REPORT ON ORGONE ACCUMULATOR STIMULATION OF SPROUTING MUNG BEANS

by James DeMeo, Ph.D.

ABSTRACT

A controlled experiment was undertaken over three summers, from 1998 to 2000, for evaluation of the growth-enhancement effects of the Reich orgone accumulator on sprouting mung beans. An overview of published accounts from both professional journals and a popular magazine indicated this device, which has been subjected to unprecedented hostility since the time of its discovery, has real life-positive benefits to people, laboratory animals and plants. Early preliminary tests by the author confirmed a clear growth-enhancement effect upon sprouting mung beans. This paper reports on a more systematic and controlled study. Mung bean seedlings were selected for ease of use and ability to control for various environmental factors. The experiment proceeded outdoors, at the author's high altitude laboratory, in paired orgone accumulator and control enclosures. Mung beans were randomly selected from the same well-mixed batch of seeds, divided into orgone-charge and control groups, placed into their respective enclosures, supplied with fresh water daily, and maintained under nearly identical darkened, confined and sheltered environmental conditions. A 34% increase in growth was observed in the group of seedlings kept inside the orgone accumulator, as compared to the control group ($p<0.0001$) kept inside a non-accumulating enclosure; the orgone accumulator group also showed increases in germination rate, water consumption, and group weight gain, though sugar content as determined by both taste and measured refractive index of sprout juices (brix readings) was higher in the control group. A separate experiment was undertaken within two control enclosures, to determine how small temperature variations alone might influence the seedling growth. Only a very slight and fully insignificant influence, of around 0.6% growth increase, was observed in seedling groups deliberately kept at a temperature up to 1.5°C higher than the other. This amount of thermal variation was about three times that recorded in the actual orgone-charged versus control experiment indicating the much larger growth-boosting effect from the orgone accumulator could not have been due to observed half-degree residual thermal variations. The results confirm, the orgone accumulator is a special device of importance, able to significantly influence the growth of seedlings.

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Introduction and Background

A good part of the discussion on Wilhelm Reich's *orgone accumulator* device focuses upon the physical evidence for the orgone energy, in the measurement of temperature, electroscopical discharge rates, Geiger-counter reactions, water evaporation, and the like. However, Reich's original discovery developed from the study of living organisms, and he gave the name *orgone* to the energy for that reason. My earliest research into Reich's monumental body of work was also in the direction of the biological sciences. Some of the most compelling experiments demonstrating the unusual properties of the orgone accumulator come from its observed effects upon living creatures. In the 1970s, I undertook a series of plant growth-enhancement experiments with the orgone accumulator, replicating the work that Reich and others have undertaken on the question, which has shown fairly consistent positive effects.[1] While the physics experiments developed by Reich are very important, the biological effects remain more foundational, particularly given their replicability and useful benefits in the treatment of serious injury and illness. For this reason, I sought to develop an experimental protocol on seed-sprouting inside the orgone accumulator which is fairly simple to reproduce and control, and the results of which can stand up against classical scientific objections.

The method employs the sprouting of mung beans, obtained from local health food stores, in shallow glass dishes of water, which are then placed in an orgone accumulator during the period of sprouting. Identical dishes of bean sprouts are placed inside suitable control enclosures, which are of similar thermal dynamics, and do not contain any metals. Both accumulators and control enclosures shield out all light from the growing seeds, which are sprouted in the dark. In 1978, I published an early pilot experiment using this method which showed an average of 74 mm of growth in dishes of control-group mung beans, as compared to 142 mm of growth inside a simple one-ply orgone accumulator, and 201 mm of growth inside a stronger 10-ply accumulator.[2] That's an average of more than twice the amount of growth inside the orgone accumulators as compared to the controls. In more recent years, this experiment was undertaken again, but with greater rigor and tighter experimental controls than before.

