

Germination of Green Gram with Effect of Sriyantra

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Abstract: Yantras are geometrical figures intended to represent the basic energies and are the graphical representation of mantras. Sriyantra signifying unlimited, abundance and positive powers. Here experiment had conducted on germination of green gram with the influence of sriyantra. In this experiment two types of sriyantra made of copper are used for the treatment. Meru sriyantra of size 4.1 cm dia and height of 4.3 cm had shown 8% more percentage germination, 27.48% (0.36 cm) more mean radical length, increase in fresh weight of 44.32% (22.62 gm) and increase in dry weight of 6.53% (0.89 gm) compared to control sample. Bhuprasthana sriyantra of size 5.6X6.6 cm had shown 8.75% more percentage germination, 311.45% (4.08 cm) more mean radical length, increase in fresh weight of 81.92% (41.81 gm) and increment of 7.20% (0.98 gm) in dry weight compared to control sample. Samples treated with sriyantra had increment in percentage of germination, radical length, fresh and oven dry weight of germinated seeds compared to control sample seeds. Two dimensional bhuprasthana sriyantra is more positive effect than three dimensional meru sriyantra.

Keywords: Germination of seeds, Meru sriyantra, Bhuprasthana sriyantra, Radical length, Fresh weight and dry weight.

1. Introduction

Vedic yantras are geometrical figures intended to represent the basic energies. Just as every elementary geometrical figure, a straight line, a square, a cross or a triangle, has a symbolic value corresponding to the basic notions, similarly the yantras symbolize one or the other power or energy. In other words, vedic yantras are the graphic representations of mantras. Yantras can be drawn, engraved or painted on a variety of substances. Etymologically the word yantra contains the root yam to sustain, support and the -tra suffix expressing instruments. Yantra is an instrument to support. Sriyantra is a diagram formed by nine interlocking triangles that surround and radiate out from the central (bindu) point. Sri means wealth and yantra means instrument. The sriyantra brings about material and spiritual wealth, sriyantra blesses the worshiper with peace, happiness, popularity, power, authority, wealth, prosperity and success. The two dimensional sriyantra is called as bhuprasthana sriyantra and when it is projected into three dimensions is called meru sriyantra [1]. High level of mathematical knowledge is involved in the construction of spherical sriyantra and plane sriyantra [2]. Rao studied on effectiveness of non linear method for the construction of ancient geometrical form of sriyantra of both plane and spherical forms of any required size ranging from miniature objects of worship to temple structure with a high degree of accuracy [3]. The algorithmic approach is presented in the study of Santhi [4] by focusing on highest level of accuracy and optimal configuration of sriyantra of two dimensions. Sriyantra's diagram structure is in tune with the mechanisms of human perception and nervous activity. Sriyantra induces higher activation of right hemisphere as compared to that of the left one [5]. Mazumder had studied on the buying behavior of gemstone and yantras among house holds and found out that

parents influence, trust in deity and impact of society were the main factors that persuaded respondents into believing in such gemstones and yantras [6]. In this study meru sriyantra and bhuprasthana sriyantra are used to know their effects on the germination of green gram seeds.

2. Materials and Methods

In this study two types of sriyantra made of copper are used for the treatment, meru sriyantra (Y1) is of size 4.1 cm dia and height of 4.3 cm; bhuprasthana sriyantra (Y2) is of size 5.6X6.6 cm. Meru sriyantra was kept diametrically parallel to magnetic North direction and bhuprasthana sriyantra was kept as one of the sides oriented in the magnetic North direction. Ten replications were conducted for each treatment and for control (C). Each replication contained randomly selected 40 green gram seeds. Seeds were soaked with distilled water in petri dish for 9 hours. Soaked seeds were sandwiched between wet filter paper in a petri dish. Then petri dish was covered with respective treatments, meru sriyantra and bhuprasthana sriyantra. Control sample was covered with white paper. Samples are allowed germination for two days. Fig. 1 shows pictorial demonstration of experimental procedure. On day 2, number of emerged seeds was counted and the radical length of each seed was measured and the fresh weight of the germinated seeds was also measured. Then germinated seeds were kept in hot air oven at 60°C for six hours and then measured its dry weight. Fig. 2 shows green gram seeds germination pattern on day 2 of different treatments.

3. Results and Discussions

Table 1 contains dry weight of seeds and day 2 parameters results: percentage of emergence, mean and standard deviation



Legend: C-Control, Y1-Meru sriyantra, Y2-Bhuprasthana sriyantra
Figure 1: Pictorial demonstration of experimental procedure

