

FUNDAMENTAL RESEARCH

Management and Control of Genetic Processes in Cotton Plants through Homoeopathy

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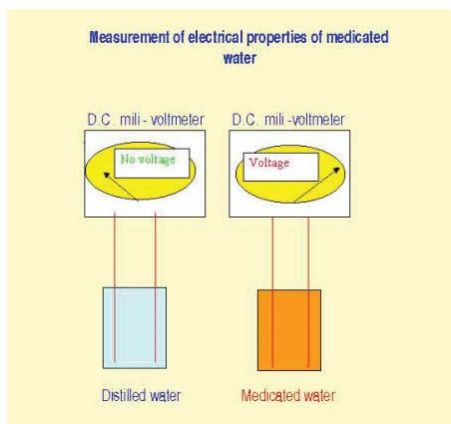
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Abstract

Detailed study on effects of homoeopathic drugs on plant bodies was undertaken at Central Institute for Research on Cotton Technology (ICAR) in Mumbai. This paper presents promising results of some of these preliminary experiments. This study reveals that electrically neutral and pure distilled water develops internal electrical charges as soon as homoeopathic drugs are added into it. Different drugs as well as different potencies of same drug develop different electrical charges. Further experiments, conducted on plants, proved that medicated water containing drugs of highest potency strongly influences the genetic processes of plants. It can accelerate germination process, can shorten cultivation period, can enhance yield as well as quality of cotton crop and also makes it possible to grow it during off-season.

INTRODUCTION

Homoeopathic drugs are prepared by successively diluting the drug in the medium of rectified spirit. The original drug diminishes gradually with each successive dilution. After few diluting stages, the original drug physically disappears from the medium (spirit). However, with each successive dilution, the drug becomes effectively more powerful as far as its effect on human body is concerned. Researchers of medical science could not find the physical presence of original drug in homoeopathic medicines of higher dilutions (potencies). Under the circumstances, very credibility of homoeopathic stream of science is being suspected.



Under this background, research study on the current subject was carried out in two phases. In the first phase of work, through series of experiments, it is established that electrically neutral pure distilled water develops internal electrical charges as soon as few drops of homoeopathic medicines are added into it. Different drugs as well as different potencies (dilutions) of same drug produce different electrical charges.

In the second phase of this study, through various experiments conducted in pots, it is proved that such medicated water containing drugs like Abrotanum etc. in highest potency (containing electrical charges) influences the genetic processes of cotton plants in a big way. It can accelerate germination process, can shorten the cultivation period, can enhance the yield and quality of cotton crop and also makes it possible to grow it during off-season.

MATERIALS AND METHODS

Homoeopathic drugs are, generally, used by diluting them in water. Hence throughout this research study, 0.3 ml of drug has been added in 10 ml of pure water to prepare medicated water for using it in experiments.

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For evaluating the electrical properties of drugs, different samples of medicated water were prepared. Different potencies of most commonly used drugs were used to prepare these samples. Initially pure distilled water was tested for electrical properties. Measuring probes of a sensitive multimeter were kept 4.5 cm apart within the medicated water of each sample for testing electrical properties. Distance between measuring probes was varied within one of the sample of medicated water to investigate its effect on readings. These experiments were repeated after grounding each of samples by connecting the same to earth.

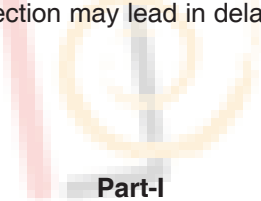
In the second phase of study, such medicated water was used for germination of cottonseeds in water as well as in soil. Adult (medium staple length hybrid) cotton plants grown in pots (15 litres capacity) were administered drops of medicated water to find its effect on flowering and fruiting processes. Yield and quality of cotton from medicated plants were examined to evaluate its effect. Cotton plants were sown in pots in the month of March (off season) and medicated every seventh day to evaluate its effect during unseasoned cultivation.

Drugs used for influencing genetic processes

- A) For accelerating rate of germination Baryta Carb. CM (potency) and Abrotanum CM were used.
- B) For accelerating rate of growth of plant subsequent to germination stage (for unseasoned cultivation) Iodum CM was used. It resulted in shortening the period required to grow into adult plant.
- C) For accelerating rate of flowering and fruiting Phosphorus CM was used. It also resulted in enhanced yield and improved quality of cotton crop.