Orgone accumulators are constructed from alternating layers of organic or dielectric insulating materials and ferromagnetic metals, with either only a few alternating layers or many layers. The more layers, the stronger the accumulator, though the relationship is not exact and depends upon many other factors, to include the local weather and environmental conditions related to atmospheric pollution. One "ply" of an accumulator is defined as one layer of organic or dielectric insulating material plus one layer of ferromagnetic metal. The non-metallic layers can include simple coarse fabrics made from sheep's wool, or non-organic dielectric materials such as fiberglass or certain hard plastics. Additional alternating layers of metal and organic/dielectric insulator can be repeated inside the walls or panels of an accumulator to increase its strength. Usually, steel wool and sheep's wool are alternately layered inside the walls of a more rigid accumulator framework, the interior of which is composed of galvanized steel sheet metal, and the exterior composed of fiberboard or mason board. Coatings of shellac and other dielectric materials are often given on the outside of the accumulator to increase its energetic attraction and durability. From a casual examination, the accumulator looks like an ordinary box with thick walls and a hollow metal plate interior, resembling a kind of solid-layered Faraday cage, or *hollow capacitor*, the latter of which is also composed of dielectric insulation and conductive metal layerings. Classical theory nevertheless anticipates virtually no effects upon plants or animals, much less upon the physical properties of the air inside. Such was, however, the essence of the claims made since c.1940 by Reich and other scientists following in his path. I have already given a complete discussion of the history, background theory and construction principles of the orgone accumulator and so will not repeat that information here.[3]

Figure 1. Orgone Energy Darkroom: A room-sized orgone accumulator (above), with several human-sized and smaller charger-accumulators nested inside (below), at the Orgone Biophysical Research Lab in Ashland, Oregon. Dishes of orgone-charged seedlings were kept inside these smaller and more powerful chargers, along with max-min thermometers, inside the larger orgone darkroom.

Figure 2. The Control Enclosure: Control seed dishes were kept inside a cardboard box along with max-min thermometers (below), which was in turn nested inside an insulated plastic box, placed on an elevated platform under a heavy wood box, with shade panels added (above), under a forest canopy. Adjustments to ventilation and shading allowed the temperature within the control and orgone accumulator enclosures to be adjusted very close to each other.

Experimental Protocol and Control Procedures

In the summers of 1998, 1999 and 2000, with the assistance of various students enrolled in the Orgone Biophysical Research Lab's (OBRL) Independent Study Program, a new series of seed-sprouting tests were undertaken, using the orgone energy darkroom (a room-sized orgone accumulator) and a thermally-balanced cardboard, plastic and wood control enclosure. The orgone accumulator darkroom was a commercial wooden "Mini-Barn" of 3.5 x 5 meters

dimension, converted into a large one-ply orgone accumulator by adding fiberglass insulation and an interior wall covering of galvanized steel sheeting. Inside this metal-lined structure were placed several additional smaller accumulators – these included two multiple-ply human-sized accumulators, each of which contained inside itself a smaller multiple-ply orgone accumulator – this latter innermost accumulator was used for the seed-sprouting experiments. Other orgone accumulators were located inside the orgone darkroom, to include an additional 10-ply charger and other disassembled accumulator panels, all of which worked to build a fairly high and sensible orgone charge inside the structure. It is typical for people who enter the room for the first time to express amazement at the subjective feelings of pleasurable expansion and high charge, which can best be described as what one might feel walking in a grove of giant redwood trees on a sunny day, combined with a mild radiant feeling on the skin.

The placement of the orgone darkroom outdoors, in a natural forested environment, created a strong, yet soft and expansive feeling inside, something which by my experience is difficult to obtain when strong accumulators are constructed within congested urban environments, or close to large power lines or nuclear reactors. In fact, the rural forested location of the OBRL facility was selected for this very reason: the great distance from significant sources of electrosmog and low-level nuclear radiation, which are known to excessively excite and disturb the orgone energy continuum. Figure 1 shows both the exterior and interior of the OBRL orgone accumulator darkroom. Two human-sized orgone accumulators can be seen at the back wall.

Open-top glass dishes containing dried mung beans with water, to be described momentarily, were placed inside the smaller charger boxes, which were then placed inside the larger human-sized accumulators inside the orgone darkroom. Total accumulator strengths of 13-ply and 25-ply were thereby achieved for the orgone-charged group of seedlings.

