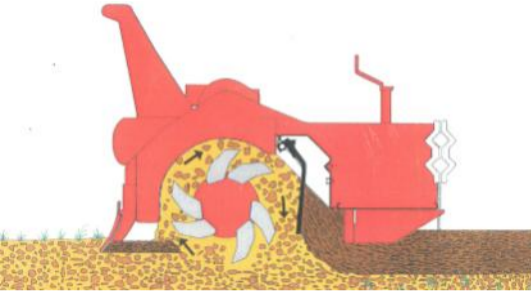


Equipment for Salad Green's and Herbs

For the grower of salad greens, culinary herbs and medicinal herbs who wishes to grow on a scale larger than the kitchen garden, it is necessary to mechanize in order to keep labor inputs manageable and the enterprise profitable. The competition is industrialized agriculture that relies on the advantages of immense scale, intense marketing, elaborate distribution systems, and the endless availability of serfs working at near slave wages.

The small to intermediate size grower has been at a disadvantage until recently because the specialized equipment needed was too large and expensive for them. However in recent years that situation has changed and extremely effective small scale machines have become available for smaller farms and are cost effective making small enterprises competitive.



machines clean up the bed by burying clods, root clumps, and vegetable residue leaving clean fine soil on top of the bed ready to receive the fine closely spaced seeds of salad greens



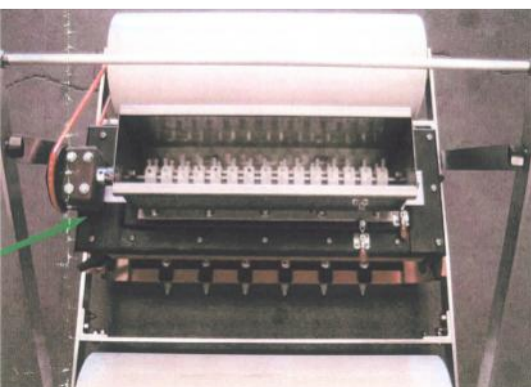
Bed Shapers: Tilling, listing up and raking out debris are time consuming bed preparation steps that can be done better by a powered bed shaper. Several European manufacturers produce PTO driven bed shapers with built in stone burriers. Even without stones these machines



and/or herbs. These bed shapers in a single pass with or without rollers create an ideal surface to permit precision seeding. The shapers range from models that make a 35" bed top and wider and range in cost from \$7500 without a roller to \$9500 with roller as of this writing (8/13/04). Many other bed sizes are also available.



growth, discourage weeds and facilitate harvesting. Until relatively recently large

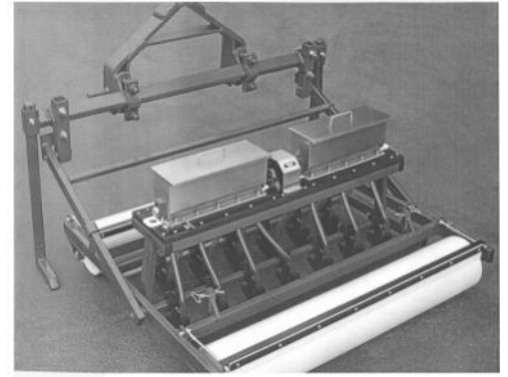


Seeding: The greens are massed plantings with closely spaced drills (lines) and with seeds close together in each drill to encourage up-right



scale growers had a major advantage because they could rationalize use of pneumatic planters that give extremely pre-

cise seed placement albeit at very high initial cost. Today even small growers can use a custom made push seeder that does 24" wide swath at cost of about \$2,500 (8/13/04) or a 3pt mount version to do a 45" bed top for about \$5500 (8/13/04). These represent a big improvement over the push seeder most commonly used by small scale growers but still are not very precise.



The single best investment any greens grower can make is the innovative precision seeder made by Dema. An extremely simple system combined with clever engineering and high quality manufacturing gives precise seed placement at a price far below pneumatic seeders. A stainless steel seed metering roller is drilled with (4) seed pockets for each planting line so that moving a single lever lets you switch from one

Note seed pockets on rotor



Rotor speed control



size seed to another. The simple movement of a pinion on the side of the Dema allows you to control speed of seed metering roll to control seed spacing in the row. Price about \$9500 (8/13/04).



3 pt mount 48" cut \$15,000

Greens harvesters: The invention of the "band saw" cutting head just a few years ago in Italy revolutionized mechanical greens harvesting. This simple idea resulted in large trailed harvesters costing around \$26,000 and self propelled models from \$45,000—\$200,000 becoming common in the Salinas Valley of California and other places. The largest growers can amortized

the cost of one of these machines in a matter of weeks with the labor savings alone, in spite of this fact the majority salad mixes sold in USA are still cut by hand by an army of extremely low paid workers, allowing large producers to under cut prices.

Fortunately the smaller grower now has access to a small scale greens harvester to keep labor demands low and to actually produce a higher quality product. It's unusual for a machine harvester to do better than hand work. With greens the band saw's cleaner cut and the elimination of bruising from holding greens bunches during cutting allows the Ortomec to produce products superior in crispness and with a longer shelf life.



48" self propelled \$32,000

Sanitation: The fewer the number of people who come in contact with the crop and the less times the crop is touched, the easier it is to keep crop free of contamination. The use of stainless steel and food grade plastics allow harvester to be pressure washed and sanitized as needed. It is necessary to see to it that totes are washed and sanitized inside and out to retain the harvesters advantage in this regard.

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