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Preparations stirring process

Current comparisons of different procedures with new methods

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On the stirring and application technology of biodynamic preparations like these is mostly practiced, there are alternatives (see LE 3 and 4/2007) in particular for stirring and application quantities. What is presented there is supplemented by current test results, which are shown below become.

Already in earlier years Initial investigations into various stirring methods were carried out at the IBDF together with the institute for flow sciences in Herrischried (cf. JACOBI 2004 and KING 1998). Compared At that time, hand stirring was combined with machine stirring and mixing using flowforms and that Oloid. However, the results in the vessel tests on beans did not show a uniform trend: That was the case the hand-stirred variant and the other methods

think about it, once everyone was Preparations stirring methods "better" than control. It became clear at that time that the special quality of the Stirring process is only insufficiently reflected in conventional experiments (see illustration in LE 4/ 2007, p. 46).

Due to new perspectives in the investigation methodology, these experiments were repeated in 2006 picked up. It now existed the hope of direct observation of the Life forces (educational forces research according to SCHMIDT et al.) to be able to illustrate the influence of the different stirring and application methods when stirring the preparations as well as when spraying.

Then they should Products with different Methods of quality assessment are examined. The question was also included in the test after reduced amounts of the stirred preparation. First results of these experiments will be carried out in shown below.

Those examined Variants:

There were three stirring methods for preparing the preparation the clay pot was through

The attempt:

Test location: Demeter operation Hof Michael in Endeholz am Edge of the Lüneburg Heath. The Soils on sandy moraines with a large proportion of skeletons (flint and gravel) are poor in nutrients and have only a low level of income. The ground points are below 35.

Test facility: Block system with 4 reps; Plot size: 30 x 60 meters.

Experimental plant: Potato "Agria"
Preparation applications: 2x horn manure in spring; 2 x horn pebbles in summer

All cultivation measures have been carried out from the farmer in the usual way carried out in a manner. Only that preparations were delivered by the experimenter himself.

compared: the usual manual Stirring method in an (old) cylindrical wooden barrel (approx. 350 liters in 500 liters Volume; 73 cm diameter, 120 cm height) with one Brushwood broom (Fig. 1); a mobile hand stirring method for the higher concentrated preparation with the reduced application rate in one Small unglazed clay vessel (approx. 20 liters in 35 liter volume; 31 cm diameter, 46 cm height) with a brushwood broom without suspension (Fig. 2). Later the clay pot was through

Short and sweet:

In a field test on potatoes, different stirring techniques - hand and machine as well as reduced amounts of water - were used for the first time biodynamic preparations tested.

There were hardly any differences in yield and ingredients.

With image-creating methods as well as with the capture of The methods can be differentiated based on the results: the results speak for stirring by hand, even with a smaller amount of water.

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replaced a copper barrel that is similar to the dimensions of the machine (approx. 160 liter in 300 liter volume, 63cm diameter, 96cm height) with brushwood broom, firmly hung up (Fig. 3);

the mechanical method in a *mixer*

Podolinsky with a copper container (approx. 135 liters in 190 liters; 62 cm diameter, 64 cm height) with two stainless steel paddle; Direction of rotation can be changed using a level switch (Fig. 4).

For the *control variant*

The preparations were not used.

The amount of preparation was uniform for all procedures

four horns per hectare of horn manure or 4 g of pebbles per hectare. The output quantity was 40 liters per hectare for the standard and

mechanical process the reduced procedure 5

liters per hectare. The water (Tap water) was heated to body temperature (approx.

36 °C) using a gas water heater. The

Delivery method was usual:

Horn manure was in one

Stainless steel backpack sprayer with Extension tube and out atomizer removed from the nozzle. Through By quickly swinging the spray boom back and forth, the jet disintegrated into a coarse droplet of "rain". The working width was around 15 Meter.

Hornkiesel was used with a back nebulizer (company: Hardi) finely misted. The Working width was depending Air movement 15 to 30 meters.

Results image-creating methods, yield

repeated experiments

came the

During the preparations the working of formative forces are examined before after

after spreading

Over the course of the following day, the plots were also examined for the differentiation of visual forces.

