylglucosaminidase (NAG), as affected by treatments at Illinois site at 7 DAA. Data are mean \pm standard error (n=4).

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Stimulates the Activity of Various Soil Microbial Groups

Phospholipids are part of the cell membranes of all microbes and each species has its own specific lipid signature. Phospholipids were measured by a third party to identify the effect of Actagro Liquid Humus[®] on different soil microbial groups.



A four year, replicated study in wine grapes in Paso Robles, CA found that Actagro Liquid Humus had the effect of increasing mineralizable carbon. Mineralization is the transformation of carbon from an organic to inorganic form, usually CO_2 . This is the soil carbon pool that can be utilized by soil microbes. The fact that this pool increases over time is an indicator of a healthy soil with a healthy microbial community. A separate study in Paso Robles, CA also saw a significant yield increase, against a grower standard, over a four year period.

Increases Mineralizable Carbon





Yield is Affected by Soil Health





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