QPRI *Express* ✓

Risk indexes and pesticide record
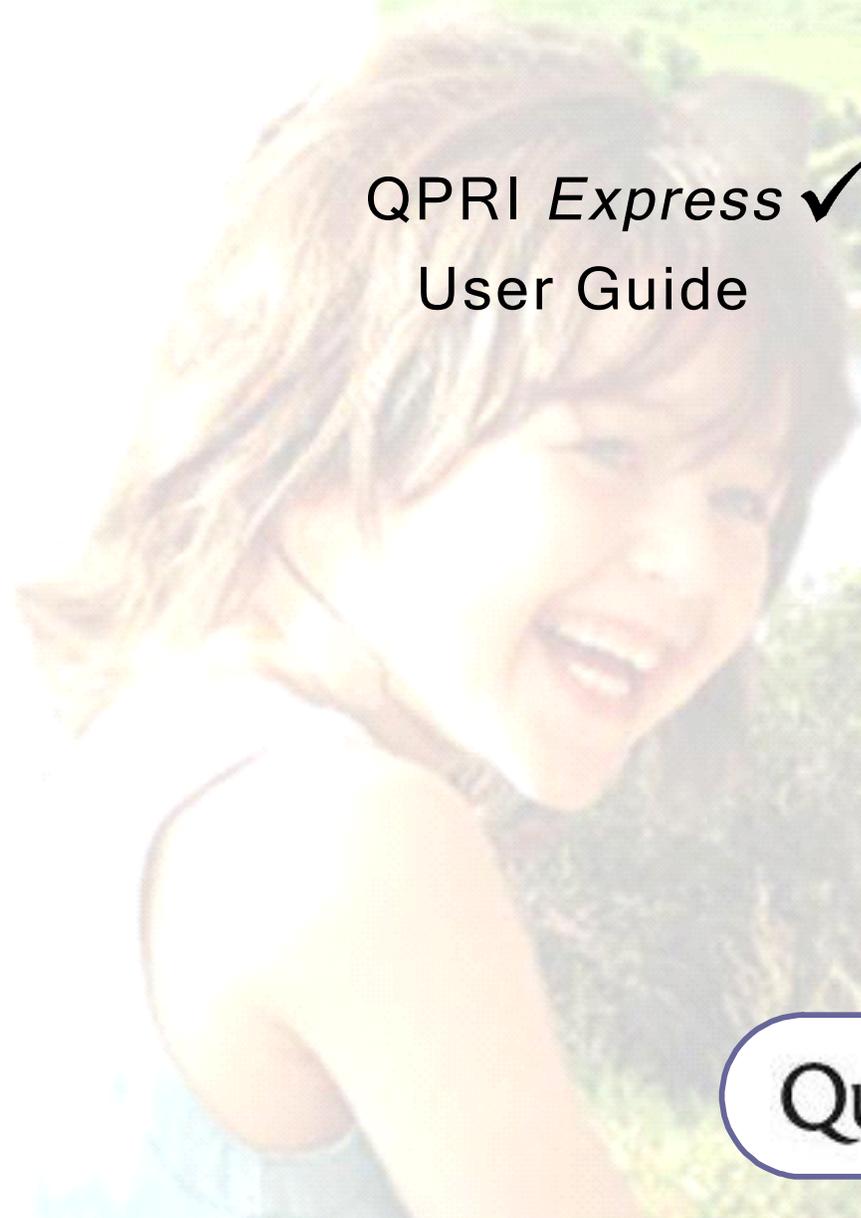
QPRI *Express* ✓
User Guide

