

Pests and Pathogens: No differences were found in weed control using biodynamic preparations, in soil cover, species richness, diversity, and evenness of weed species. In one long-term study, biodynamic Preparations 501 and 502 increased disease intensity in organically grown wheat.

Evaluating the Literature Critically

In considering the current body of literature on biodynamics, there are some points to keep in mind.

Statistics: When the number of comparisons made among treatments increases, the likelihood of finding a significant difference also increases, if only by chance. The way to reduce this systematic error is to use a statistical correction factor, which sets a higher bar for what is considered “significant.” This correction is often overlooked and it points out a possible source of statistical error.

Look for the Positive: It is tempting to focus on isolated positive results, highlight the significant results, and say little about the rest, especially in the article’s abstract or conclusion. Reading the entire article, not just a summary, provides a more complete picture.

Science-based Agriculture

We live in a culture that increasingly holds scientific evidence as just another belief. This is partly due to a failure of agricultural researchers and educators to draw clear lines between methods that have been rigorously tested and those that have not.

There are currently no clear and consistent effects of biodynamic preparations on organically managed systems. Other alternative techniques, including use of cosmic rhythms to schedule various farm activities and image formation to

Components of biodynamic preparations

- #500 – Cow manure packed into a cow’s horn
- #501 – Silica from finely ground quartz, mixed with rain water, packed into a cow’s horn
- #502 – Yarrow (*Achillea millefolium*) flower heads fermented in soil
- #503 – Chamomile (*Matricaria* sp.) flower heads fermented in soil
- #504 – Stinging nettle (*Urtica* sp.) tea
- #505 – Oak (*Quercus* sp.) bark packed into the skull of a domestic animal
- #506 – Dandelion (*Taraxacum officinale*) flower heads packed into cow mesentery
- #507 – Extract from valerian (*Valeriana officinalis*) flowers
- #508 – Horsetail (*Equisetum arvense*) tea

Note: Species of plants used differ with global geography.

visualize nutritional quality of plants do not lend themselves to rigorous experimental testing. Given the thinness of the scientific literature and the lack of data supporting the efficacy of biodynamic preparations, biodynamic agriculture is not to be recommended as a science-based practice at this time. 

Extracted from Chalker-Scott’s review article in HortTechnology, 2013 26:814-819.

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New Nutri-Facts Series Available

The International Plant Nutrition Institute (IPNI) has recently released a new publication series titled *Nutri-Facts: Agronomic Fact Sheets on Crop Nutrients*.

The set of *Nutri-Facts* is focused on providing a condensed set of information for all essential plant nutrients, and key aspects related to their appropriate use. Currently, *Nutri-Facts* are available for nitrogen (N), phosphorus (P), potassium (K), sulfur (S), boron (B), manganese (Mn), and zinc (Zn). New additions are expected to complete the series later this year.

To obtain pdf copies of *Nutri-Facts* see <http://www.ipni.net/nutrifacts> 

