

Agnihotra Ash Amended With Yellow Soil As The Growth Regulator For Zea Mays

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Abstract: The main objective of the present work is to study the influence of Agnihotra ash on agriculture so as to develop a practical approach for enhancing the crop yield. The ash was obtained from the Homatherapy centre of Mandleshwar and the work had been carried in Biotechnology lab of Shri Umiya Girls College Mandleshwar. The study was done with plant *Zea mays*. A comparative study has been done by using Agnihotra ash and control ash. Yellow soil was amended with the ashes for the work. Yellow soil with Agnihotra ash gave the best result. The yellow soil alone gave the poorest result. Agnihotra ash increases the yield and the rate of growth by 20% as compared to the control ash and about 40% as compared to the soil alone. The application of the ash in agricultural field called as Homa farming will enhance good mean to give livelihood opportunity for small resource farmer.

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Introduction

Agnihotra is a sacred tradition started by the 'Rishis' of ancient India. It is now considered by some as the worship of the Lord Yajna Naarayana. 'Agnihotra' then means worshipping the Lord Vishnu. Agnihotra (Homa) consists of making two offerings to the fire exactly at the time of sunrise & sunset along with two small Sanskrit mantras. The offerings consist of two pinchfuls of uncooked rice grains smeared with a few drops of cow's pure ghee (clarified butter). The fire is prepared out of dried cow dung cakes in a small copper pot. First, a small piece of the cow dung cake was taken and placed it at the bottom of the pyramid pot. The other pieces of cow dung cakes were arranged around it neatly. Some cow ghee at one end of small cow dung piece had been put, and then lights it with match stick. The piece of cow dung is lighted with fire then put it in copper pyramid pot. Two pinch full of clean, unbroken rice grains (raw) are grasped on one's left palm or in a small dish. These rice grains are smeared with a few drops of cow's pure ghee, and then divided in two parts. At exact time of sunrise and sunset saying 'Svāhā' one part of the rice grains to the fire is offered and then the next is done in similar way. After the completion of the whole process, the ash obtained is called as Agnihotra ash. Agnihotra is regarded a process of purification of the atmosphere as a cumulative effect of various scientific and sonic principles harnessed to give rise to an unparallel purifying and healing phenomenon. The ash obtained from the same process irrespective of any time

limitation and the use of simple copper pot is considered as the control ash. The addition of appropriate quantity of Agnihotra ash with soil changes the composition of soil which increases the beneficial aspects of the same towards the growth of agricultural plant. It is the ghee used in Agnihotra process that is the catalytic factor and on a more subtle level the Mantras interacting with the combined effect of the burnt ghee and rice. This combination enters the soil after returning from the solar range. It enters the plants by, one might say, attaching itself to minerals and water absorbed by the root system of the plant. The ghee acts as a catalyst creating a chemical reaction with the plant aiding in enzyme and vitamin production and encouraging and increasing the cyclic rate. In other words the plants mature faster, taste better and are better just by mere performance of Agnihotra in the garden. Agnihotra and Agnihotra ash, when put on the soil, help stabilize the amount of nitrogen and potassium present. Agnihotra ash increases the water soluble phosphorous extracted from soil (Berk 2009). In the institute of commercial Horticulture, Tamil Naidu Agricultural University, Ooty, Comparative studies were done on flower mainly, but also on some kinds of vegetables, and the results are that organic farming with Agnihotra gave better results in terms of yield, quality and shelf life as well as disease resistance (Selveraj 2009). Several reports from India, Peru, Venezuela, US and Austria, some of them including scientific documentation, give account of the beneficial effects of homa farming on plant

germination, development, health and pest resistance, as well as on yield and product quality (Atul et al 2006, Bhujbal 1981, Perales et al 2000, Quintero 1998, Schinagl2004).

Material and Method

Yellow soil was collected from Umiya college campus and the soils were grounded and passed through 2mm sieve. Agnihotra ash and control ash were collected from Homa Therapy Centre. Samples were prepared by mixing each type of soil with two types of ashes respectively in 4:1 ratio. Three replicates of 100 gm of each type of sample had been taken in petriplate namely

- Only Yellow Soil (100 gm)
- Yellow Soil + Agnihotra ash (80 gm + 20 gm)
- Yellow soil + Control ash (80 gm + 20 gm)

Seeds of *Zea mays* had been soaked in water for 24 hours and then 6 seeds of *Zea mays* had been seeded in each plate. The plates had been kept for one month in same condition of sun light, shed and water. After one month different parameters of soils and plants had been studied and compared.

Result and Discussion

The Table 01 shows the weight of soil before and after the experiment. By detail study we find that the water holding capacity does show any large variation, but on studying the dry weight we could find that soil with Agnihotra ash has minimum weight that means the nutrient absorption is maximum. Thus the Agnihotra ash increases the absorption by increasing the pore size of the root.