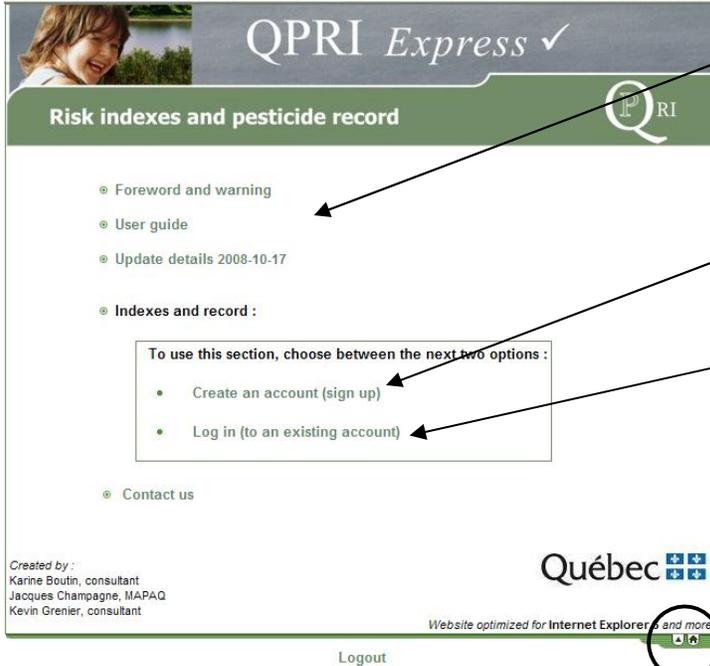Québec 🏵

Illustrated User Guide for QPRI *Express*✓

DISCLAIMER

Users are solely responsible for their utilization of QPRI *Express*✓ . No ministry or government organization may be held responsible for the application of results generated by QPRI *Express*✓ .

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1. Home Page

General information on the software application: foreword and disclaimer, comprehensive user guide, and update information

To create a new user account

To log into an existing user account

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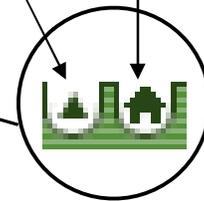
1.1 Main Menu (after opening a session)
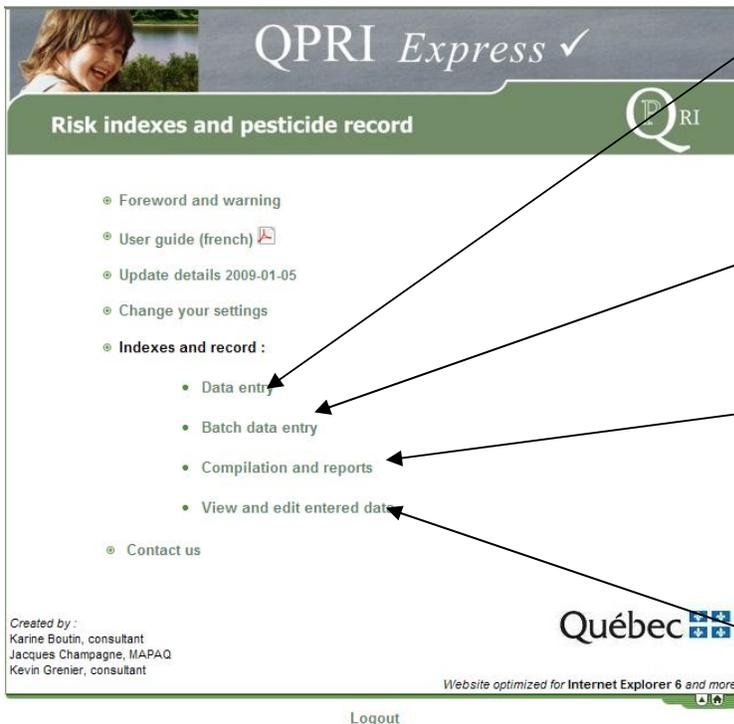
Data Entry: to enter data into the record and calculate risk indexes *Page 3*

Batch Data Entry: to enter data into the record more quickly and calculate risk indexes *Page 6*

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View and Edit Entered Data: to view, edit, print, or delete entered data. *Page 18*

2. Data Entry

1. Select or add a new farm business. Select or add a treated field and its area.

2. Select this field's crop type.

3. Enter treatment date. If you have multiyear data to enter, begin with earliest year. Note that it is not possible to enter data for years prior to 2000.

4. Select an application technique (type of sprayer or seed treatment, etc.).

5. View commercial product list in one of four product categories provided (fungicides, herbicides, insecticides, other). Then select registered pesticides for the targeted pest(s) (next page).

To add a product that is not in the list: Select this command only when using the QPRI *Express*✓ as a pesticide registry. Risk indexes cannot be calculated for products that were not in the initial list.

N.B. If you wish to include an procedure that is not a pest control treatment, you can add it here. For example, enter "mechanical weeding" as a "new product."

6. Select the commercial product applied.

7. Enter the area treated (a smaller treatment area reduces the risk).

8. Enter the rate or total amount of the commercial product applied. The rate will be expressed in ml/ha org/ha and the amount in kg or liters.

- The ERI and HRI are calculated automatically once the amount of the selected commercial product applied is entered.

- The ERI and HRI generated by QPRI *Express*✓ cannot be compared with each other because their weighting is not equivalent and they are not calculated using the same variables.

- To have the same basis for comparison at the crop, treatment, field, or farm levels, the product risk indexes ERI and HRI are given for one hectare.