(It was observed during these experiments that some drugs retarded these genetic processes and extended the period for it to almost twice than that required normally under control conditions. However, since those findings were not useful in the field of agriculture, study in that direction was not taken up. In case of medical field, study in this direction may lead in delaying the aging process and/or extending the life span of human beings.)

RESULTS AND DISCUSSIONS



Electrical properties of medicated water

It was found that pure water was originally neutral in respect of electrical properties. On examining samples of medicated water, as shown in Figure-1, it was found that this medicated water developed specific potentials (D.C. voltages). This way when different drugs of different potencies were tested, each corresponding sample found to contain specific different potential. Similarly different drugs in CM (100,000) potency were tested. In this case also different drugs produced different potentials. This is evident from Tables 1, 2 and 3.

Table-1: Electrical properties of water containing homoeopathic drug — Nux Vomica in different potencies

Drug-potency	Q	6	30	200	1M (1000)	10M (10,000)	CM (100,000)
D.C. Voltage in mV	2.3	5.0	17.0	7.0	-6.9	-17.5	-11.8

Table-2: Electrical properties of water containing homoeopathic drug — Mag Phos in different potencies

Drug-potency	Q	6	30	200	1M (1000)	10M (10,000)	CM (100,000)
D.C. Voltage in mV	-	31.7	41.7	4.7	-23.8	13.3	23.5

Table-3: Electrical properties of water containing different homoeopathic drugs in CM potencies

Drug	Mag Phos	Nux Vomica	Iodum	Phosphorus	Tuberculinum
D.C. Voltage in mV	23.5	-11.8	-17.9	4.3	-2.6

It was further revealed that as the distance between two measuring probes was altered, the voltage between them also altered. This is evident from Table-4.

Table-4: Effect of distance between measuring probes within medicated water on measurement of potential difference

Spacing	4 cm	3 cm	2 cm	1 cm	0.5 cm
D.C. voltage in mV	-87.1	-70.2	68.9	63.6	61.1

Grounding one of the probe or even both the probes did not discharge this electrical charge. This suggests development of inter-molecular electrical charges within the medicated water.

From forgoing experiments, it became clear that electrical properties of distilled water changes when it gets mixed with homoeopathic drugs. Different drugs produce different electrical charges within water. Even different potencies of same drug also produce different electrical charges in water. Further none of these charges were alike. This strongly indicates existence of inter-molecular electrical charges in medicated water.

