Bean Agronomy Network~ *Partnership in Industry*

September 3, 2004 - All Bean Bulletin #9

Harvesting dry beans

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Tips for cutting and harvesting dry beans.

Timing:

- The optimum time to cut dry beans (pinto, pink, gnb, small reds and blacks) is minimum 60-70% pod turn. Optimum situation is to have 100% pod turn while having lots of green foliage on the plant. Strip some plants and count the actual percentage of white and green pods to see where your field is.

Cutting Methods;

- In southern Alberta most beans are harvested with the use of knife cutter, powered rod and straight-cut header fitted with an Elmers or Sund pick-up.
  Beans are first undercut and rodded. If cutting is done in one pass and rodding in another, then beans should be rodded a.s.a.p. after cutting. This will allow the whole field to dry down and mature at the same time under good drying conditions.
- Some growers are using a Double rod to undercut and this works well where soils are mellow and soft enough for this operation to be successful.
- There are more Pickett One-Steps being purchased by growers. This machine has a double- rod mounted in front of a windrower. This operation rods the beans out of the soil and places them in a windrow.

Bean cutters

- Harriston, Heath, Speedy, Orthman, Kirchner and Elmers all manufacture bean knife cutters. The last three also manufacture single and double rods in use throughout the bean production area.
- Harriston, Heath, Speedy and Elmers all have standards for each cut row. These cutters cut one row and lay two rows together. Orthman and Kirchner have a single standard for each two cut rows.
- All of the above cutters work best when set about 1" below the soil surface. Speeds between 5 and 8 mph are common. The vining or gathering rods should be set properly so that if a second rodding is required because of weather, tractor travel can be accommodated between cut and rodded rows.
- The pitch of blades can be changed to allow soil penetration. Most cutters also have two width settings, a "narrow" one for cutting and the "wide" for re-cutting if this is necessary.

Set-Up

- Cutters should be leveled on a flat surface, with nose of the blades up about 3/4" from toe to nose. Adjust depth wheels to allow for a 1 " depth cut. Adjust vine turners so that plants flow evenly through cutter operation. Final 'tweaking' will be done in the field. Remember that you want to move a little soil as possible.

Rodding

- Rod beans in the same directions that you cut them.
- You will need good points on the rod standards to get soil penetration. Rod speed should match ground speed and vine rods should be set so the combine pick-up does not miss any stray plants.

Combining

- Pick up beans in the same direction that you rodded them.

Combines

- John Deere- conventional and rotaries and IHC rotaries all work very well. Cylinder speed capacity should be in the 140-200 range.
- Remember that you don't want any sharp or pointed surfaces that beans can strike and break. Most models have bean kits available including cup elevators, wide slotted concaves, slow speed gearboxes, sheaves and drives.
- Smooth rub bars, good wind capacity are all needed to get achieve a quality samples of dry beans.
- Recommended pickups are Sund, Elmers and Picketts. All work well. The pickup speed should exceed ground speed only slightly (40-50 rpm)
- Slotted screens on the table and feeder housing all help reduce the amount of dirt and fines entering the combine.
- Unloading auger should be operated at slow speeds. If possible always leave a little product in hopper to reduce shattering of new product coming into the hopper.

This summary is very short and concise. If you need help, contact your company field representative for more information and assistance.
Leif