

2013 National FFA Agronomy CDE

Diagnostic Clinic and Fertility Problem

KEY

According to the scenario there are two issues noted. Neighboring fields have corn rootworms. The farmer used Treflan last year. Looking at the provided references especially the clubbed roots in the photographs the problem is Treflan carry over. The drought conditions, high organic matter and low soil pH contributed to this problem.

Next year do the following..

1. Lime the field to correct pH.
2. Rotate to less susceptible crops such as soybean or alfalfa.
3. Plant the field last to allow more time for the herbicide to break down.
4. Do some tillage. This will help dilute the amount of herbicide in the root zone and expose more of it to sunlight. DNA herbicides such as Treflan break down quickly in sunlight.

Fertility Problem answers

2.5 tons of lime is needed per acre for 35 acres. 87.5 tons of lime is needed for the field.

Cost for lime - \$2800.

The 70 tons of phosphorus will be met by using 11-52-0. This requires 134.6 pounds per acre. 2.36 tons of 11-52-0 is needed costing \$1,366.35.

The 220 pounds of nitrogen required for the crop will be partially met with 14.8 pounds coming from the 11-52-0 application. The remaining 205.2 pounds will be met using anhydrous ammonia (82-0-0). 250.2 pounds of anhydrous per acre meets the recommendation. 4.38 tons of 82-0-0 is needed for the field costing \$2,803.20.

The potassium recommendation of 50 pounds per acre will be met using 0-0-60. 83.3 pounds of 0-0-60 per acre is needed. 1.46 tons of 0-0-60 is needed for the field costing \$947.92.

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