

HDC Food Grade Soybean Production Guideline

Grower

Growers must be 100% committed to using HDC Production Guidelines.

Growers must be willing to use production techniques that will produce high quality beans.

Growers must have proper equipment and soil type to meet these standards.

Growers must be willing to accept and implement advice given by HDC staff.

Field

Fields best suited for Food Grade Soybean production are well-drained, medium textured soils.

Food Grade Soybeans must be grown in proper rotation to avoid diseases such as white mold and root rot. They should be grown in at least a three year rotation with corn and cereal crops.

Avoid planting into fields that have infestation of hard to control perennial weeds that will cause staining. (i.e. horsenettle, nightshade, pokeweed)

Genetically Enhanced (GE) Concerns

The contract edible soybean fields will have no GE soybeans grown in the previous year.

Isolation of the edible soybean crop is required. A Grower cannot grow GE bean crops in the fields adjacent to the contracted crop unless a buffer strip of 3 metres is present.

Planting Date

Depending on the crop heat unit rating in your area, Food Grade Soybeans are generally planted between mid-April and mid-May.

To avoid emergence problems, plant into warm, moist soils. Planting in cool, damp conditions may reduce emergence, population and seedling vigor.

Seed

Hensall District Co-operative will supply you with certified grown seed to reduce chances of seed-borne diseases and Genetically Enhanced seed concerns.

A rhizobial inoculant provides additional insurance for soybean to fix their own nitrogen.

A number of different treatments are available to protect against seed decay organisms, wire-worms and seed corn maggots. See your HDC Field Marketer for details.

Row Width	Final plant stand per acre	Seeds per foot of row	Pounds per acre (Based on seed size 2300)
30 Inches	130,000 to 140,000	7.4 to 8.0	57 to 60
20 Inches	150,000 to 160,000	5.7 to 6.0	65 to 70
15 Inches	170,000 to 175,000	4.8 to 5.0	74 to 76
14 Inches	175,000 to 180,000	5.0 to 5.2	76 to 80
7 Inches	195, 000 to 200,000	2.6 to 2.7	85 to 88

*Plant population will vary greatly due to seed size; therefore, always check individual lots for number of seeds/ lbs.

Soil Fertility

Adequate soil fertility is a must for growing top quality beans.

We recommend soil testing to determine proper fertilizer application rates for Phosphorus and Potash.

For specific fertility requirements, see your HDC Field Marketer.

Weed Control and Pesticides

Weed free fields allow you to optimize yields, reduce disease pressures, prevent staining and make harvesting easier.

Pesticide selection is very critical especially under conservation tillage. Therefore consult “Publication 75 – Guide to Weed Control” and see your HDC Field Marketer for specific programs.

The producer must use only Canadian approved pesticides as per label instructions in their Food Grade Soybean production program.

Records of Agent, Rate, Method, Date, and Days to Harvest

Quality Assurance Program

The grower will be enrolled in the HDC QAP program as stated in the edible soybean contract. A HDC Field Marketer will monitor the crop from time to time or as needed; and the grower agrees to implement any general or reasonable advice.

White Mould

White Mould is a disease that restricts the bean’s ability to set pods fully, resulting in uneven early ripening, small seeds and reduced yields. Prior to and during the flowering period, symptoms or white mycelium or water-soaked lesions can be present on the plant. With prolonged periods of warm, moist conditions, plants can appear wilted, lighter in colour and an odour may be detected.

Once symptoms are present crop destruction and yield reduction has already occurred.

To date, the most effective way to control white mould is through the use of a fungicide. Consult your local HDC Field Marketer for rates and product choices.

Other ways to minimize disease pressure is to rotate out of soybeans, limit nitrogen usage and grow crops in wider row widths.

Pre-Harvest

If weeds are a problem, a pre-harvest treatment of Reglone should be applied to burn down weeds. This product will not affect germination or seed quality.

Transorb, RoundUp and TouchDown can be used if production is destined for the food market only.

Note: Volunteer corn must be removed from the fields.

Harvesting

Please review combine clean out procedures. You should ensure your combine has been completely cleaned and flushed of any contaminated products.

Harvesting at moistures between 12 – 15% will greatly reduce mechanical damage such as splits and cracked seed coats. Fine tuning your combine by slowing the cylinder and open concaves will reduce this potential problem. Check bean samples regularly as moisture changes in the beans during the day.

Mudtagging can be avoided by harvesting soybeans until the plants are completely dry (ie 1:00 p.m.) and stay out of the field once dew breaks (i.e. 7:00 p.m.).

It is very important to ensure that edible beans, corn, berries, and **genetically modified soybeans/corn must not contaminate** the load.

The Grower will take steps necessary to prevent contamination from glass, fuels, harmful contamination and other market classes.

It is understood that it is critical to produce quality beans that meet or exceed our customers' quality requirements. The harvesting of a quality product will significantly improve your bottom line.

Please note, improper on-farm aeration may cause quality problems for ourselves and our customers. We reserve the right to reject or take on a consignment basis, improperly on – farm aerated beans.

Payment for Food Grade Soybeans will be made on the basis of 13% moisture as standard.

Grading Criteria

Moisture - minimum 12% / maximum 14.5%, standard being 13%

- Purity
 - naturally dry (no dryers)
 - 99.5% pure white hilum
 - must not be contaminated with another crop or variety (especially GE crops)
 - berries, **corn**, white beans and other foreign material are **not allowed**
- Colour - good natural colour and bright- must meet Canada #1 grade standard after cleaning Seed
- Quality- low cracked seed coats, free of weed stain, free of mud tag, no mold/ heated beans, less than 5% mechanical damage
- Dockage - maximum 2.25% dockage (recorded in pit ticket as 2.25 – 1.00 = 1.25) and other foreign materials

NOTE: The criteria must be met in order to be eligible for the premium. HDC grading decision is final.

On Farm Storage of High Value Products

You have taken the time to produce a high quality, value added product for sale to a specific customer, have you taken the time to assure that the storage of this product is of the same high standards. Listed below are the recommended storage procedures that Hensall District Co-operative has set as requirements for high value products.

Ensure proper clean out of bin floor, aeration tunnels, sides, bean ladders and ceiling.

Inspect cleanout material for insects. If present, dust with Protectit approx. 50g/sq ft.

before loading in new crop. The top can also be treated after filling. See your HDC Field Marketer for more information.

Ensure proper clean out of loading and unloading equipment.

Level top surface of the product being stored.

Maintain storage temperatures of 40F to 49F.

Do a monthly inspection of grain bin during storage seasons including the following:

Temperature.

Visually inspect top of product. Should look bright, clean, free of molds and free of lumps.

Smell should be clean and fresh. Should be free of moldy or musty smells.

Avoid warming up the grains in the winter time, aerate when temperatures are appropriate.

Keep temperatures constant from top to bottom of the product or you will get condensation and a crust on top.

Transportation

Inspect to ensure that all residue products from previous loads are not present in the truck/ wagon that edible soybeans are destined. All corners, tarps, airlocks and unloading spouts should be free and clear of residue products.

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IP Food Grade Soybean Guideline	Date: Sept. 2005	Revision: 2006
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