- Theoretically the ERI value can vary from 1 to 961 and the HRI from approximately 1 to 23,040. However, the HRI indexes are usually lower than 1,000.

9. If you click on the information icon, you will be redirected to the SAgE pesticide "commercial product" record.

10. It is highly recommended that you enter data into the "Treatment Period" and "Targeted Pest" fields as well as those in the "Weather Conditions," "Control Effectiveness," and "Comments" sections so that the pesticide record will be as complete as possible. However, these sections have no effect on the risk indexes; they only serve for the pesticide record. It is the required fields (indicated by an *) that are used to calculate the ERI and HRI values.

11. Save the data immediately after entering it to avoid losing it.

Comment: All the entered data can be viewed and printed using the "**View and Edit Entered Data**" option *(Page 18)* on the QPRI *Express* home page. To monitor risk by field, crop, or entire farm, select "**Compilation and Reports**" *(Page 9)* on the home page.

3. Batch Data Entry

This section enables you to make multiple entries at once. Risk indexes for a single product cannot be viewed in this part of the software application. To do so, see Section 2 of this guide.

1. Select a farm business.

2. Select treatment date, application technique, type of pesticide, commercial product, and rate applied.

3. It is highly recommended that you enter data into the "Treatment Period" and "Targeted Pest" fields as well as those in the "Weather Conditions," "Control Effectiveness," and "Comments" sections so that the pesticide record will be as complete as possible. However, these sections have no effect on the risk indexes; they only serve for the pesticide record. It is the required fields (indicated by an *) that are used to calculate the ERI and HRI values.
N.B. To enter data in the latter three sections, click on the "+" icon.

4 a. Click on "Select Product."

Treatment information

Treatment date : 15 MAY 2009 (dd/mm/yyyy) *

Application technique : Air Bl. Spr. - high or lateral directed spray - ABS-HL *

Type of pesticide : fongicide   [Add a product]

Commercial product : - Select a registered commercial product - *

Rate (/ha) : *   Formulation type :
Active ingredient(s) :
Chemical family(ies) :
Resitance group(s) :

Treatment period : - Select -

Targeted pest(s) :

⊞ **Weather conditions** (optional)
⊞ **Control effectiveness** (optional)
⊞ **Comments (tank mix amount, nozzles, pressure, applicator name...)** (optional)

[Select product]

Selected products * ?

Date	Type	Product	Rate	Application tech.	Treatement period	Resistance group	
15-05-2009	fongicide	SUPRA CAPTAN 80 WDG - 24613	3750 g/ha	HL	at flowering	M	✗

4 b →

Treatment location * ?

Field	Field area	Crop type	Area treated	PestRI-E /ha	PestRI-S /ha
- Select a field -					

[New field]   *Calculated as a function of the applied rate of the selected products.*

4b. The selected product and part of the entered data will be displayed in the "Selected Product" table. The previously completed fields inside the brackets will be reset so that another product can be entered by repeating steps **2** to **4a**.

The following is an example of a triple product entry.

[Select product]

Selected products * ?

Date	Type	Product	Rate	Application tech.	Treatement period	Resistance group	
15-05-2009	fongicide	SUPRA CAPTAN 80 WDG - 24613	3750 g/ha	HL	at flowering	M	✗
30-05-2009	insecticide and acaricide	DECIS FL - 25573	200 mL/ha	HL	after flowering	3	✗
17-06-2009	insecticide and acaricide	INTREPID 240F - 27786	750 mL/ha	HL	after flowering	18A	✗

Treatment location * ?

Field	Field area	Crop type	Area treated	PestRI-E /ha	PestRI-S /ha
- Select a field -					

[New field]   *Calculated as a function of the applied rate of the selected products.*

[Save entry]

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5. Select or add one or more fields in which all treatments were applied.

6. Click on "Save Entry."

IMPORTANT: When the above entry is saved, the three treatments (NOVA 40W, DECIS 5 EC and INTREPID 240F) are recorded for both selected fields (Honeycrisp and Spartan). The software will record 3 * 2 = 6 treatment records:

Product	Field
SUPRA CAPTAN WDG	Honeycrisp
SUPRA CAPTAN WDG	Spartan
DECIS FL	Honeycrisp
DECIS FL	Spartan
INTREPID 240F	Honeycrisp
INTREPID 240F	Spartan

See Section 4 of this guide if you make a mistake entering batch data.

3. Reports and Compilation

This section enables you to display risk compilations in table or graph form.

