



HARVEST GUIDELINES

Food Grade Soybeans

In order for Hensall Co-op Producers to have access to the very competitive Azuki bean market, our Producers and Hensall Co-op as a processor, must focus on meeting our end-users' needs. This value-added business adds more profit to the bottom line of your operation and to that of your farmer-owned co-operative. Please review the following notes, and make sure every effort is made to meet contract specifications.

The contract grading criteria must be met to qualify for the food grade premiums (review your contract for more details).

Food Grade Soybeans Contract Grading Specifications

Identity Preserved & SQHW Varieties

Moisture	- Minimum 11.0% / maximum 14.5%, Hensall Co-op's standard Food Grade Soybean drying/shrink chart to apply. - naturally dry (no dryers)
Purity	- 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 the sample
Quality	- maximum 5% cracked seed coats, free from mud tag/weed stain, no mold/heated beans, less than 5% mechanical damage & splits
Dockage	- maximum 2.25% dockage and other foreign materials with all dockage deductible back to 0.0%
Seed Size (12/64) Screen	- over 92% of the beans remain on the screen - full premium paid. - if less than 92% of the beans remain on the screen – premium paid will be reduced by 1% for each percent under 92%. i.e. if seed size rating is 92% → 100% x weight x Premium/bushel if seed size rating is 91% → 99% x weight x Premium/bushel if seed size rating is 75% → 83% x weight x Premium/bushel

Note: A small amount of corn in the load will not be cause for rejection since the product will be processed to remove foreign material.

Note: These criteria need to be met in order to fulfill the requirements in the contract. Seed discolouration, adhering soil and weed stained beans will be assessed as colour concerns during grading. Food Grade Soybeans outside the above criteria will be downgraded to the level of available premiums as markets allow. If they do not qualify for any other premium class or if no premiums are available, the downgraded beans will be treated as crush market beans. The above spec sheet is subject to change as markets require.

Our end-users are demanding that high quality product be delivered to them on a consistent basis. Genetically modified corn and /or soybeans continue to be major concerns for our end-users.

Harvesting/Processing Challenges: Some of the biggest challenges we face during processing are seed coat colour and moisture. It is often difficult to harvest all of your food grade soybeans when conditions are ideal however preventing problems is the key to producing good quality. By exercising extra patience when conditions are not quite right, quality can be improved on a lot of questionable product. We can not send product that does not meet the grade to our end-use buyers since doing so will undermine the support that these buyers give Hensall Co-op's producers. Please review the section of the cost of lost premiums, later in this document.

Pesticides:

Producers must use only Hensall Co-op approved pesticides as noted in the Hensall Co-op production guideline, as per label instructions. The guideline can be reviewed after logging in to FieldTrace or contacting your Field Marketer. Review the FieldTrace resources on our website at <https://hensallco-op.ca/FieldTrace.htm/>

Note: Please review the document entitled "Food Safety Notice" at <https://hensallco-op.ca/Contract-delivery-resources.htm>

Harvesting:

Please review the manufacturer's combine clean out procedures. Ensure that your combine, trucks and wagons and other handling equipment have been completely flushed of any previously harvested products. The Producer must also take steps necessary to prevent contamination from glass, treated seed, fuels, livestock feed and other harmful contaminants.

We can't stress enough we need soybeans that are free from edible beans, corn, berries, and genetically modified soybeans and corn! Please make a reasonable attempt to prevent contamination where possible. Incoming loads will be tested for GMO at the probe room.

Harvesting at moistures above 12% will greatly reduce mechanical damage such as splits and cracked seed coats. Check bean samples regularly as harvesting conditions change during the day. Fine tuning your combine by slowing the cylinder and/or opening the concaves will reduce this potential problem. Always check the quality of the product being handled for cracked seed-coats and damaged beans.

Staining of seeds can be avoided by not harvesting soybeans until the plants are completely dry and staying out of the field once the dew falls. Dampness from dew or from plant juices will coat the seeds and allow dust and soil particles to adhere to the seed. Stained beans will reduce the grade of product delivered and may cause loads to be rejected since they will not meet the end-users' specifications.

On Farm Storage of High value products:

You have taken the time to produce a high quality, value-added product during the growing and harvest season. Please don't forget to follow through, with a plan that ensures this high quality is maintained if you've agreed to store your soybeans! Please note that improper on-farm storage may cause quality problems for us and our end-users. We reserve the right to reject or take on a consignment basis, improperly stored

on-farm beans that are not aerated or aerated too much (i.e. too dry causes high cracked seed-coats).

Listed below are the recommended storage procedures Hensall Co-op has set as requirements for high value products:

1. Ensure proper cleaning of the bin floor, aeration tunnels, sides and ceiling.
2. Treat the bin with Protect-It stored grain insecticide.
3. Ensure proper clean out of loading and unloading equipment.
4. Level top surface of the product being stored.
5. Maintain storage temperatures of 40F to 49F.
6. Do a monthly inspection of grain bin during storage seasons including:
 - 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. In-bin checks and air quality checks from aeration fans are good indications of quality.
7. Avoid warming up the grains during the summer, aerate when temperatures are appropriate.
8. Keep temperatures constant from top to bottom of the product or you will get condensation and a crust on top.
9. Consult with the storage system manufacturer for proper operating instruction.
10. Avoid the use of sucker/blower transfer systems when possible but if needed ensure they are in good repair (Airlocks seals) and run as full as possible. Always check the quality of the product being exhausted from the transfer unit for cracked seed-coats and damaged beans.

Transportation:

Inspect vehicles and handling equipment to ensure all residual products from previous loads are not present in the truck/wagon to be used for food grade beans. All corners, tarps, airlocks and unloading spouts should be free of residual products. Monitor the smell of the soybeans as they are loading to ensure no "mouldy odour" and that they are cool and sweet.

The Cost of Lost Premiums:

Food Grade Soybean Producers should look at the cost of lost premiums and should do everything they can to ensure quality specifications are met.

Regular IP Soys:

100 acres x 45 bu/ac x \$3.25/bu premium = \$14,625.00

X-790 (Large Tofu Type):

100 acres x 38 bu/ac x \$5.00/bu premium = \$19,000.00

This loss to the producer is substantial at any time but let's take it a step further. Hensall Co-op must have a steady supply of high quality food grade soybeans to meet the needs of existing and potential customers. If the food grade soybeans are lower quality, Hensall Co-op incurs increased processing costs which reduces returns to Hensall Co-op and our member producers. Hensall Co-op may also incur quality

discounts from buyers or pay penalties for non-delivery of unfilled contracts. Together we both stand to benefit from the extra care you take in harvesting top quality food grade soybeans, so we ask our Producers to use the care warranted to maximize quality.

Above all else, please remember, we're here to help. If you have any questions about your Food Grade Soybean Programs, call your Field Marketer.

Best of luck harvesting,
Your Hensall Co-op Team