The control enclosure consisted of a series of nested non-metallic boxes placed under the shade of large trees about 15 meters from the orgone darkroom: the bean-water dishes were placed inside a cardboard box which was sealed with black electrical tape along its seams. Two of such cardboard boxes, containing two dishes of beans, were then inserted inside an opaque plastic storage box which was lined with plastic bubble-wrap for insulation, and the storage box lid was then closed. The storage box was placed on top of a plywood platform which was elevated off the ground by about 15 cm, similar to the Mini-Barn orgone darkroom – a large sealed wood box was then inverted to cover the plastic storage container. The control enclosure was therefore similar to the accumulators, except that it did not contain any metals. It is shown in Figure 2.

An Extech light meter with external probe was used to measure the presence of unwanted light entering through possible cracks into both the orgone accumulators and control boxes, and both measured at zero lux.

Temperature controls were established empirically, through minor adjustments in the accumulator door opening and control shading panels before the experiments were started, as determined by direct daily readings from separate mechanical max-min alcohol thermometers. It was found that nearly identical temperatures could be achieved between the accumulator and control environments by leaving the door to the orgone darkroom ajar by about two centimeters, and by adding a sealed one-gallon jug of water inside the cardboard control boxes holding the seed sprouting dish, to increase its interior thermal mass. Wood shading panels were set around the sides and the top of the control enclosure to shield against diffuse or stray-direct sunlight which penetrated through the forest canopy. Once this was done, the thermal dynamics of the controls and accumulators were brought to within approximately one-half degree C, over the daily averages of the experimental runs, as measured with max-min thermometers.

Humidity inside the enclosures was assumed to be nearly identical, given the very close interior temperatures, similarity of volumes and the sealed nature of both the accumulators and controls. A layer of plastic was added to the inside walls of the cardboard control boxes to prevent any moisture absorption into the cardboard, to match the situation inside the metal-lined accumulator boxes. In any case, there was no flow of air into or out of either the accumulators or the controls; they received fresh air daily, however, when they were opened for watering, as described below.

The dishes of seedlings were prepared as follows: Round open-faced, flat-bottom Pyrex evaporation dishes of 170 mm diameter and 90 mm height were used. A sample of 100 dried mung beans were extracted randomly from a well-mixed sack of beans, then weighed dry, and placed into each evaporation dish along with 50 ml of untreated well water from an excellent source at my laboratory. The water level was sufficient to cover the dried beans about half-way, allowing them exposure to both air and water. Prior work indicated this method would insure the seeds would not "drown" and thereafter fail to sprout, nor would the dish dry out over a period of 24 hours. Starting at approximately noontime, two glass dishes of watered seeds were placed inside the orgone accumulators, one inside the 25-ply and another into the 13-ply accumulator, with another two identically-prepared dishes placed inside the cardboard-plastic-wood control box. After watering and placement of the dishes and the max-min thermometers, the accumulators and control enclosures were shut closed and sealed, so as to eliminate all light and to conform to the previously-established thermal controls. Twenty-four hours later, the boxes were opened, and the dishes of seeds removed to evaluate their growth and water levels. Water was added daily, on demand, so as to keep a constant and identical level of water at the bottom of all the dishes, even if one dish consumed more water than another. The seedlings thereby got as much water as they needed, eliminating water-stress as a variable. The quantity of water given was recorded, as were the readings on the max-min thermometers. The dishes of seeds were then closed back into their respective enclosures, for orgone-charging, or for controls. After approximately 10 days of this procedure, around the time when the sprouting seeds were pushing up against the interior lids of the accumulator boxes, the experiments were terminated and the seedlings measured.

Experimental Results

For evaluations, the dishes of sprouted seedlings were firstly photographed; then the mass of sprouted seeds was carefully removed from the glass dishes and blotted dry on paper towels for about 10 minutes. After blotting, the masses of sprouted seeds, including roots, were weighed, and the net increase in plant mass calculated by subtraction from the original dry weights. Individual seedlings were then gently teased apart and stretched out along a meter stick, and measured from root-tip to the point just below where the leaves joined the stem of the sprout. Averages and other statistical data were then extracted. Figure 3 shows the results from the three summertime seed-sprouting experiments at OBRL, for 1998, 1999 and 2000. The orgone-charged groups clearly grew significantly more than the controls.