3.1 Compilation in table form

1. Select a farm business.

2. Select year.

3. Select "Detailed" or "Global." If you select "Global," advance to Step 5.

4. Select "Field" or "Crop" depending on the type of compilation you want.

5. Click on "Run."

3.1.1 Example of a detailed compilation by field

When the ERI and HRI are related to the area cultivated, the QPRI generates risk indicators (PestRI-E/ha and PestRI-S/ha) by crop, field, or farm business. For example, for a given crop, the ERI and HRI for each product are multiplied by the area treated. The sum of the results divided by the crop area gives the PestRI-E and PestRI-S.

Risk indexes and pesticide record

Farm business : Apple - orchardist
Year : 2009

Field : Honeycrisp (1 ha)　　　　　**Crop :** Apple

Date	Product	Amount	Rate	Area treated (ha)	Application tech.	Resistance group	Product risk / ha ERI	HRI
2009-09-06	MAESTRO 80 DF	2,5 Kg	2500 g/ha	1	ABS-HL	M	56	384
2009-08-26	MAESTRO 80 DF	2,5 Kg	2500 g/ha	1	ABS-HL	M	56	384
2009-04-30	DITHANE DG RAINSHIELD NT	5,9 Kg	5900 g/ha	1	ABS-HL	M	9	462
2009-04-26	DITHANE DG RAINSHIELD NT	5,9 Kg	5900 g/ha	1	ABS-HL	M	9	462
2009-04-22	DITHANE DG RAINSHIELD NT	5,9 Kg	5900 g/ha	1	ABS-HL	M	9	462

Field risk indicators / ha:　　　**PestRI-E / ha** = 1646　　　　**PestRI-H / ha** = 8573

Risk calculated as a function of the applied rate

Field : Spartan (1 ha)　　　　　**Crop :** Apple

Date	Product	Amount	Rate	Area treated (ha)	Application tech.	Resistance group	Product risk / ha ERI	HRI
2009-08-15	CAPTAN 80 WDG	1,8 Kg	1800 g/ha	1	ABS-HL	M	56	288
2009-08-01	CAPTAN 80 WDG	1,8 Kg	1800 g/ha	1	ABS-HL	M	56	288
2009-07-06	CAPTAN 80 WDG	2 Kg	2000 g/ha	1	ABS-HL	M	56	288
2009-06-24	CAPTAN 80 WDG	2,5 Kg	2500 g/ha	1	ABS-HL	M	56	384
2009-06-07	SENATOR 70WP 1	0,8 Kg	800 g/ha	1	ABS-HL	1	1	922
2009-06-03	GUTHION SOLUPAK	2 Kg	2000 g/ha	1	ABS-HL	1B	289	368
2009-06-03	SUCCESS 480 SC	0,1 L	100 mL/ha	1	ABS-HL	5	110	5
2009-05-31	POLYRAM DF	4 Kg	4000 g/ha	1	ABS-HL	M	33	846
2009-05-28	SENATOR 70WP	0,4 Kg	400 g/ha	1	ABS-HL	1	1	922
2009-05-28	POLYRAM DF	4 Kg	4000 g/ha	1	ABS-HL	M	33	846
2009-05-24	POLYRAM DF	5 Kg	5000 g/ha	1	ABS-HL	M	33	846
2009-05-20	POLYRAM DF	4 Kg	4000 g/ha	1	ABS-HL	M	33	846
2009-05-15	RIPCORD 400 EC	0,2 L	200 mL/ha	1	ABS-HL	3	240	135
2009-05-15	AGRI-MEK 1,9% EC	0,38 L	380 mL/ha	1	ABS-HL	6	121	58
2009-05-12	POLYRAM DF	4 Kg	4000 g/ha	1	ABS-HL	M	33	846
2009-05-09	SUPERIOR OIL	16 L	16000 mL/ha	1	ABS-HL		110	135

Field risk indicators / ha:　　　**PestRI-E / ha** = 1261　　　　**PestRI-H / ha** = 8023

Risk calculated as a function of the applied rate

Here the PestRI-E/ha and PestRI-S/ha indicators represent the total risk for each field in the selected year. They express the risk per hectare as a function of the area treated—one application of the same product on 10 hectares will affect the indicator less than if applied on 20 hectares.