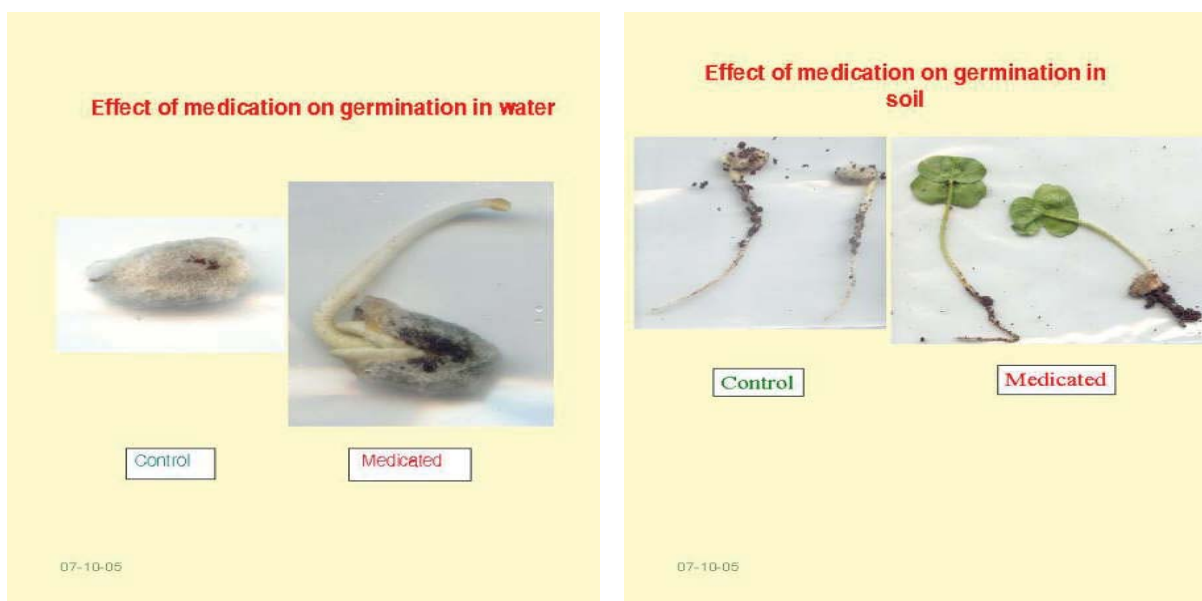
Part-II

Effect of drug on plants

Development of plant from seed begins with the process of germination. In case of children with improper growth, administration of certain homoeopathic drugs was observed to set right this defect. So it was decided to verify effects of drugs on germination process of cotton seeds.

Effect on Germination

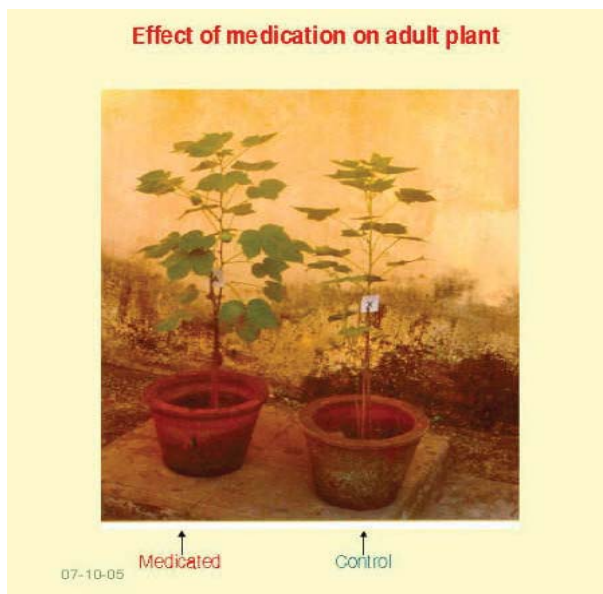
For this part of study, medium staple length hybrid cotton seeds were divided in two groups. Each seed from first group was submerged in 5 ml of plain (tap) water. Similarly each seed from second group was submerged in 5ml of medicated water. Both sets were kept under identical conditions for 96 hours. They were examined after 96 hours. It was observed that the rate of germination of seeds kept in medicated water was significantly higher than that of those kept in plain water (Figure-2).



Germination test was performed in soil also. The seeds were divided in three groups. Seeds from first group were sown in soil without giving any treatment. Seeds from second group were soaked in medicated water containing one medicine before sowing in soil. Seeds from third group were soaked in medicated water containing dose of two medicines before sowing. It was observed that seeds, which received dose of two medicines, germinated very quickly and the sprouts appeared on the surface of the soil within 48 hours only. Similarly, sprouts from seeds containing dose of single medicine appeared on the surface of the soil within 72 hours. Sprouts from untreated seeds did not appear on surface of soil even after 72 hours. However, after 72 hours all the sprouts were removed from soil. It was seen that the roots of sprouts containing dose of two medicines were so much spread under the soil that they were broken and could not come out from soil. The enhanced rate of germination of these seeds is clearly visible in Figure-3.

Effect on adult plants²

For conducting this test, untreated medium staple length hybrid cotton seeds were sown in pots. It was observed that after 110 days all the plants were fully grown, but flowering process was not started on any of the plants². These plants were divided into two sets. Plants from first group were not given any treatments. Plants from second set were given a dose of medicated water. Within one week flowers appeared on treated plants. In the second week, fruits were seen on these plants (Figure-4). Untreated plants did not get any flower by this time.



After collecting first crop of cotton from treated plants, another dose of medicine was administered to each of them. Again flowers appeared within one week and fruits were seen in subsequent week. Second crop of cotton was collected from treated plant. At this time first crop was also collected from untreated plants. Entire cultivation process was completed in about seven months period².

