

The Use and Preparation of a Homemade Conditioner for Vegetables[©]

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INTRODUCTION

I am glad to introduce and share the results of my learning along with the other members of IPPS. Together with my brother, I grow roses, chrysanthemum, and hypericum, among other flowers. This year we started with about 400 ha for growing grains at 23° latitude and 630 m altitude, where the subtropical climate predominates with annual pluviometric indexes (pluviometer = instrument for measuring the amount of precipitation at a given location over a specified period of time) around 1500 mm, mostly during the summer. The soil is a red latosol, typically acid and poor in phosphorus; thus some corrections have to be made to bring the soil to an appropriated status for plant growth. Therefore, I am not able to guarantee the efficiency of this method to other members of IPPS due to the variability in the growth conditions. However, for those who are experiencing problems with their plant growth or development and with frequent infestation by pests such as spider mites or thrips, it is worthwhile to try this method mostly due to its easiness to work out and low cost. Additionally, in my view, the method allows me to partially restore the earlier organic conditions present in the soil that were spoiled by the continuous and systematic use of soluble fertilizers and pesticides.

COMPOST TEA PRODUCTION AND USE

This method was first introduced to me by a company that sold a compost-based product containing different herbs — it seems that company became inspired by biodynamics to achieve that product. In the preparation to use this product the company recommended the use of a plastic container with a volume of 1000 L with 200 kg of cow manure added and 50 kg of their product. The container was then filled with water and left to ferment for 15 days. The reader will realize it is a compost tea. This tea is diluted by 10% for pulverization or it is used in a 200 L per ha rate when added to the irrigation water. When we tried this method, we did not realize any change in the plant culture at first, but this changed when I had the idea of adding a small amount of humic and fulvic acids from leonardite to the tea. We were surprised with the results regarding the improvement in the plant culture and the reduction in pests like spider mites and thrips. After 5 years we are still using this method and we are ready to use it also in the culture of grains and cotton which are irrigated through a circular irrigating system. I have noticed that the best results are obtained when we use the method in rotation cultures from the winter to the summer with appropriate temperatures for the growth. Under these conditions it is possible to use less fertilizer or even no fertilizer at all, but this depends upon the soil and the culture under growth. If one of these conditions isn't present, fertilizer is recom-

mended in order to achieve higher output. This compost tea can also be made in large tanks for larger areas where, for each 1000 L, I use about 200 kg of fresh cow manure plus 25 kg of old and dark compost and 25 kg of old vegetative plant remains found in the ground of natural woods where a range of species grow. It seems that the presence of the vegetative plant remains has a stimulating effect in the radicular system of the plant. After 15 days of fermentation it is possible to collect every day 100 L of tea from a 1000 L container and refill the box with water again. We collect the tea only when the solid portion is very well settled because we are interested only in the liquid portion near the surface. The solid is used in order that the microorganisms can remain in the aqueous medium in their activity of producing different types of organic molecules which are necessary for a plant's metabolism. After the collection and refilling with water, I stir the bottom of the tank with a shovel to release carbonic gas. If I notice that the solid material in the bottom is diminishing I add cow-manure and compost with plant vegetative remains. For each hectare I use 200 L of the tea at the time of irrigation when I add only 150 g of leonardite in a weekly basis. The producer starts to see the effect only in the 3rd week. Depending upon the climatic conditions I believe that the method can be applied every 14 days. A different source of humic and fulvic acids can be used, however those acids are more concentrate in leonardite. For those who want to pulverize it is necessary to know if the plant species has a good absorption by the leaves, otherwise irrigation is indicates. For every 10 L of water 1 L of tea should be used and I additionally add a 1/4 teaspoon of leonardite. The pulverization has to be done weekly. This is the method I use and I believe that who try it will be very satisfied with its results.