Figure 4 presents histograms of these same seed growth data for the three summers combined, with a total of 1200 individual seedlings from 12 different dishes of seeds. The orgone charged group grew an average of 200 mm, while the controls grew 149 mm, an average of 50 mm of increased growth-length in the orgone-charged group as compared to the controls. The longest orgone-charged seedling was 385 mm, while the longest control seedling was 317 mm. Overall this computes to a roughly 34% increase in growth due to orgone-charging.

Another way of viewing these data is given in Figure 5, which orders the data from shortest to longest sprout length, displaying the orgone-charged and control groups on the same graph. Again, one can clearly see the systematic increases in growth from orgone-charging, across the board.

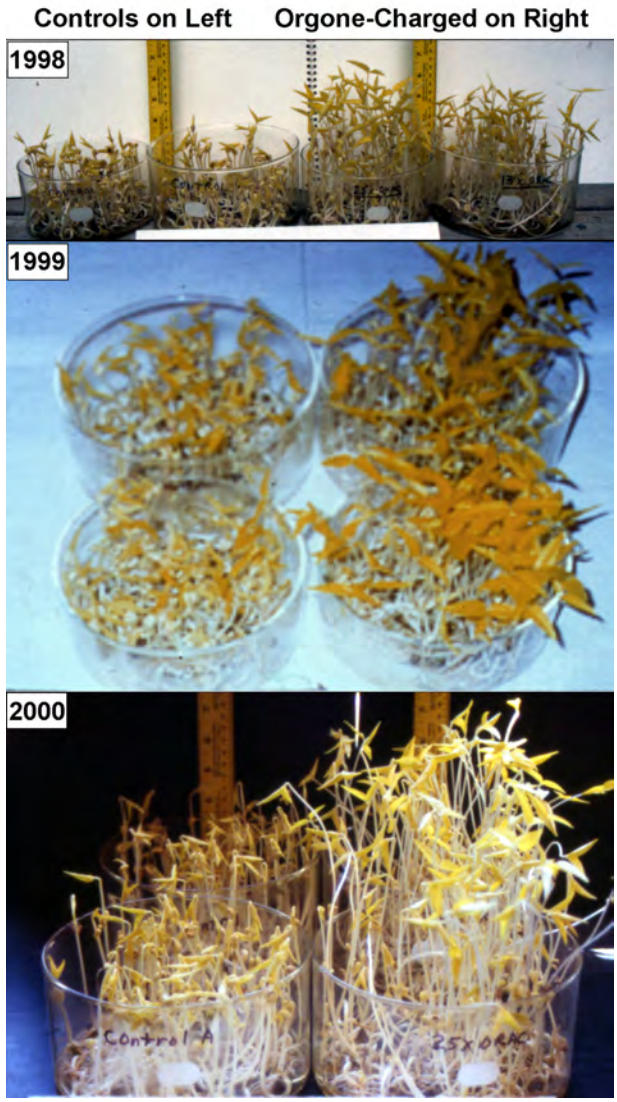

Figure 3. Three Summer Trials of Orgone Accumulator Seed-Stimulation Experiments. Dishes of seeds on the right sides of each photograph, with greater growth, were charged inside orgone accumulators. Dishes on the left sides were the control groups. Top 1998, Middle 1999, Bottom 2000.

