New York State Integrated Pest Management Program

1997 Report on the Use of Sudan grass for Improved Yield and Quality of Onions Produced on Muck Soils in New York

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Abstract:

Prior to 1996, our field research focused on cultural aspects of Sudan grass, when to plant, planting rate, mowing vs. non mowed, mowing once vs. mowing multiple times, etc. In 1996, we obtained our first yield comparison results and continued with that research in 1997. In our area, the summer of 1996 was very wet and generally, yields were down. In contrast, 1997 was a very dry year. Yield results in 1996 showed an average increase of 16%, while the average yield increase for 1997 was 26%. More significantly, we found the increase in the number of onions jumped, from a 30% increase in the number of onions in 1996 to a 73% increase in 1997. The range was from 43% to 93% more onions in the Sudan grass rotated fields. Surprisingly, there was no significant difference in onion size. Even though there were more onions, the size was the same in Sudan grass fields versus non rotated fields. Growers might expect smaller onions with higher numbers but we did not see this. Following Sudan grass, our results show onions are bigger and there are fewer seedling loses. Seeding rates can be reduced.

We also wanted to look at the long term positive effects of Sudan grass rotation. We evaluated onion fields two years after a Sudan grass rotation. It appears there is still a significant yield and numbers increase but it is not as great compared to the first year after rotation. We found an average yield increase of 18% and a 13% increase in the number of onions. We would like to continue looking at long term effects.

For a printed copy of the entire report, please contact the NYS IPM office at:

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