3.1.2 Example of a detailed compilation by crop (2 crops)

Risk indexes and pesticide record

Farm business : Orléans St-Pierre
Year : 2008

Crop type : Strawberry **Crop area** : 11 ha

Date	Field	Product	Amount	Rate	Area treated (ha)	Application tech.	Product risk / ha ERI	Product risk / ha HRI
2007-05-22	orléans	BRAVO 500	21 L	3500 mL/ha	6	HBS	12	551
2007-05-18	orléans	EQUAL 65 WP	13,5 Kg	2250 g/ha	6	HBS	20	198
2007-05-18	orléans	CABRIO EG	6 Kg	1000 g/ha	6	HBS	81	60
2007-05-18	orléans	SENATOR 70WP	6,6 Kg	1100 g/ha	6	HBS	1	691
2007-05-18	orléans	WARRIOR	0,624 L	104 mL/ha	6	HBS	81	72
2007-05-18	orléans	WARRIOR	0,624 L	104 mL/ha	6	HBS	81	72
2007-05-18	orléans	ALIETTE WDG	33,6 Kg	5600 g/ha	6	HBS	1	68
2007-05-18	orléans	KELTHANE 50 W	21 Kg	3500 g/ha	6	HBS	100	490
2007-06-05	Veestar	THIODAN 50 WP	10 Kg	2000 g/ha	5	HBS	298	684
2007-06-05	Veestar	THIODAN 50 WP	10 Kg	2000 g/ha	5	HBS	298	684
2007-06-05	Veestar	NOVA 40 W	1,7 Kg	340 g/ha	5	HBS	36	86
2007-06-05	Veestar	NOVA 40 W	1,7 Kg	340 g/ha	5	HBS	36	86
2007-06-05	Veestar	NOVA 40 W	1,7 Kg	340 g/ha	5	HBS	36	86
2007-06-05	Veestar	AGRI-MEK 1,9% EC	5 L	1000 mL/ha	5	HBS	100	43
2007-06-05	Veestar	THIODAN 50 WP	10 Kg	2000 g/ha	5	HBS	298	684
2007-05-28	Veestar	BRAVO 500	17,5 L	3500 mL/ha	5	HBS	12	551
2007-05-18	Veestar	BRAVO 500	17,5 L	3500 mL/ha	5	HBS	12	551

Field risk indicators / ha   **PestRI-E / ha** 717   **PestRI-H / ha** 2772
Risk calculated as a function of the applied rate.

Crop type : Apple **Crop area** : 2 ha

Date	Field	Product	Amount	Rate	Area treated (ha)	Application tech.	Product risk / ha ERI	Product risk / ha HRI
2009-09-06	Honeycrisp	MAESTRO 80 DF	2,5 Kg	2500 g/ha	1	ABS-HL	56	384
2009-08-26	Honeycrisp	MAESTRO 80 DF	2,5 Kg	2500 g/ha	1	ABS-HL	56	384
2009-08-21	Honeycrisp	IMIDAN 50 WP INSTAPAK	4 Kg	4000 g/ha	1	ABS-HL	169	518
2009-08-12	Honeycrisp	MAESTRO 80 DF	2,5 Kg	2500 g/ha	1	ABS-HL	56	384
2009-05-12	Spartan	POLYRAM DF	4 Kg	4000 g/ha	1	ABS-HL	33	846
2009-05-09	Spartan	SUPERIOR OIL	16 L	16000 mL/ha	1	ABS-HL	110	135

Field risk indicators / ha   **PestRI-E / ha** 1454   **PestRI-H / ha** 8298
Risk calculated as a function of the applied rate.

Here the PestRI-E/ha and PestRI-S/ha indicators are calculated over one year for two different crops (strawberry and apple) in order to compare risk between crops on the same farm.

Risk indicators for two strawberry fields (Orléans and Veestar) are displayed here. The following will help you understand how risk is calculated for a crop:

PestRI-E for the Orléans field = 377 * 6 ha = 2,262 +
PestRI-E for the Veestar field = 1,126 * 5 ha = 5,630
                                                            7,892

The total, 7,892, is then divided by 11 ha to obtain a PestRI-E/ha of 717.

This procedure is identical to that used to calculate the crop PestRI-S.