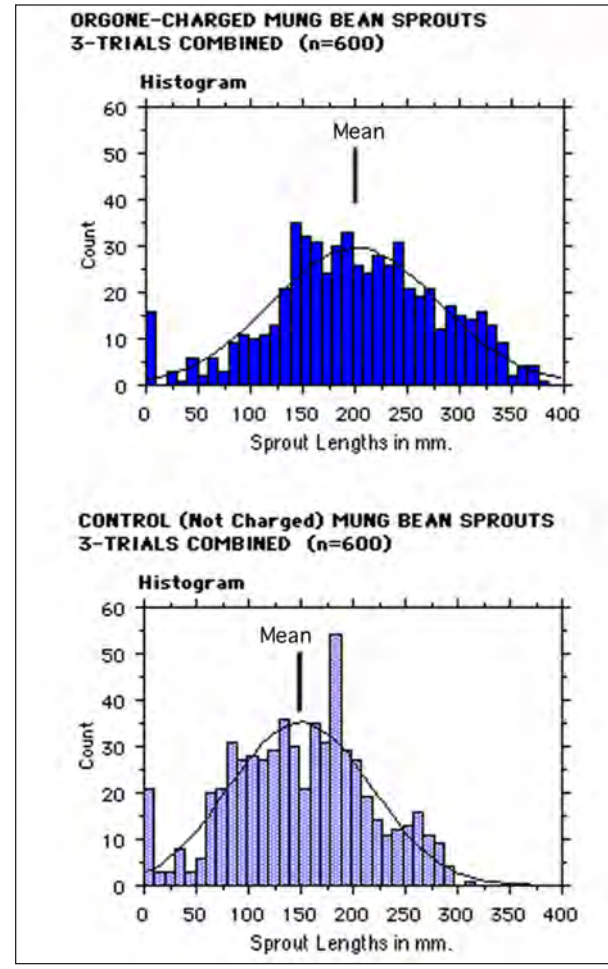

Figure 4. Histograms of Orgone-Charged Versus Control Mung Bean Sprouts. Top: Orgone Charged. Bottom: Controls. Orgone-charged group clearly shows more growth than control group.

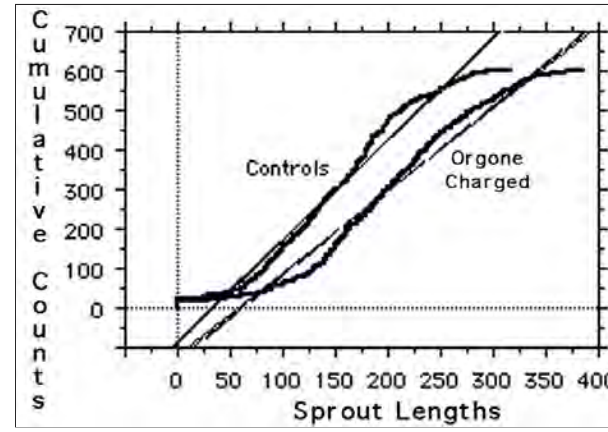

Figure 5. Sprout-Length Cumulative Counts, Orgone-Charged Versus Controls

The two graphs show widely-separated regression lines, and do not overlap. They only come a bit closer together at the very lowest end of the curve given the fact that both groups had a small percentage of seedlings which did not sprout, and which were identified as "zero" growth. A simple T-test indicates the probability of this distribution happening by chance alone is less than 1 in 10,000, very significant indeed ($p<.0001$).

Germination rates, where any seedling with growth of less than 25 mm at the end of the experiment is considered to be "dead" and non-germinating, was 95.8% for the controls and 97.3% for the orgone-charged groups. Orgone charged seedlings also consumed a slightly greater quantity of water than the controls (118.3 ml versus 109.9 ml) and showed a slight gain in weight (53.2 gram versus 49.0 gram). However, these latter characteristics were not as significant as the overall increase in the length of the seedlings. In fact, the orgone-charged seedlings were often quite elongated and spindly, sometimes giving the appearance of being so highly-charged they were racing upwards. The control seedlings were certainly quite vigorous and healthy all on their own, and appeared stouter even if slower-growing. This interpretation is supported by blind experiments performed on the taste of the sprouts – everyone agreed that the control seedlings tasted better, while the orgone-charged group was more bitter. This was confirmed by refractometer readings of the juice from the seedlings, indicating a higher sugar content in the control group. The orgone-charged group appeared to be expending more of its sugars in growing to greater lengths. More will be said on this in the conclusions.

Overall results for the three aggregated trials (1998, 1999 and 2000) are summarized in Table 1. A similar analysis of each trial independently has been undertaken (not presented here for space considerations), which as suggested by the photographs in Figure 3, gives nearly identical results.

TABLE 1.

