be available to lower the temperature to a maximum of 35° F. and every effort made to hold this temperature during transit.

If Florida growers deliver uniformly high quality sweet corn to Northern markets, there is a large potential market available; for low quality wormy corn there is virtually no market.

CHEMICAL CONTROL OF WEEDS ON FARM DITCHES

MRS. RUTH WEDGEWORTH
Belle Glade

Since we started farming in 1932 we have always tried to keep the ditch banks and levees of our farm as clean of weeds as possible. I well remember in the first few years when we would find a sprig of Jew grass, how we would pull and take it to the house and burn it, to keep it from spreading, for we were aware that it might be infected with mosaic that could be carried to the celery by aphids or other biting insects.

As our land became more used, the weeds multiplied faster than we were able to combat them, especially in the last few years since labor has been so high and scarce. Our loss from mosaic celery has run as high as thirty to forty percent in some fields and the loss in returns has run well into the five figures in one season.

So when information came from various sources about chemical sprays that would kill weeds, we immediately began to learn all we could about them.

When I tell you that on our celery farm of 320 acres we have seven miles of ditches and on our entire acreage we have 35 miles, you will realize why we were so interested.

The weeds on these ditch banks harbor not only the mosaic disease I have spoken of, but also the insects to carry the disease to the celery or other mosaic susceptible crops as well as numbers of other destructive insects to vegetable crops.

The water hyacinths clog up our farm ditches in a few months after being cleaned with a dragline with hyacinth bucket. These hyacinths, it is claimed, holds back the flow of water as much as 40%, thus not allowing the water to reach our pumps after a heavy rain fall as fast as it should.

This past season, we have had the opportunity to try, in cooperation with the Everglades Experiment Station, a number of the new chemical weed sprays and have found some that work very well, killing the weeds that grow on the banks, as well as the hyacinths. The cost of some of the sprays is still too high, but I believe with the demand for the volume that will be used, these sprays will be materially reduced in cost.

We estimate that to clean both sides of a six to seven foot ditch of a fairly heavy weed growth, would cost, at our present labor scale and inefficiency, about $100. These weeds should be hauled away, for Jew grass and purslane will not die when uprooted, but will continue to grow and be a menace. This estimate does not include the cleaning of canals of hyacinths with the dragline.

In comparison to hand labor, we now can spray the same mile of ditch with one of the new 2-4-D's of a 40% concentration. We would use about 800 gallons of a solution made up of 1 gallon of the chemical to 225 gallons of water. This will only require two men approximately three hours or a total cost for labor and materials of about $38.00.

We use our celery spray machine that has a tank that holds 225 gallons of spray mixture. The pressure is held just below 200 pounds. Where the weeds are large or for spraying along our St. Augustine grass covered levees,
we use an orchard nozzle with a large holed disc. One man slowly drives the machine along while the other sits on a platform built beside the spray tank and plays the spray from the nozzle onto the weeds and hyacinths.

On ditches that do not have a heavy growth of weeds, or young weeds which are much easier killed, we use a boom that reaches out to the middle of the ditch and has fish tail nozzles every eight inches. By driving slowly first on one side and then the other, all the weeds and hyacinths receive sufficient chemical to kill them.

We have found that one of the spreaders, commonly used with other sprays, increases the efficiency of the chemical weed spray under our hard water conditions.

We have been able to kill the elderberry bushes and other small bushes that start to grow on our levees as well as the sprout that comes up around the Australian trees we use for windbreaks.

Now that sufficient 2-4-D is available we have started a regular program of weed control. All ditches at our celery farm and around our pastures have recently been sprayed and the weeds and hyacinths are dying—some weeds wilt and die quickly while others take more than a week, as the chemical must be carried down to the roots, but they all eventually die.

We will spray our ditch banks every 45 to 60 days as needed through the summer months, as we are using a cover crop of Egyptian wheat which is not affected by 2-4-D. In the fall, a few days before we start transplanting our celery into the field, we will thoroughly spray, with a little stronger solution, the ditch banks around the block to be planted—this spraying, according to tests, will keep the ditch banks nearly free from growth for the ninety days that it will take to bring the crop to harvest. Celery and other vegetable crops are so susceptible to the weed sprays that even a fine mist from the spray will seriously damage or kill it, so no spraying can be done around the fields after the crop is once transplanted to the field.

Our levees are covered with St. Augustine grass that is not affected by the weed spray so we can keep weeds far enough away from the celery, that we feel we can cut down a great deal, if not nearly eliminate mosaic from our celery fields. By destroying the hyacinths we will much improve the efficiency of our drainage system. By eliminating weeds, we will also greatly improve the general appearance of our farm.

INSECTS AFFECTING SWEET POTATOES IN THE EVERGLADES

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The growing of sweet potatoes for the production of starch is a new industry for the Everglades. Prior to 1942, no sweet potatoes, other than small home plantings for food, were grown in this area. At present a considerable acreage is devoted to the production of starch-type sweet potatoes. Expansion of this acreage is anticipated. These developments give rise to the question of insect pests of sweet potatoes and their possible significance in this area. Insects are limiting factors in production in many sweet potato growing regions. Thus, it seems desirable to record some preliminary observations made during the past three years on the insects that attack sweet potatoes in the Everglades.

In a general way the period during which these observations were made was characterized by less than normal rainfall. The effect