3.1.3 Global portrait of one farm business over two years

Risk indexes and pesticide record QRI

Farm business : Apple - orchardist

Year : 2009

Crop : Apple	Crop area : 2 ha	
Product	Nb. of applications	Amount used
AGRI-MEK 1,9% EC	2	1,23 L
GUTHION SOLUPAK	2	4,25 kg
RIPCORD 400 EC	2	0,45 L
IMIDAN 50 WP INSTAPAK	2	8 kg
SUCCESS 480 SC	1	0,1 L
SUPERIOR OIL	2	46 L
MAESTRO 80 DF	5	15 kg
NUSTAR	1	0,2 kg
DITHANE DG RAINSHIELD NT	5	29,5 kg
SEVIN XLR	1	1,5 L
BIOPROTEC 3P	1	2,125 kg
POLYRAM DF	5	21 kg
CAPTAN 80 WDG	4	8,1 kg
SENATOR 70WP 1	1	0,8 kg
FLINT 50 WG	2	0,38 kg
DITHANE WSP 80%	4	20,4 kg
SENATOR 70WP	1	0,4 kg
Crop risk indicators / ha (Apple)	PestRI-E / ha : 1453	PestRI-H / ha : 8298
Crop Pressure index /ha (Apple)	Pressure index : 63,68 kg / ha	
Farm business risk indicators / ha	PestRI-E / ha : 1453	PestRI-H / ha : 8298
Farm business pressure index / ha	Pressure index : 63,68 kg / ha	

Risk calculated as a function of the applied rate/font>

Year : 2008

Crop : Apple	Crop area : 2 ha	
Product	Nb. of applications	Amount used
GUTHION SC	2	2,7 L
CABRIO EG	1	1,5 kg
CAPTAN 80 WP INSTAPAK	13	39 kg
RIPCORD 400 EC	1	0,285 L
DECIS 5 CE	1	0,25 L
IMIDAN 50 WP INSTAPAK	5	15,7 kg
NEXTER	1	0,3 kg
SUCCESS 480 SC	1	0,2 L
KOCIDE DF	3	11,8 kg
BIOPROTEC CAF	1	3 L
SUPERIOR OIL	2	90 L
ASSAIL 70 WP	1	0,097 kg
MAESTRO 80 DF	7	22,125 kg
SEVIN XLR	2	2,5 L
POLYRAM DF	6	31,9 kg
NOVA 40 W	2	0,44 kg
FLINT 50 WG	2	0,35 kg
DITHANE WSP 80%	4	23,6 kg
ABOUND FL	1	3 L
Crop risk indicators / ha (Apple)	PestRI-E / ha : 2335	PestRI-H / ha : 9792
Crop Pressure index /ha (Apple)	Pressure index : 100,57 kg / ha	
Farm business risk indicators / ha	PestRI-E / ha : 2335	PestRI-H / ha : 9792
Farm business pressure index / ha	Pressure index : 100,57 kg / ha	

Risk calculated as a function of the applied rate/font>

A global compilation summarizes risk indicators (PestRI-E and PestRI-S) over several years and/or several farms, resulting in a shorter table.

Pressure indexes (amount of active ingredient applied per hectare) help explain the level of risk. Risk is affected both by the amounts applied and by how hazardous the product is. The pressure index can give you an idea whether it is the products or the amounts used that contribute the most to the risk level.

To summarize, the ERI and HRI risk indexes help you choose the least hazardous pesticides, while the PestRI-E and PestRI-S risk indicators allow you to analyze the change in pesticide risk in relation to the scale of pesticide use.

PestRI-E/ha and PestRI-S/ha represent the total risk for the farm in a given year. These indicators express risk as a function of the area treated—treatments applied to larger areas contribute more to the PestRI-E/ha and PestRI-S/ha indicators.

3.2 Graphical compilation

1. Select a type of graph: **a)** "Field Comparison," for a portrait of the risk in various fields of the same farm business.
b) "Farm Businesses Comparison," for a graphical portrait of the risk of the farm businesses in your account.
c) "Annual Monitoring of a Farm Business," for a graphical representation of the risk for a single farm business over several year
d) "Annual Monitoring of Farm Businesses," for a graphical representation of the risk of a number of farm businesses over several years

2. Select a farm business if you've chosen the "Field Comparison" or "Annual Monitoring of Farm Businesses" options.

3 . Select a year if you've chosen the "Field Comparison" or "Farm Businesses Comparison" options.

4 . Click on "All," to obtain all fields, farm businesses, or crops, or on "Select" to choose particular fields, farm businesses, or crops.

5 . Click on "Run."