	Control Groups	Orgone-Charged Groups	Percent Change
Average Seedling Lengths	149 mm	200 mm	+ 34%
Germination	95.8%	97.3%	+ 1.6%
Weight Increase	49.0 gram	53.2 gram	+ 8.6%
Average Water Consumed	109.9 ml	118.3 ml	+ 7.6%
Refractive Index (%Brix)	6.3	5.1	– 19%

Separate Control Experiments for Temperature

After these data were obtained and analyzed, a question was raised if it were possible for the small residual thermal differences between the accumulator and control groups to yield up such an effect, independent of orgone-charging. Generally, plant growth can be stimulated under warmer conditions, as is readily seen inside a greenhouse. While an *average* daily thermal difference of around 0.6°C (~1°F) was observed over the course of the individual trials, without systematic thermal bias in favor of either the control or accumulator groups, I felt it important to more thoroughly address this question. A search of published literature failed to locate specific information on the growth response of sprouting mung beans to variable temperature, except for an optimal growth temperature lying between 18-30°C (65-85°F). Consequently, experiments were undertaken to empirically evaluate the differences between groups of mung beans grown under slightly different thermal environments.

Early temperature trials using incubator ovens, with heating elements turned on and off by thermostatic controls, yielded erratic results as directly measured with precise thermometers – variable thermal gradients of several degrees F existed between their tops and bottoms, and between the back and front, and so forth. Metal incubator ovens also resemble an orgone-accumulator, which in the context of the present experiment suggested a host of uncontrolled variables and questions, such as the effects upon the seedlings of the proximity of the metal walls of the incubators. Consequently, incubator ovens and other metal "environmental control" devices were

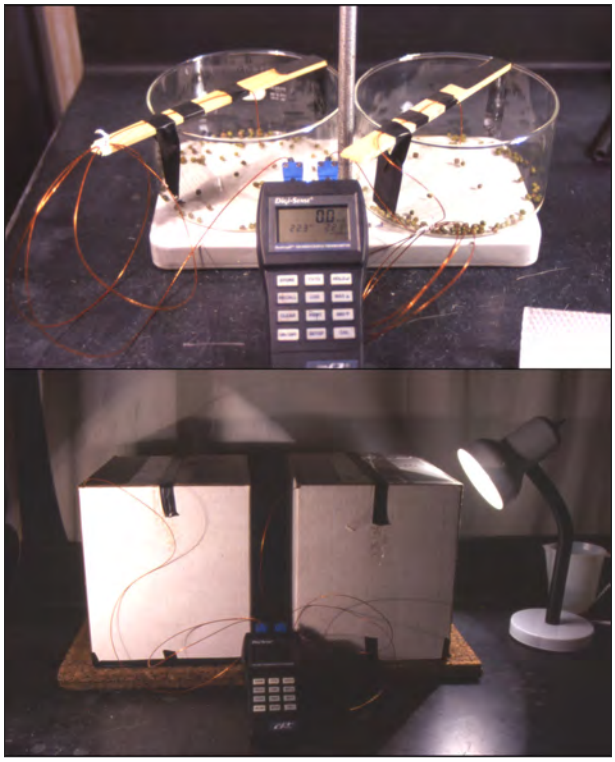

Figure 6. Temperature Control Experiment. Dishes of beans with temperature probes (Top) are placed inside the two boxes (Bottom); box on the right is heated slightly by the incandescent lamp. No light enters either box. Differential electronic thermometer at front center.

abandoned in favor of a method based upon the control procedures of the original seed-sprouting experiment.

A solution was found by placing two identical cardboard boxes on a table in a constantly shaded and darkened part of the laboratory. Glass dishes with seeds and water identical to those described above were prepared, except that a sensitive thermocouple was suspended inside the center of each dish, about three centimeters from the bottom. The two dishes were then placed inside two identical cardboard boxes, closed up and sealed with black electrical tape along the seams. The two thermocouples were attached to a Cole-Parmer *Digi-Sense* dual-channel differential temp-erature meter, which recorded the data every hour. A 60 watt incandescent light bulb was then brought close