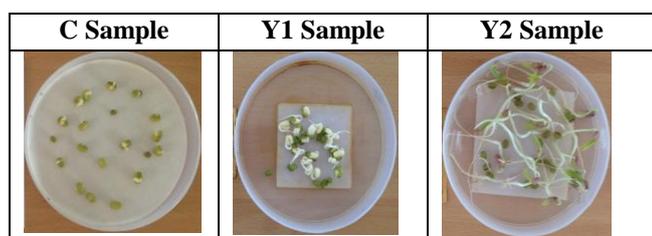


Figure 2: Green gram seeds germination pattern

of radical length, percentage increase in mean radical length, fresh and oven dry weight and percentage increase in fresh and oven dry weight of germinated seeds. Table 2 shows results of two sample independent t-test. Fig. 3 shows growth of radical length of each green gram seed. Test results on day 2 had shown that with respect to control sample (C) *meru sriyantra* (Y1) sample showed 8% more percentage germination and *bhuprasthana sriyantra* (Y2) sample had 8.75% more percentage germination. Sample Y1 had 27.48% (0.36 cm) more mean radical length and Y2 sample had 311.45% (4.08 cm) more mean radical length compared to control sample and Y2 had 222.75% (3.72 cm) more mean radical length compared to Y1 sample. Y1 sample had increase in fresh weight of 44.32% (22.62 gm) and sample Y2 had increase in fresh weight of 81.92% (41.81 gm) compared to control sample and Y2 of 22.05% (19.19 gm) compared to Y1 sample. Of oven dry weight of germinated seeds, Y1 sample had increment of 6.53% (0.89 gm) and Y2 sample had increment of 7.20% (0.98 gm) compared to control sample and Y2 had increment of 0.62% (0.09 gm) compared to Y1 sample. *Sriyantra* samples Y1 and Y2 had increment in all the parameters like percentage of germination, in mean radical length, fresh weight and oven dry weight compared to control sample. This might be due to *sriyantra* acting as producer of energy of creation as *sriyantra* consists of four rows of upward pointing triangles called *vahini*, symbolizing the male element (*pursha*) and five rows of downward pointing triangles called *sakthi*, symbolizing the female element (*prakriti*) of divinity and so represent the union

of masculine and feminine divine [1]. The *sriyantra* architecture is based on the ancient *vedic* science. It adds constructive celestial energies into surroundings by removing all the unconstructive vibrations. It absorbs scrupulous cosmic ray wave emitted by the planets and other universal objects and convert them into positive vibrations [7]. Sprouting is a nutritional or biological phenomenon with its own enzyme activity [10]. Thus here *sriyantra* might have activated enzymes more in the seeds and thus increased their radical length.

Table 1: Summary of Results

Variables	Treatment		
	C	Y1	Y2
Weight of air dry sample (gm)	18.62	18.61	18.62
Emergence (%)	91	99	99.75
Mean radical length (cm)	1.31	1.67	5.39
Change in mean radical length (%)	-	27.48	311.45
Radical length (SD)	0.79	0.81	2.71
Fresh weight (gm)	51.04	73.66	92.85
Change in fresh weight (%)	-	44.32	81.92
Oven dry weight (gm)	13.62	14.51	14.60
Change in oven dry weight (%)	-	6.53	7.20

Legend: Total number of seeds in each treatment: 400 seeds
 Soaking period: 9 hours
 Germination period: 48 hours
 Range of test temperature: 28~32°C
 1. Y1 and Y2 samples have more percentage emergence, radical length, radical fresh weight and radical dry weight compared to control sample.
 2. Y2 sample had more percentage germination, radical length, radical fresh weight and radical dry weight compared to Y1 sample.

Table 2: Design 2-Summary of Welch independent *t*-test Results

Treatment	t-value	df	p-value
C vs Y1	-6.24	797.66	7.049e-10*
C vs Y2	-28.84	467.02	2.2e-16*
Y2 vs Y1	-26.29	469.83	2.2e-16*

Legend: **p*<0.001

1. Y1 and Y2 samples shown exponential significant in radical length compared to control sample.
2. Y2 sample have exponential significant in radical length compared to Y1 sample.

Meru sriyantra is of three dimensional multi pyramid geometric grid and stands as a symbol of *sumeru* mountain balancing the whole universe and may be acts as positive energy or bio energy or subtle energy converter and might enhanced nutrients that gave more percentage germination and radical length of germinated seeds by absorbing earth magnetic field and universe cosmic energy [8, 9].

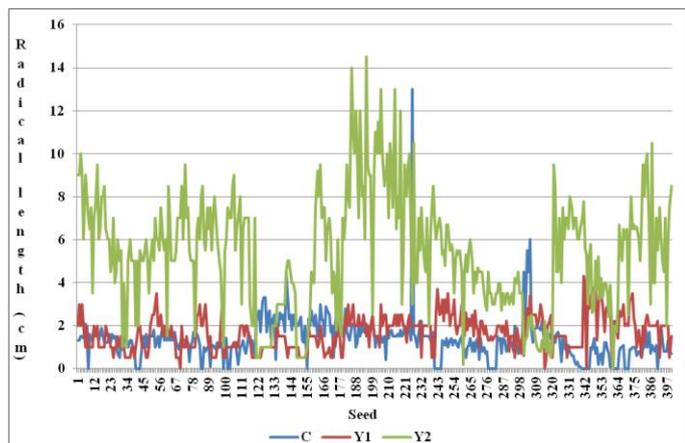


Figure 3: Green gram seeds radical length pattern

4. Conclusions

Samples treated with both forms of *sriyantra*, *bhuprasthana* and *meru* had increment in percentage of germination, radical length, fresh and oven dry weight of germinated seeds compared to control sample seeds. Two dimensional *bhuprasthana sriyantra* is more positive effect than three dimensional *meru sriyantra*.

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