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3.2.1 Example of a field comparison

Field comparisons allow you to compare levels of risk in various fields for the same farm business. If you have a number of crops per farm business, the risk levels in all fields and crops are displayed and are then broken down by crop (see the following example for one crop).
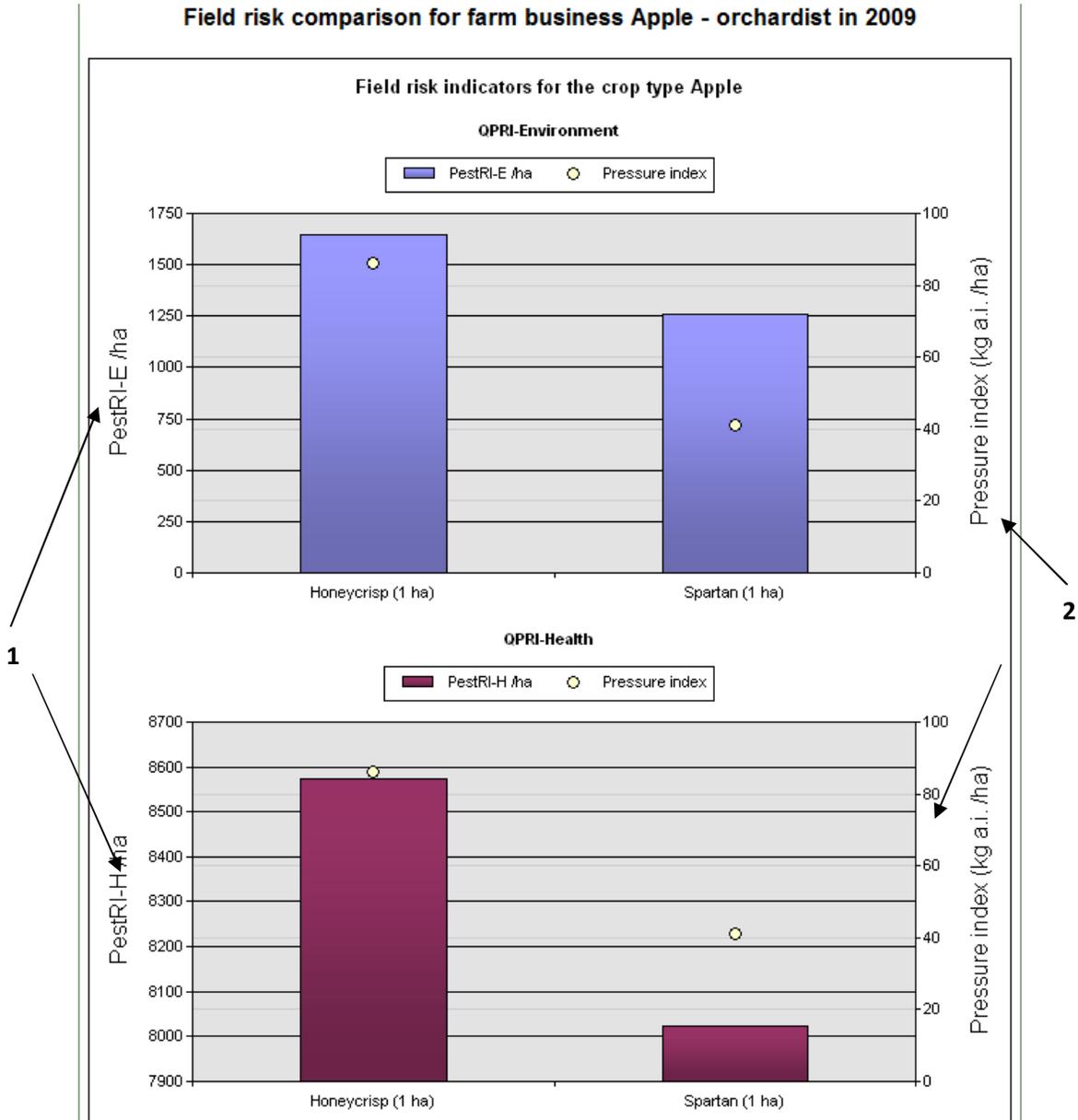
1. This side of the graph displays the scale for the PestRI-Environment (PestRI-E) and PestRI-Health (PestRI-S) indicators, represented by the bars.