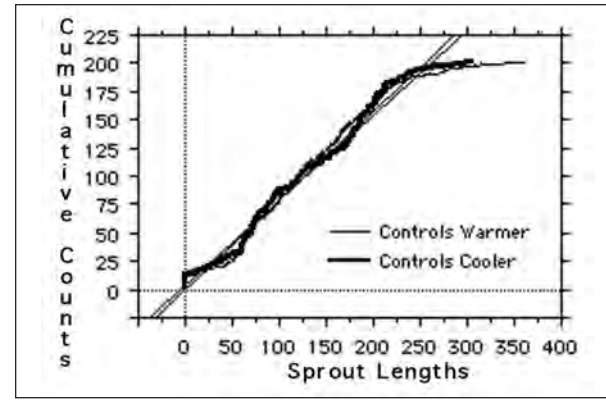

Figure 8. Sprout-Length Cumulative Counts Cooler Versus Warmer Environments

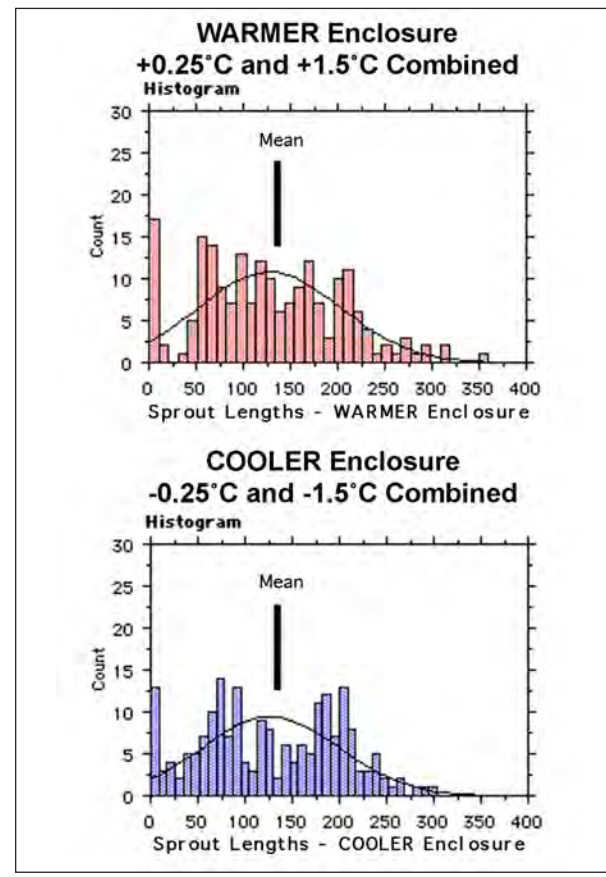

Figure 7. Histograms of Temperature Control Experiments. Top graph displays growth of beans kept slightly warmer, by ~0.25° to ~1.5°C (~0.5° to ~2.8°F), as compared to beans in bottom graph. No significant differences appear between these two sets of data, in stark contrast to the data from the orgone-charging experiment, in Figure 4.

to the side of one of the boxes, from between 10 to 50 cm distance, allowing for a slight warming effect on one of the boxes, as shown in Figure 6. By carefully adjusting the distance between the light and the box, I was able to achieve a controlled slight increase in temperature within the proximate box, even as the temperature inside the laboratory rose and declined over the course of the day. This procedure was performed two times, once with one dish at an average of ~0.27°C (~0.5°F) difference, and again with ~1.5°C (~2.8°F) difference. This procedure demonstrated *no significant differences in growth-rate between the cooler and warmer dishes of bean sprouts,* for both the 0.27°C and the 1.5°C trials. The results of these experiments, combined, are shown in Figures 7 and 8. The warmer boxes showed a mean of 127.9 mm of growth, while the cooler boxes yielded 127.1 mm growth, an insignificant difference of only 0.8 mm, or 0.6%. The regression lines, seen in Figure 8, nearly overlap, as do the data themselves, which are indistinguishable on the graph. The probability values were also fully insignificant, with p=0.91 on a T-test comparing the two groups. This is good evidence that the small thermal variations which persisted in the experimental set up comparing orgone-charged and control groups – which were on the order of an average ~0.6°C (~1°F) difference – were insufficient to produce the magnitude of growth-enhancement effects seen in the orgone-charged groups.

