Tillage Systems Forum

ASSBT 2011 GENERAL MEETING
ALBUQUERQUE, NEW MEXICO
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TILLAGE SYSTEMS – STRIP TILLAGE; ZONE TILLAGE; STALE SEED BED

Forum Moderator:

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The forum was designed to raise awareness of recent changes in sugarbeet tillage systems, diversity of tillage systems in North America, and to discuss why certain systems are popular in specific growing areas. John Smith provided general definitions for three tillage systems surfacing in several of the sugarbeet growing areas:

– **Strip tillage:** Residue is moved away from where the crop row will be to warm and dry the soil in the immediate row area. Emphasis is on moving residue. Any tillage will be shallow, and will be with a single shank in the row, usually less than 6 in. deep. Fertilizer might be placed behind the shank. Warmer, dryer row area allows earlier planting and faster emergence.

– **Zone tillage:** Similar to strip tillage except the shank is operated deeper, usually 8-12 in. Closing the deep shank track and making a good seedbed for the row are key functions. Fertilizer is usually applied at one or more depths behind the shank. Equipment is more robust than for strip tillage. Implement components include a large residue cutting disk, residue row cleaners (optional), the shank, a pair of angled coulters to squeeze the shank track closed, and a rolling basket arrangement to prepare the seedbed.

– **Stale seedbed:** Primary tillage and secondary tillage to create a seedbed are completed in the fall. The soil surface mellows over winter. Sugarbeets are planted directly into this stale seedbed without any spring tillage. Any weeds are controlled with herbicides prior to planting.

An agriculture representative for each sugarbeet cooperative/company in North America was invited to briefly describe the dominant tillage systems used in each growing area. Of particular interest were tillage systems identified as strip tillage, zone tillage, and stale seedbeds. Each agriculture representative responded to three specific questions, and then the forum was opened to discussion related to tillage systems. The three questions were:

45006. How popular are strip tillage, zone tillage, or stale seedbed systems in your area?

45007. Why are these particular systems popular or not popular?

45008. If none of these three tillage systems is used in your area, what tillage system is popular?