Effect on quantity of yield²

Quantity of cotton collected from each of these two sets was weighed. Average (seed cotton) yield per medicated plant was 25.09g. Similarly average (seed cotton) yield per untreated plant was 10.39g. This amounts to approximately 250 % increase in yield due to medication.

Effect on quality of yield

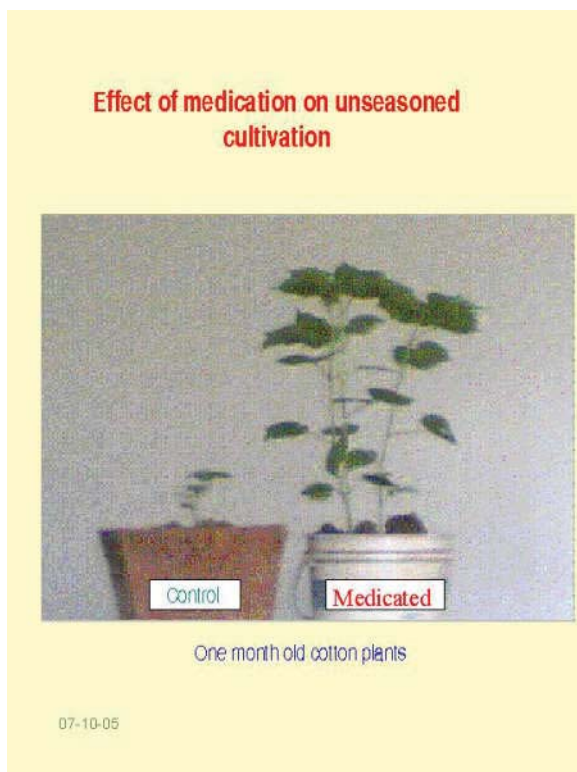
Quality of cotton collected from both sets of plants was evaluated. 50 gm lint each from medicated as well as control plants were subjected to HVI test. The result of this test is shown in Table-5. It is seen that there is overall improvement in quality of cotton on account of medication.

Table-5: Effect on quality of cotton

	2.5 % Span length in mm	Micro. value	Uniformity Ratio %	Tenacity At 3.2 g/t (Strength)	% Elongation	Short fibres %
Cotton from control plants	28	4.8	52.6	19.27	5.8	6.5 %
Cotton from medicated plants	29.65 ↑	4.7 ↑	54.9 ↑	21.91 ↑	6.8 ↑	5.9 % ↑

Effect on unseasoned cultivation

For this part of research study, seeds were sown in two sets of pots during the month of March, which is not the normal season for cotton crop. In first set, seeds were sown and watered without receiving any treatment. In case of second set, seeds were soaked in medicated water before sowing. They were also watered with medicated water. Normal organic manure was used. The difference in growth after 30 days and that after 70 days is clearly seen in Figure-5 and figure-6 respectively. It was also observed that cotton crop was ready in medicated plants in just 100 days. This points to reduction in cultivation period on account of medication. Normal cultivation period recorded in case of seasonal plants sown in pots was 200 days².



Effect on other crops

Similar experiments have been conducted on wheat, gram, mango and grapes also. In all cases, the drugs have produced profound effect on genetic functions. However, it is observed that different drugs are required for different genetic processes e.g. a drug influencing germination process does not affect flowering process. Different crops require different drugs to influence same genetic process.

CONCLUSION

From forgoing study, it became clear that the specific electrical charges developed in the medicated water penetrated plant cells and influenced the genetic processes of the plants.

Use of homoeopathic drugs in agriculture is simple, inexpensive and effective. It can be concluded from this study that it is possible to increase yield as well as improve quality of agricultural crops through homoeopathic drugs.

REFERENCES

1. Gangar HU, Revolution in cultivation is possible by using *Homoeopathic medicines* (in Hindi), Kheti Dunia, 15/10/2003.
2. Gangar HU and Sudha Tiwari, Homoeopathy: A Superior Substitute of Genetic Engineering for Cotton Cultivation, *Bhartiya Vaigyanik evam Audyogik Anusandhan Patrika*, 2004, 1, 80-83.