

Identity Preserved (IP) Systems

Bill Farley
Regina, SK

Background

Identity preserved systems or processes are intended to provide purchasers of agricultural products, including grains, oilseeds and pulses, with a high degree of assurance regarding quality. Essentially, these systems are designed and executed to keep those crops with special qualities separate and free from bulk commodities. While the term IP is only now becoming more commonplace, such systems have long been in existence.

The Canadian Seed Growers Association facilitates a system that has been in place for 100 years. Together with the Canadian Food Inspection Agency and the Canadian Seed Institute, a system is administered to ensure effective quality management for the production, cleaning and handling of planting seed. If all quality issues are addressed the particular lot of seed will be issued a certificate. This system is intended to provide full documentation and tracability.

The organic grains industry through a number of certifying agencies also operates as an Identity Preserved system. Here the industry partners have developed a system whereby the production, processing and handling of pesticide free grains, oilseeds and pulses is kept separate from non-organic and bulk commodities. Products meeting these conditions are certified, and documentation and tracability exist to provide assurance to users.

The trend towards more crops being grown and processed as IP is becoming well established. This is a result of a marketplace that has preferences for food products with special traits and high quality.

Warburton Mills works with farmers, the Canadian Wheat Board, and N.M. Patterson in the production and handling of a number of spring wheat varieties used to produce flour in their mills in the U.K. The varieties have certain characteristics that give their products special qualities. Cargill also works with farmers and Dow Agrosiences in the production and handling of Nexera canola varieties used to produce oils with specific qualities.. Although these two examples differ from organic and pedigreed seed production, the IP system used still involves segregation and special procedures. Other specific well known IP crops include Navigator Durum at the Saskatchewan Wheat Pool and Linola at Agricore United.

Users of higher quality IP agricultural crop products generally pay premiums over conventional commodity crops. So in many cases there are incentives for producers to grow them. The premiums must be large enough to compensate producers for the extra work. It is when the producer becomes more involved in secondary processing of IP crops that the task of documentation becomes more extensive and quality control more important.

Personall Experience

On our farm at Grand Coulee, much of our IP production involves growing and processing pedigreed seed and flaxseed for human use. In order to maintain quality throughout all steps cleanliness is essential. This generally involves thorough cleaning of all equipment: drills, seed

tank, augers, grain trucks, grain bins, combine, and seed cleaning equipment. Just as important is the cleanliness of the fields intended for these specialized crops.

However, soil conservation practices that we now employ on our farm have meant a change in some techniques useful in pedigreed seed production. Our conservation practices include continuous cropping, minimum tillage and rotations with many crops. Summerfallowing can be useful in preparing a field for safer seed production. Many crops such as spring wheat, barley, and red lentils can volunteer for many years. To avoid contamination in subsequent crops, longer rotations become necessary. While summerfallowing used to have a fit in cleaning up a field, we now find that growing a variety of different crops is more efficient. Consequently, an important key in seed production or in any type of IP production for that matter is **field use history**. In seed production, certification can be denied if field history is not consistent with established rules. Maintaining thorough documentation of field or land use is critical in IP crop production. In much the same way, it is not uncommon to pick up an ag magazine wherein crop advisors recommend that producers keep thorough records of field herbicide use to prevent expensive mistakes.

In my opinion to insure against contamination keep the following crops apart in rotations.

Flaxseed & Canary seed
Durum Wheat & Barley
Yellow Mustard & Canola
Small red & green lentils
Different varieties of wheat

In 1999, I attempted to grow a crop of Foundation Durum Wheat on a particular field. My land use records showed that the previous crops were Canola, Peas, Flaxseed, and Glenlea wheat. I felt confident that there would be no problem but the field did not pass inspection due to the number of Glenlea volunteers.

Contamination can potentially reduce or destroy the value of your IP crop so make sure you have good records and understand the characteristics of preceding crops.

Specific Example of and IP System

As I mentioned above, we grow and process flaxseed for human use and the particular variety is yellow seeded. In order to illustrate how an IP system works I will explain the steps we follow for one specific market.

The specific traits required of the processed seed lots are:

- (1) 99.9 % purity
- (2) a seed cadmium level of less than 0.25 parts per million
- (3) less than 0.1 % brown seeds
- (4) less than 8% moisture
- (5) Less than 3 % cracked seeds
- (6) CFIA inspection and certification

Documentation for the end user includes:

- (1) Bacterial counts & choliform counts
- (2) Land use history
- (3) Herbicide, pesticide & fertilizer report
- (4) Soil cadmium test

Some of the practices necessary for these conditions to be met include:

- (1) Field history illustrating a low chance of contamination with brown flax
- (2) Soil tests
- (3) Good weed control
- (4) Storage in clean, tight & dry bins

Conclusions

IP production really means segregation. If you are interested in growing an IP crop, talk to the contracting company or buyer about what the rules are , such as:

- (1) extra costs & procedures
- (2) delivery schedule & prices
- (3) purity/tolerance standards
- (4) documentation required
- (5) legal requirements

While IP production involves much extra work on the part of the producer, the rewards of placing an IP crop in one's rotation can pay off.

CLEANED PRODUCT REPORT

GOLDEN FLAX : CHECK LIST

DATE _____
FARMER _____
CLEANING FACILITY _____
LAND LOCATION _____
QUANTITY before CLEANING _____
QUANTITY after CLEANING _____
LOT NO. _____
MOISTURE % _____ 9% MAX
PURITY % _____ 99.9 % MIN
INERT MATTER % _____ 0.1% MAX
BROKEN SEED % _____ 3% MAX

CFIA SAMPLING

Name _____
Date _____
Lot No. _____
No. Bags _____

FIELD HISTORY REPORT

Lab Soil Test Done Year _____ Field location & No. _____

N__P__K__S__

Field Size in Acres _____

Spring Operations

Operation _____ Date _____

Operation _____ Date _____

Operation _____ Date _____

Operation _____ Date _____

Fertilizer Used Formula _____ Rate _____

Formula _____ Rate _____

Seed Treatment _____ Rate _____

Herbicides Used _____ Rate _____

Herbicides Used _____ Rate _____

Insecticides Used _____ Rate _____

Other _____

Other _____