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Effect of potentised homoeopathic medicines on the germination and growth of *Pisum sativum* L.

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Abstract

The study is to know about the possible effects of arsenicum album on germination of the *Pisum sativum* (pea seed). The pea seed were treated with three different potencies of arsenicum album (30C, 200C, 1M). with the increase in potencies the possible changes in the root can be seen. Hence the effect on growth was obtained on medicines when its compared to untreated one after the dilution of drug beyond the avogadro's number.

Keywords: Arsenicum album, Avogadro's number

Introduction

Homoeopathy is a system of medicine where the medicines were proved upon the healthy human being, animals and plants. This system works based upon the "law of similar". Homoeopathy has the capacity to treat the diseases of plants as well. That's how the field of Agro-homoeopathy has emerged.

Agro-homoeopathy allows the plants to improve in growth and also protect the plants from getting diseased. Hence, in this experiment the pea seed were selected and treated with different potencies of homoeopathic medicine.

This process is to observe the germination and growth of the pea seeds [*Pisum sativum*] which are treated with different potencies of homoeopathic medicine and compared with the seeds which are untreated with medicines (distilled water).

Materials and Methods

Materials

Dry seeds of pea (*Pisum sativum*) were taken and stored in a dark room. Uniformly sized seeds were selected and are washed thoroughly with tap water and were left to dry. Forty sterilized seeds were taken and kept in a sterilized plastic glass over the paper towel. Ten millilitres of distilled water mixed with homoeopathic medicines of different potencies were sprayed at respective glass. The seed normally considered to germinate when the radicle of the seed started to protrude. The germination percentage was calculated by using the formula,

$$\text{Germination percentage} = \frac{\text{No of seeds germinated} \times 100}{\text{total no. of seeds sown}}$$

After like two days the germination percentage of the seeds were noted. After about 14 days, various growth parameters have been noted down.

Treatment

The treatments used in this experiments

- Arsenicum album 30C, 200C, 1M.
- Distilled water.

All the medicines of different potencies obtained were diluted with the distilled water and given ten downward successions.

Analysis of growth of the seed

The root length and shoot length of the seed were recorded. The root and shoot length were measured with the help of measuring scale and thread on a daily basis to know the growth difference Between the seeds treated with different potencies.

Result and conclusion

Germination rate

To stimulate the germination process of the seeds, the medicines were treated with the homoeopathic medicine arsenicum album of different potencies along with the untreated one (distilled water) i.e, control one (fig 1). The germination rate is higher in seeds treated with homoeopathic medicines. Though all the seeds treated with medicines showed good germination rate, the seeds treated with 200C showed low rate than the control one and it is well obtained in arsenicum album 1M potency.

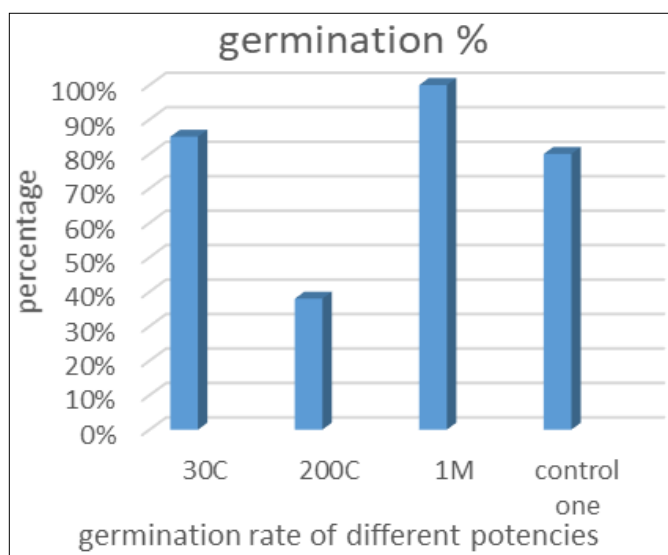


Fig 1: Germination percentage of pea seeds on different potencies and control one.

Growth rate of the seeds

As the seeds were treated with homoeopathic medicines of different potencies showed a gradual increase in the plant growth. The shoot length and root length differs from potencies. The highest shoot length (5.5cm) and highest root length (10cm) was obtained from arsenicum album 1M at the end of 12 days using the paper towel method.

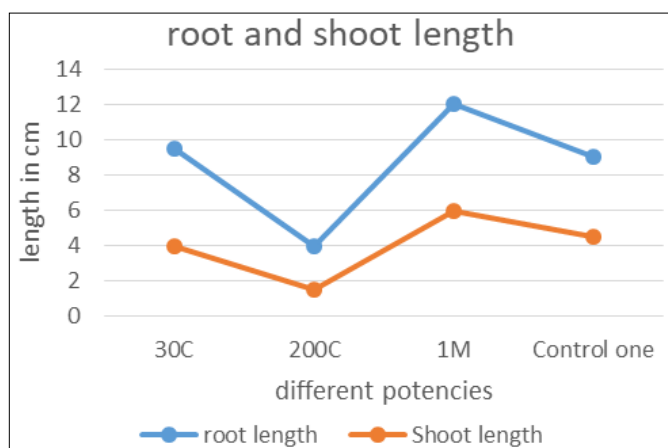


Fig 2: root and shoot length

Through this experiment we can see that a simple crude homoeopathic medicine which is then potentised and applied to plants shows much growth difference.

Conclusion

As from the experiment we can observe that the potentised homoeopathic medicines which were used on the pea seed (*Pisum sativum*) shows a good response in germination process as well as the growth of the seed compared to the control one.

This method of treating the plants with homoeopathic potentised medicines can improve the biological benefits. The medicines can be further used to improve the plants health and future benefits from the plants.

Conflict of Interest: Not available

Financial Support: Not available

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