

## **VIEWS FROM THE WATCH TOWER**

### **THORNS, THISTLES AND THE CURSE**

AS a benevolent feature of the curse or sentence of God upon our race because of Original Sin, we are told that God said to Adam when driving him forth from Eden, "Thorns and thistles shall the earth bring forth unto thee...and thou shalt eat bread in the sweat of thy face." Without the thorns and thistles and battling with them man would have found life too easy, and would in indolence have sunken into depravity more rapidly than he has done.

But the curse is to roll away – times of restitution are at hand when the great King, Messiah, will exercise his power among men for their uplift; and when the great demoralizer, Satan, and his associated demons will be restrained. Then the thorns and thistles would be a real menace to man's rapid rise, for they with the insect pests would serve to absorb his vitality and hinder him from intellectual progress.

We should expect, therefore, that now or very soon some means would be found for coping with and subduing these pests. Already science has done much to combat the insect foes by washes, sprays, etc. But now from governmental institutions we have the glad message that thorns and thistles may be easily vanquished – by a cheap chemical spray which kills the weeds, while non-injurious to grain, etc. It is even claimed to be beneficial to some varieties of the latter.

*The Technical World* says: –

"It is estimated that weeds cut down the yield of grain in this country at least twenty per cent. Under these conditions

agriculturists have for several years occupied themselves in the attempt to discover a chemical that can be used for spraying grain-fields. To make it a success it is necessary that the chemical should destroy the weeds, but leave the cereals uninjured. ...Numerous methods of extermination have been tried and abandoned because they were ineffective, injured the grain crop, poisoned stock, or were too expensive.

"From this it is evident that any means that can be found to destroy these pests will mean one of the greatest discoveries for agriculture that has ever been made. No mechanical invention in farm machinery will compare with it in importance.

"It can now be said with certainty that such a discovery has been made. The first successful experiments were attempted in June, 1906, by the Agricultural College of the University of Wisconsin. The work has been carried on under the direction of Prof. R. A. Moore.

"The experiments carried on consist in spraying the field with a ten-per-cent. solution of iron sulphate. The idea of controlling wild mustard by this method was conceived last year at the university experiment station. The work was based on information derived from Germany, where experiments had been tried on mustard. Plans were laid to make tests on the university farm as soon as the wild mustard appeared. No machine for the purpose is made in this country. A sprayer costing \$135 was imported from Germany. The tests on the university farm were entirely successful. Professor Moore then experimented on other Wisconsin farms, in Dane, Kenosha and Waukesha counties and at Lynn, Lyons county, Minn. As far as known these are the only experiments that have yet been made in this country and in every case there is evidence that the weeds have been annihilated, while there has been no perceptible injury to the grain. The grains that have been tested are oats, barley, wheat and spelt. No tests have

been made on rye in the United States, but Prof. Staglich has had success in spraying rye in Europe. Experiments are also being made on Indian corn, and the results so far have been successful. The only effect that is seen on the grain is the blackening of the lower and older leaves that are doomed to wither eventually, while the young leaves, that bring the cereal to maturity, are unharmed. There are no complaints from any center of deterioration either in the quality or quantity of the grain crop sprayed. There has been no difference observed in the time of ripening. No tests have been made in this country on clover or grasses, but experiments made in Scotland show that in no case was damage done to the young clover or grass, while the mustard was entirely destroyed.

"So far the sulphate-of-iron solution is found to act definitely on mustard, yellow-dock, cockle-bur, [R4080 : page 324] smart-weed, rag-weed, and Spanish needles, while there is every reason to believe that it will destroy Canada thistle....

"It is at once apparent that every section of the country will share in the benefit of this discovery. The various weeds that iron sulphate will destroy are found to prevail in different localities. The white daisy is familiar to Eastern farmers, the rosin-weed to Western, wild mustard is widely scattered, and Canada thistle grows in most of the Northern States."

Nor is this all that is making ready for "times of restitution," when the Scriptures declare "the earth shall yield her increase." A means has been found for

## **ENRICHING THE SOIL**

It has long been known that soil is impoverished by the exhaustion of its supply of nitrogen. It has been known also that there are vast quantities of nitrogen in the air; but no one has known how to get it to reunite with the soil. Beds of nitrogenous

fertilizers in far-off lands have been transported at great cost to rejuvenate depleted soils – but the cost is too great for general use. Recently two successful methods have been discovered for separating nitrogen from the air by electricity at a comparatively small cost, and it is confidently predicted that its manufacture on a large scale will soon supply a cheap restorative for earth's rejuvenation.

Meantime another means has been found – "some good microbes have been employed to aid the work of reclamation." These useful *bacteria* operate only in connection with *leguminous* plants – such as the various clovers, vetches, peas and beans. The nitrogen-fixing *bacteria* form nodules on the roots, and these absorb nitrogen from the air and fix it in the soil. This not only causes the legumes to flourish but enriches the soil for different succeeding crops.

A circular before us from the U.S. Dept. of Agriculture, Washington, D.C., relates the foregoing in other terms, and offers to the public on application the salts in proper quantity free of charge.

Doubtless the same Divine Wisdom which is now supplying man with skill to construct machinery and manufacture electric lights, etc., is operating also in this "Day of His Preparation" in the ways above indicated to remove the thorns and thistles and to cause the wilderness to blossom as the rose. Thank God for the eyes of faith to recognize him as our Deliverer by whomsoever he may send the assistances.

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