Conclusions

The orgone energy accumulator has been shown to work a remarkable affect upon the growth of seedlings, increasing the sprouting length by 34%, and germination rates and overall weights by smaller percentages. However, as mentioned previously, refractive indexes and taste of the sprouts indicate the orgone-charged sprouts had a lower sugar content as compared to the control groups. The orgone-charged sprouts were possibly expending sugars in making additional cellular material, growing to longer lengths. Or, it might be the consequence of keeping the sprouting seedlings inside the accumulator on a constant basis. Prior studies have shown enhanced flowering and fruiting of garden vegetables, with increased sweetness (by taste), in groups which were orgone-charged for considerably shorter periods of time (i.e, a single exposure of only a few hours).[4] Biomedical experiments also are limited to short daily orgone-charging sessions, as excessively prolonged accumulator usage may lead to temporary unpleasant *overcharge* symptoms, such as headache and nausea. Consequently, while the present experiment provides clear positive proof that the orgone accumulator imparts an increased growing force to seeds sprouted in glass dishes and nourished only by water, this method of prolonged charging in the laboratory *is not directly comparable or applicable to increased agricultural productivity,* which has already been shown to benefit from shorter charging periods.[1,4] The next phase of this laboratory approach should focus upon providing a broader spectrum of nutrients coupled with shorter charging-times in the accumulator.

We might also ask, how does the orgone accumulator create this affect upon the sprouting seedling? This is a question about which we can only speculate. Orgone energy stimulates the parasympathetic nervous system in animals, leading to expansiveness and relaxation, as well as increased energy.[8] How might this apply to seedlings? Orgone is known to have a strong mutual affinity and attraction to water, and it may be that the water is firstly charged, only secondarily to be absorbed by the seedling. Once the seedling is growing and moist, it would then absorb even more energy directly into its structure, and with the increased vitality, push and elongate itself more so than the control seedlings, even to the point of exhausting its available chemical nutrients. Or, it is possible that there is a *field created inside the accumulator, which works against the gravitational force* (as proposed by Reich) thereby helping to "push" or "pull" the seedlings upward, in a manner similar to the force which moves sap upwards, to the tops of tall trees.[5] Wagner has already proposed an antigravitational function at work in tree-sap mechanisms based upon his findings with gravitational accelerometers placed inside the cores of large trees.[6] It

may be that what is observed inside the orgone accumulator, affecting sprouting mung beans, is a small scale version of that principle, of what happens in living nature, in trees. If so, then it suggests a physical mechanism for levitation independent of the seedling or tree, waiting to be better understood, and harnessed.

As written elsewhere, a primary consideration for replication of this experiment is, aside from the control procedures already discussed, that key attention be given to proper accumulator construction materials, and also, that the local energetic environment must be viewed as an integral part of the experimental setup. One cannot undertake this experiment in highly-polluted regions, within close proximity to large high-tension power lines, or within 25-50 miles of a nuclear reactor, and be certain of repeatable positive results. Indoor environments with background EM fields of even less than 1 milligauss or 1 kv/m may also disturb the energetics within the accumulator, and yield erratic results. Regions characterized by natural forests, and structures similar to an "old barn in the woods" as described in my ***Orgone Accumulator Handbook***, are a reasonable description of the optimal environment for biological orgone energy experiments.[3]

It must be additionally noted, Reich's use of the orgone energy accumulator as an experimental medical device was proven to have positive effects for a wide variety of diseases, including degenerative illnesses such as cancer. This finding was, of course, jumped upon by his critics, and abused by the 1950s Food and Drug Administration as an excuse for the persecution of Reich, and the eventual *banning and burning* of all his scientific books and journals, and his eventual death in prison – all for the technical violation of an obscure FDA labeling law! The reader should know, the orgone accumulator has as powerful an effect upon animal tissues and physiology as upon plants, as demonstrated in a host of clinical reports and controlled studies, including two double-blind controlled studies on the psycho-physiological effects upon human subjects, as undertaken at the University of Marburg, Germany, and the University of Vienna, Austria.[7,8] Consequently, there is no excuse whatsoever for the hostile smears directed against Dr. Reich and the orgone accumulator, as have continued now for more than half a century. The honest, authentic scientist will take note of this fact. It should also be mentioned that there is an equally large body of published experimental evidence on the physical demonstration of the orgone energy, from a physics and atmospheric point of view, starting with Reich and continuing down to the present day.[9]

The results presented here, and elsewhere, are positive proof for the factual existence of a powerful biologically-stimulating energy within the orgone accumulator, unlike anything presently acknowledged by mainstream science.

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CORRESPONDENCE

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