The harvested ones Potatoes were made in the laboratory on their vitamin C content, Extract darkening and means the image-creating methods examined. The earnings the potatoes showed none significant differences.

It averaged 312 dt/ha. The spread between the plots was

low, which indicates uniform growth of the potatoes. This is for further laboratory tests are

important. The potatoes were stored in the cellar according to size. Only the average tuber size was used for further investigations.

Also the vitamin C content showed no significant Influence of the preparations, nor the examination the extract darkening. The The scatter between the samples was at these sizes however, relatively high.

Results image-creating methods

The investigation using The *image-creating methods*, on the other hand, led to Blind test for a clear characterization of the variants. Apart from that from one of the eight blinded samples the four left



Variants are clear Rank rating too. At the The variants *hand-stirred* and

hand-stirred reduced were rated highest, lowest the variant *machine stirred*. The *control* was in the middle. The Statements of the methods

The rise pattern and copper chloride crystallization were correct agree. To understand this shortened review is an explanation of the basis for assessment and a characterization of the Variants required.

Different vessel, stirred differently = other effect? Here variant 2b with hand stirring in a copper barrel



In order to avoid the color and shape differences in the images

To obtain quality statements, it is possible to use reference images.

Is it known how maturity, Immaturity, aging, disturbing Effects (such as radiation) or those for plant organs typical processes (GEIER 2005a) show in the pictures, comparison samples can be used against this background to be characterized. Ratings

based on such reference images are usually aligned with those of ingredients, e.g.

B. ripening parameters, but often clearer. Also in this case

the analyzes (see above) do not significantly separate the variants

Another approach to quality assessment

is to feel emotionally touched by the pictures without any self-consciousness to let and the impression

to be conceptualized (cf. PICARIELLO 2005). This approach can be described as empathetic observation (cf. GEIER 2005b). With appropriate This type of deepening can the image evaluation up to Lead inspiration. In the present case, Both types were evaluated, based on reference images about the physiological Status of the plant and empathetic observation.

Against this background are the variants as follows characterize:

Control: root-emphasized, heavy, strong, moving and possibly somewhat vegetative; *hand-*

stirred & hand-stirred reduced: relatively fine,

radiant and differentiated; certain characteristics of flower and fruit images

of the variant are *reduced* the differences from the control are less pronounced.

machine stirred: finer and more differentiated than that

Control, but not like that significantly reduced as with the *hand-stirred & hand-stirred* variants . Additionally an inharmonious one occurs

Basic approach. In empathetic observation

he also moves as restlessly or "moderately" moved.

The earthy, or root-related character, like him

shows itself in control, is known from potatoes.

Through the preparation treatment, the images

become finer, brighter, more differentiated and more uniform. This are characteristics that occur in ripeness and the plant organs Flowering and fruiting occur.

Against the background of the Reference images can therefore to an improvement of the Quality is determined by the preparation treatment become. The difference to Control is slightly greater with *hand-stirred* than with *reduced by hand*. Further investigations are necessary show whether this difference is relevant to quality.

The *machine-stirred* variant

also has better results Ripening qualities than the control, albeit less significantly reduced than with the *hand-stirred* and *hand-stirred* variants . Only at The *machine-stirred* variant has an inharmonious shape.

Such disharmonies are from disruptive influences



known as electronic Radiation (see MATTHES et al. in LE 3/2007), genetic manipulation (RICHTER & WIRZ in LE 1/2007 and RICHTER et al. 2005) or significant aging. The machine-stirred version was therefore rated the least favorable in the blind evaluation.

Results rational

Research into educational forces

The statements made by means of that could be achieved using the formative force methodology were many times over more clear. Here they are individual procedures are described in summary (2. Horn manure application, source: test protocol from D. Schmidt, 2007). Your detailed presentation will follow at a later time in a detailed Research paper.

Control: Sharp rays hit from the surrounding area directly on the gravel-rich soil. Of this minerals predominate Radiations. The plants have to be in this

They "struggle" under strict forces and stand there somewhat abandoned.

Usual hand stirred Application method: This Barrel of the yard was during of stirring groups Surrounded by helpful elemental beings who... Already knew the process well and with etherization and Astralization of the spray liquid contributed greatly. It worked on the field

Intensively invigorating preparation on the floor area and stimulating (encouraging). the down-to-earth elemental beings. The effect worked far beyond those affected Plants ("landscape-changing").