Table 01: Weight of the soil sample used

| Sample | Initial Weight (gm) | Weight after experiment | |
|---|---------------------|-------------------------|-----------------|
| | | Wet Weight (gm) | Dry Weight (gm) |
| Yellow soil alone 1 st | 100 | 109.6725 | 93.7430 |
| Yellow soil alone 2 nd | 100 | 112.6875 | 94.2100 |
| Yellow soil alone 3 rd | 100 | 113.1225 | 94.8025 |
| Yellow soil + Control ash 1 st | 100 | 103.6650 | 94.4380 |
| Yellow soil + Control ash 2 nd | 100 | 114.3300 | 93.9275 |
| Yellow soil + Control ash 3 rd | 100 | 109.0565 | 93.2790 |
| Yellow soil + Agnihotra ash 1 st | 100 | 110.3150 | 92.9010 |
| Yellow soil + Agnihotra ash 2 nd | 100 | 111.6335 | 93.0975 |
| Yellow soil + Agnihotra ash 3 rd | 100 | 113.9555 | 94.4708 |

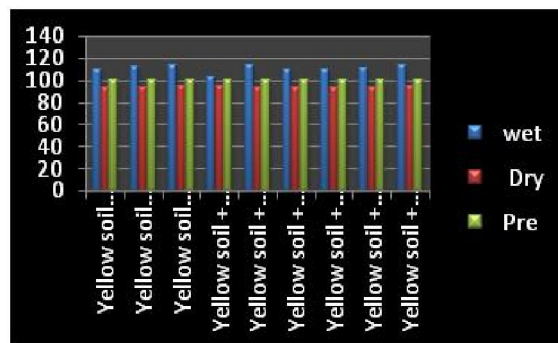


Fig 01: Comparative weight of the soil sample

The Table 02 and Fig 02 show the comparison between different morphological characters of the plants in different plates having three types of soil samples. The Agnihotra Ash amended with yellow soil show better results followed by the control Ash with yellow soil and then yellow soil alone.

Table 02: Comparative studies of plant's characters under different plates

| Soil Sample | Average Leaf Length | Average Root Length | Average Shoot Length | Weight |
|---|---------------------|---------------------|----------------------|--------|
| Yellow soil alone 1 st | 6.3 | 7.58 | 8.94 | 0.6282 |
| Yellow soil alone 2 nd | 3.75 | 4.2 | 7.0 | 0.7318 |
| Yellow soil alone 3 rd | 5.82 | 5.12 | 8.24 | 0.6795 |
| Yellow soil + Control ash 1 st | 9.7 | 11.08 | 11.68 | 1.0226 |
| Yellow soil + Control ash 2 nd | 4.13 | 8.57 | 6.0 | 0.5536 |
| Yellow soil + Control ash 3 rd | 4.58 | 8.38 | 6.26 | 0.6107 |
| Yellow soil + Agnihotra ash 1 st | 8.88 | 8.97 | 12.33 | 1.2052 |
| Yellow soil + Agnihotra ash 2 nd | 5.08 | 7.34 | 7.06 | 0.7766 |
| Yellow soil + Agnihotra ash 3 rd | 5.82 | 6.33 | 7.95 | 0.6748 |

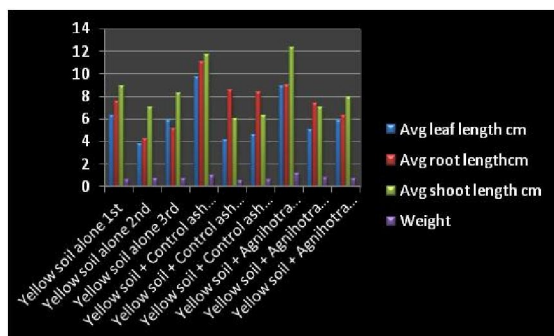


Fig 02: Comparative studies of plant's characters under different soil sample.

The Average values of all the characters are given in Table 03 and Fig 03. From the table and the graph it is very clear that agnihotra ash stimulate the growth of *Zea mays* much faster as compared to Control Soil Samples.

Table 03: Comparative studies of plant's characters under different soil sample.

| Soil Sample | Average Leaf Length | Average Root Length | Average shoot Length | weight |
|-----------------------------|---------------------|---------------------|----------------------|--------|
| Simple Yellow Soil | 5.29 | 5.63 | 8.06 | 0.6732 |
| Yellow soil + control Ash | 6.13 | 9.34 | 7.98 | 0.7290 |
| Yellow soil + Agnihotra Ash | 6.59 | 7.55 | 9.11 | 0.8855 |

Table 04: Numbers of plants grown in different soil sample.

| Soil Sample | Numbers of Plants grown |
|---|-------------------------|
| Yellow soil alone 1 st | 05 |
| Yellow soil alone 2 nd | 02 |
| Yellow soil alone 3 rd | 05 |
| Yellow soil + Control ash 1 st | 05 |
| Yellow soil + Control ash 2 nd | 03 |
| Yellow soil + Control ash 3 rd | 05 |
| Yellow soil + Agnihotra ash 1 st | 06 |
| Yellow soil + Agnihotra ash 2 nd | 05 |
| Yellow soil + Agnihotra ash 3 rd | 06 |

The Above tables shows the number of plants grown in each type of soil sample, The sample with Agnihotra ash with yellow soil shows 94.4% of

growth whereas control ash with yellow soil gives only 66.67% and Yellow Soil Shows 72.2%.

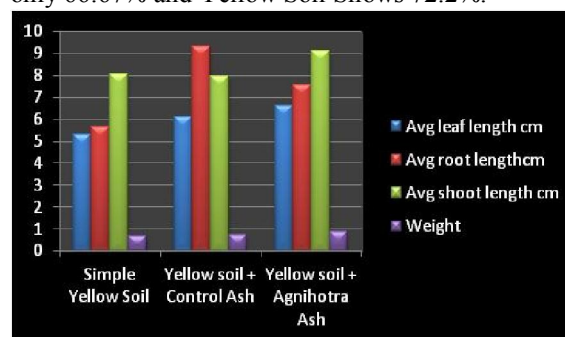


Fig 03: Comparative studies of plant's characters under different soil sample.

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