



ADVANCED AG SYSTEMS'S

Crop Soil News

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"It is the crops that feed the cows that make the milk which creates the money."

Aeration: The Un-Tillage

Aerators were originally designed for improving the air/soil interface of lawns and golf courses. In other countries they developed heavier units to aerate pastures that were compacted from grazing. They have had sporadic use here in the Northeast. There are two basic similar designs with differences in how the blade is designed and enters the soil. Most units have replaced the solid iron holding the shaft (picture at right) with a heavy "C" shaped spring, to cushion the impacts with rocks.



The principle is a triangular tine that enters the soil and leaves a hole upon exiting. When the tine is straight, it simply pokes a hole into the ground. This has been used to incorporate manure into sod fields with minimum disturbance and no runoff. The tines may still tip up an occasional flat rock. When the shaft is at an angle (3 degrees up to 10 degrees), the exiting tine lifts and loosens the soil in the top 3 – 6 inches. It leaves a slightly larger hole, more loosened soil, and a clump of raised soil (see photo at left 3 degree angle).

Of course we had to try it for everything else we till. One of the biggest uses we discovered for aeration tillage is for rapid preparation for legume seedings. The aerator is set at an angle to work the soil slightly more aggressively and is followed by a trailing drag fingers and double rolling basket. (See photo at right from LandView Farms 518-369-8216). The drag fingers break up and level the clumps of soil raised by the tines. The rolling baskets then crumble the soil into a fine seedbed necessary for legume seedings. Any lumps of soil are broken while they are moist and spread over the surface of the field. The results is a



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