Reduced amount of water: Around the small pot busy elementals prevailed Creativity, but in law sober mood. In the The field was limited Effect of the preparation the intense stimulation of the Life of the plant from the ground and seemed to be in in a very orderly manner, in keeping with their nature. *Mixer:* Above that Ahrimanic beings drew themselves in a vat (by R. Stei-



ner as essentially characterized forces with a solidification and cold tendency, which work in machines, among other things) together and pushed that otherwise playful Weaving of the elementals into a kind of bondage. By force they worked in a kind of reluctant mood. in The Field

The effect of the preparation went beyond the plants in a kind of "atmosphere change". From this space above the plants worked

Forces alien to nature harden into the foliage. A beneficial, invigorating current was present some kind of cover underneath the leaf surfaces and soil surface.

Conclusion

The studies illustrate that with increasing sophistication

Methodology (and taking into account the world of life forces) a more differentiated picture of the effect emerges the biodynamic

Version 1:

Hand stirring in the wooden barrel (left side, top)

Variant 2a:

Hand stirring in the clay pot, small output quantity (left side, bottom)

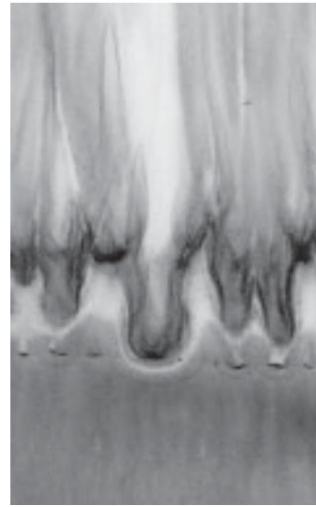
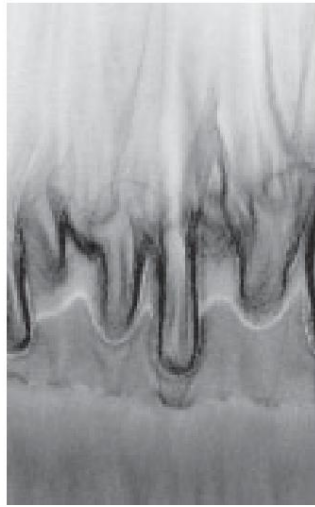
Variant 3:

Mixing machine with copper barrel (above)

Sources:

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Figure 5:
Rising pictures of potatoes.
Left control without preparations,
Middle spray preparations hand-mixed,
on the right, spray preparations
machine stirred.



preparations can result as with methods that only refer to the external appearance. To what extent these results already with the individual the search for a new inner relationship to work help with the preparations everyone can do it themselves decide. However, opened a path, many questions

regarding how to deal with not just the preparations pragmatically according to criteria to solve the feasibility, but specifically aimed at optimizing the work with them to work towards preparations.

Nevertheless, to make statements about the influence of stirring technology of the preparations depends on the product quality

present study just a first building block. That is the results agree those of the observation of educational forces in the field and previous observations agree. For further information However, conclusions are further Investigations to be undertaken and their results to wait and see.

Impact study of horsetail extracts



A multi-year investigation as part of a doctoral thesis

researched whether aqueous extracts from horsetails (*Equisetum spec. L.*) with different production and application to wheat and barley the yield and the

Willingness to attack pa-

can influence breeds. The three types of wheat Kormoran, Arkas and Adler and the barley variety Nakeda were based on their grain and straw yield, the contents ash, silica, phosphorus, Potassium, magnesium and calcium examined in straw. Result: Horsetail extracts can

various resistance properties Plants improve, being fresh Cooking extracts most effective

are. The application increases, among other things: the number of fine leaf hairs.

Raupp, Joachim: Impact ver- various horsetail extracts on the number of Silica cells and the Nature of the Cuti- cular wax layer of the Flag leaves fromWheat and up Flour- dew infestation Barley. Dissertation, University of Bamberg; April

Further literature on 508:

Healing powers of horsetail between soil and plant and in People, von Beate Hübener Schröder fLE 3-1999, p. 36