

Strategies for Continuous Production of Summer Salad Greens/Leafy Greens

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Field Prep

Field preparation for leafy greens begins the year before production with cover cropping and summer tillage to reduce weed pressure during the crop year. Typically a full cover of winter rye and vetch is incorporated in mid June to mid July and a summer bare fallow is maintained to diminish the weed seed bank. In mid to late August a fall cover of oats are seeded, which are winter killed, leaving a light mulch the following spring. This mulch is either disced or shallow plowed (3-4") to create a seedbed for spring and summer planting.

Planting Schedule, Lettuce

Lettuce makes up approximately half of our mix and is both transplanted and direct seeded. Transplanted lettuce varieties are the salad bowls and oakleaf varieties, which have deeply lobed leaves and don't appear to be a large torn up leaf when harvested at a more mature stage than baby lettuce. This has a number of advantages: first we can achieve a steadier supply of lettuce during the growing season as germination and early growth of the lettuce is accomplished in a controlled environment. Second, weeds are more easily controlled around transplants than direct seeded plants. Third the bulk of leaves harvested from transplanted heads are greater than direct seeded leaves and fourth the frillier mature leaves add volume to the mix with less weight. We additionally direct seed lettuce for our mix as it adds variety and texture to the mix. For direct seeded lettuce we use a three-row Planet Jr. Seeder with one lettuce variety per row. Lettuce mixes are not used. The main reason for this is that different lettuce varieties have different growth habits and dates to maturity. With the varieties separated we are able to cut each variety at its optimum stage. Lettuce is seeded and transplanted on a two week schedule and harvested two to three times.

Planting Schedule, Greens

Salad greens; Arugula, Red Russian Kale, Red Mustard, Tatsoi and Mizuna; are seeded weekly. These greens are seeded separately in a double row using a two-inch scatter shoe on the Planet Jr. Floating row covers are installed over the greens before germination for control of flea beetles. Since these beds are covered, early weed control in the greens is essential. To accomplish this the greens bed is prepped two weeks prior to seeding. This includes bed forming, rotovating and incorporating a combination of bloodmeal and soybean meal and rolling the bed to allow good soil contact for weed seed germination. On the day of seeding the bed is flame weeded prior to seeding to eliminate any germinated seeds. Floating row covers are applied using a set of disc hillers on a toolbar, which also rolls out the fabric. Agribon 15 or 17 in a 72-inch width is preferred, as these fabrics don't retain as much heat in the summer. No hoops are used when the fabric is first installed and edges are buried in soil to seal the bed. Approximately two weeks after seeding one side of the row cover is lifted, the bed is hand cultivated, wire hoops are installed and the fabric is again sealed with soil using a high wheel cultivator and a plow attachment. We have found that weeding can be significantly reduced

with the earlier seed bank reduction and flame weeding. In the early season when flea beetle damage is highest we have sprayed through the row cover to control beetles that moved in while the bed was uncovered.

Harvest

Harvest was done twice per week with a goal of 100-120lbs. per harvest. A work crew of 6-7 could cut, wash, bag and pack 100-120lbs. of greens in four hours. Sales were to local restaurants and natural food stores and averaged \$8.00/lb. for salad mix and \$9.00/lb. on arugula. All cutting was done with sharp scissors, by handfuls into washable plastic baskets. Lettuce heads were cut to retain the growing tip for future harvest. Direct seeded lettuce and greens were seeded in rows to allow for efficient hand cutting. In order to reduce decisions on the salad mix ingredients during cutting, plantings were done in approximate quantities needed for sales. While a lettuce planting was often harvested 2-3 times, greens were only cut once.

- Transplanted lettuce, grown four rows per 100' bed would have a double row cut each harvest day. Yields averaged 45lbs./100' double row.
- Direct seeded lettuce, sown three rows per 100' bed would be harvested at 1/2 bed per harvest. Yields averaged 15lbs/1/2 bed
- Arugula, grown two rows per 100' bed, had one row cut each harvest day. Yields averaged 25-30lbs/100'. For a 120lb. batch not all of this was needed allowing for additional sales of arugula.
- Other Greens: The standards here were Red Russian Kale, Mizuna, Red Mustard and Tatsoi as these ingredients consistently averaged the best yield. Grown two rows per 100' bed with one row cut each harvest day, yields averaged 30-40lbs./row, also allowing for additional sales. Other greens, such as beets and spinach were added when available.

Salad mix sales grew to be the largest grossing crop produced on our farm, with sales accounting for 50 to 60% of the business. Timing, weed control and efficient harvest strategies reduced the overall workload and allowed for successful summer production.