Effect of Agnihotra Atmosphere and Agnihotra Ash on plant growth and soil health

Dr. Ulrich Berk

In the last article we have discussed the effects of Agnihotra and Agnihotra Ash on the growth and disease resistence of plants – both under lab conditions and in a greenhouse.
But what are the effects in field conditions? The first systematic study on Homa Organic Farming was done in the Agricultural University in Palampur, Himachal Pradesh (a Northern State in India, at the edge of the Himalaya mountains).
Interesting how this research project started.
In 2006, Karin Heschl and Bruce Johnson, both experts on Homa Organic Farming who live in India, gave presentations at a conference on organic farming. After Karin's presentation in which she mentioned considerable increase in the yield of mangoes in Homa Therapy atmosphere, one participant of the conference, Dr. DS Rathore, at that time Vice-Chancellor of the Palampur Agricultural University, expressed his protest afterwards– saying that it is just impossible that burning cow dung and ghee and uttering some simple mantras could bring about such effects.
Another senior agricultural scientist, Dr. RK Pathak, saw this and talked to Dr. Rathore – saying that is is unscientific to just claim the Homa method cannot work. A scientific approach would be to set up an experiment and show that the method does not work.
Dr. Rathore agreed, so they were setting up a small Homa Organic Farm on the land of the university. In 2007 Reiner and Manu Sczypior, Homa volunteers from Austria who then stayed in India, set up the resonance system. On that farm during several years a lot of research was conducted. Soon it became clear that the original aim – showing that Homa methods do not work – could not be achieved. On the contrary, they got many good results.

They studied the effect of organic nutrients including Agnihotra Ash on crop productivity and soil health.
Medicinal plants like lemongrass, wild marigold, and aloe vera were chosen.
With lemongrass, there was a significant increase in the yield attributes viz plant height, number of leaves and plant spread and ultimately the yield of lemongrass increased with the addition of organics over the control.
Highest biological yield (7833 kg per hectare) was obtained in the treatment with organic manure + Agnihotra Ash + sowing according to the moon calendar, while lowest yield (2833 kg per hectare) was obtained in control + not following the moon calendar. Second best treatments was that using organic manure + Agnihotra Ash, but not following the moon calendar.

Also the oil content was best in treatments with Agnihotra Ash – up to seven times higher than control!
Similar results were with wild marigold and with aloe vera. The authors sum up their findings as follows:
„To sum up, it has been clearly demonstrated in this experiment that in lemon grass, wild marigold and aloe vera Agnihotra Ash was significantly superior to other organic treatments.“

The second part of their research was about soil health, a very important factor also for future production (and declining soil health is a big problem worldwide because of conventional farming).
Following the results they got regarding soil health:

- Homa environment inhibited growth of harmful bacteria like *Fusarium solani, F.oxysporum, Rhizoctonia solani, Sclerotinia sclerotiorum, Sclerotium rolfsii, Phoma medicaginis* and *Alternaria brassicae;*
- Maximum inhibition ranged (29-42%) recorded in Agnihotra hut followed by Tryambakam hut (8-32 .
- Homa environment had adverse impact on appearance and population build up of pests like tomato fruit and shoot borer and semi loper;
- Homa ash possessed deterrent capabilities for management of these insects as compared to untreated tomato plants.
- Applications of Agnihotra Ash in soil at time of transplanting & then adding Agnihotra Ash to irrigation water at regular 15 days interval was effective in management of these insects.
- Effects of Agnihotra Ash on the growth of soil borne pathogens and bio agents indicated that all organisms were inhibited by Agnihotra Ash;
- Aerial micro flora count showed interesting observations:
- Bacterial counts in room where Agnihotra was performed got reduced significantly.
- **In room with only fire did not show any significant change in microbial (bacterial, fungal, and actinomycetes) counts! This shows that control of harmful bacteria is actually the effect of Agnihotra performed properly – just having a fire does not have these effects.**
- In total of 70 beneficial bacterial isolates; out of these 18 isolates are bacteria which make phosphorus in soil water soluble.
- 18 showed IAA production in range of 0.4-15.6 µg/ mL
  (IAA - Indole Acetic Acid - production is a major property of rhizosphere bacteria that stimulate and facilitate plant growth.)
- 7 isolates showed siderophore production in range of 3-14 activity diameters. (Siderophores make iron available to plants.)
- 12 bacterial isolates showed Ammonia production .
- Isolates isolated during and after the Agnihotra were found to show a variety of PGPR traits. (PGPR: Plant Growth Promoting Rhizobacteria.)

- These appear attractive towards development of microbial inoculants and enrichment of various organic manures.

These results made it to the front page of the Journal „Indian Express“. „Bhasm“ or „bhasma“ means „ash“ e.g. in Ayurveda.



Indian Express 27.07.2009 Front Page and cont. page 2

Ashes to yield: organic farming's new mantra

Himachal agri university research shows homa bhasma *improves crop growth,* mantras *cure plant diseases*

RAVISH TIWARI

NEW DELHI, JULY 26

IN the din of concerns expressed over agriculture in Parliament, a small — but interesting — detail on organic farming got drowned.

The government revealed that an organic farming research group working for over three years at the CSK Himachal Pradesh Agricultural University in Palampur has observed improved crop growth when the soil was treated with the by-products of *homa*, primarily ashes, along with organic manure.

PAGE 1 ANCHOR

ANIRBAN BORA

In response to an unstarred question by the BJP's Shreegopal Vyas in the Rajya Sabha, Agriculture Minister Sharad Pawar also said that the research has shown crop diseases to have been treated by the chanting of *mantras*.

"Yes, we have observed better crop prospects when the *bhasmas* were integrated with other components of organic farming. At present, these are only observations from our experiments and not a scientific confirmation. But we hope to publish our controlled observations within a year and a scientific paper

CONTINUED ON PAGE 2