

Types of Application Tool Bars

The field application of manure slurry in agriculture fields is a combination of getting the effluent to the field as well as applying the slurry in the field. The implement that applies the manure slurry is called the tool bar.

There are many different tool bars made by many different manufacturers. Each have their purpose and all manufacturers claim their tool bar is the best. There are primarily four different broad types of tool bars with variation for different variations for situations. These four types of tool bars are the: 1) knife or sweep type, 2) coulter type, 3) aerator type, and 4) broadcast with no incorporation.

Knife or Sweep Injection Tool Bars



The most popular sweep is the Dietrich Sweep which is a hardened steel sweep designed for three different application rates. The ones LPD uses is the high flow model which will accommodate application rates between 10,000 and 40,00 GPA. Higher application rates will leave slurry on top of the ground.

Tool bars with this type of sweep will gently lift the soil 1-¼ inches which creates a pocket for the manure slurry. As the tool bar moves along the ground the soil will gradually flatten over the furrow. At high gallon application rates the furrow will be held open until the slurry moisture seeps into the ground. On tight soils this may leave a ridge or bump until rain or irrigation water will soften the soil.

This tool bar is ideal for tilled ground or through harvested corn, bean, wheat and other grain and silage crops.

Due to the ridges it leaves it is not the preferred tool bar for grass, alfalfa or forage crops.

Closure coulters can be installed which will close the furrow immediately after application.



Coulter Type Tool Bars



This type of tool bar uses a wavy or straight coulter to sweep the crop debris away from the path of injection.

Then a coulter opens a furrow and the manure slurry is deposited in the pocket. Following the manure slurry is a closing coulter which pushes the soil back over the open furrow.

This type of tool bar is typically used for lower GPA applications, although some units have been used on flat ground with relatively high application rates.

LPD's coulter tool bar is 38' wide and can make turns without having to remove the tool bar from the ground. It does leave a small tear drop area that will not receive effluent on the turn around.



The resulting field does have some ridging or humps but not as bad as a sweep. The width of the tool bar and the fact it does not have to be removed from the ground on turn arounds makes it a popular choice for some situations.

Aerway Type Tool Bar



The Aerway tool bar will perforate the ground leaving 6" to 8" pockets that the effluent or manure slurry will fall into. There are two types of slurry deliveries: 1) broadcast prior to and after the rotary wheels perforate the ground, 2) direct deposit of the slurry behind each rotary wheel after it perforates the ground.

LPD uses the broadcast method as this causes less plugging of the hoses and a more even distribution of the manure slurry. LPD also has twice the number of rotary tines on their Aerway tool bars; LPD uses the tines that are not angled which leaves the fields with less ground disruption.

The Aerway tool bar is the tool bar of choice for grass forage and alfalfa fields. There will be some manure slurry on top of the ground and wiped over the foliage as the drag hose is pulled across the ground. A good rain or irrigation watering will wash away manure coating left on the leaves.