

## No-Till Watermelon Demo

The following are photos from David Carter's Farm in Bentonville, AR

This is a small diversified market farm utilizing plastic or grass clipping mulch.

Watermelons and other cucurbits are primarily grown on plastic mulch at this farm. This demonstration was an attempt to reduce the time and frustration caused by removing plastic mulch from the field after harvest.

The first of October cereal rye (6lbs per 5' x 300' bed) and cereal rye/austrian winter peas (6lbs/3lbs per 5' x 300' bed) were planted as a cover crop.



First of October



Mid-December



Mid April

The rye only cover is on the left and rye/pea mix is on the right. Differences between the two treatments were not visibly noticeable with most peas either winter killed or smothered out.



The PVC pipe square is 1'x1' the cover was about 2 ½' tall

The fresh weight of the cover crop was recorded at this stage with the rye only bed weighing 422g or 14.9oz per 1 ft. square. The rye and pea weight was 449g or 15.8oz per 1 ft. square



The cover crop was “crimped” using a rototiller with the PTO turned off.



The “crimped” cover crop was then sprayed using a backpack sprayer with a 2% glyphosate (generic roundup) solution with surfactant.



The first of June, two week old watermelon transplants were planted into the killed mulch.



In late June, when vines began to run, Select Max (clethodim) grass herbicide was sprayed over the top of the watermelon plants at .5 oz. per gallon with surfactant and roundup was used in the row middles.

Harvest began late July and proceeded through mid August with a total of 200 marketable watermelons averaging 25lbs off two 300' rows.



Weed pressure was slightly higher than hoped but did not appear to hurt yield and it should be noted that no mechanical cultivation or hand pulling was done. A few changes that could be made would be to plant the watermelons closer at 3-4' spacing rather than 6' spacing in row. Shorten the time between termination of the cover crop and planting to 3 weeks. Pre emergent herbicide may be a good option as well. Overall the grower was very pleased with the results and quality of the crop. Cleanup of the field was very easy with the removal of the drip tape being the only thing left to do by hand. The field was then mowed and tilled. This greatly saved on the time and effort needed to remove plastic mulch. The grower plans to expand on this technique and size of planting next year.

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