2. This side of the graph displays the scale for the pressure index, represented by the yellow dot.
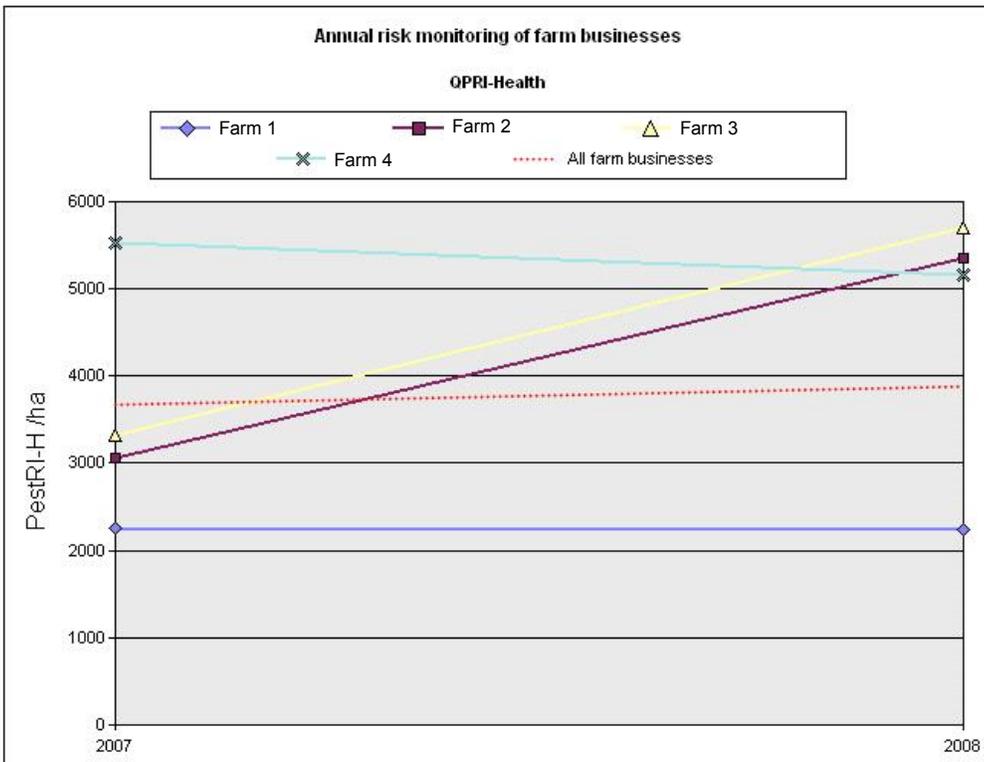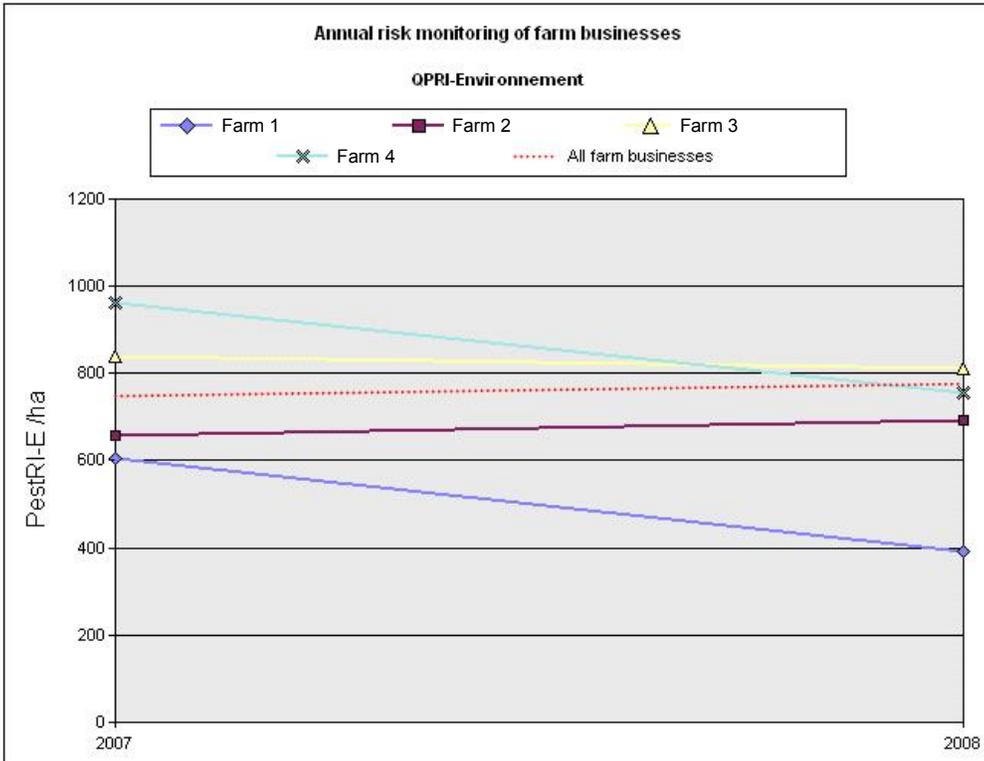
3.2.2 Example of a farm businesses comparison

Farm businesses comparisons allow you to compare risk levels between the various farm businesses in your account for a particular year. If you have a number of crops per farm business, the risk for all crops and farm businesses is displayed and then broken down by crop (see the following example for one crop).
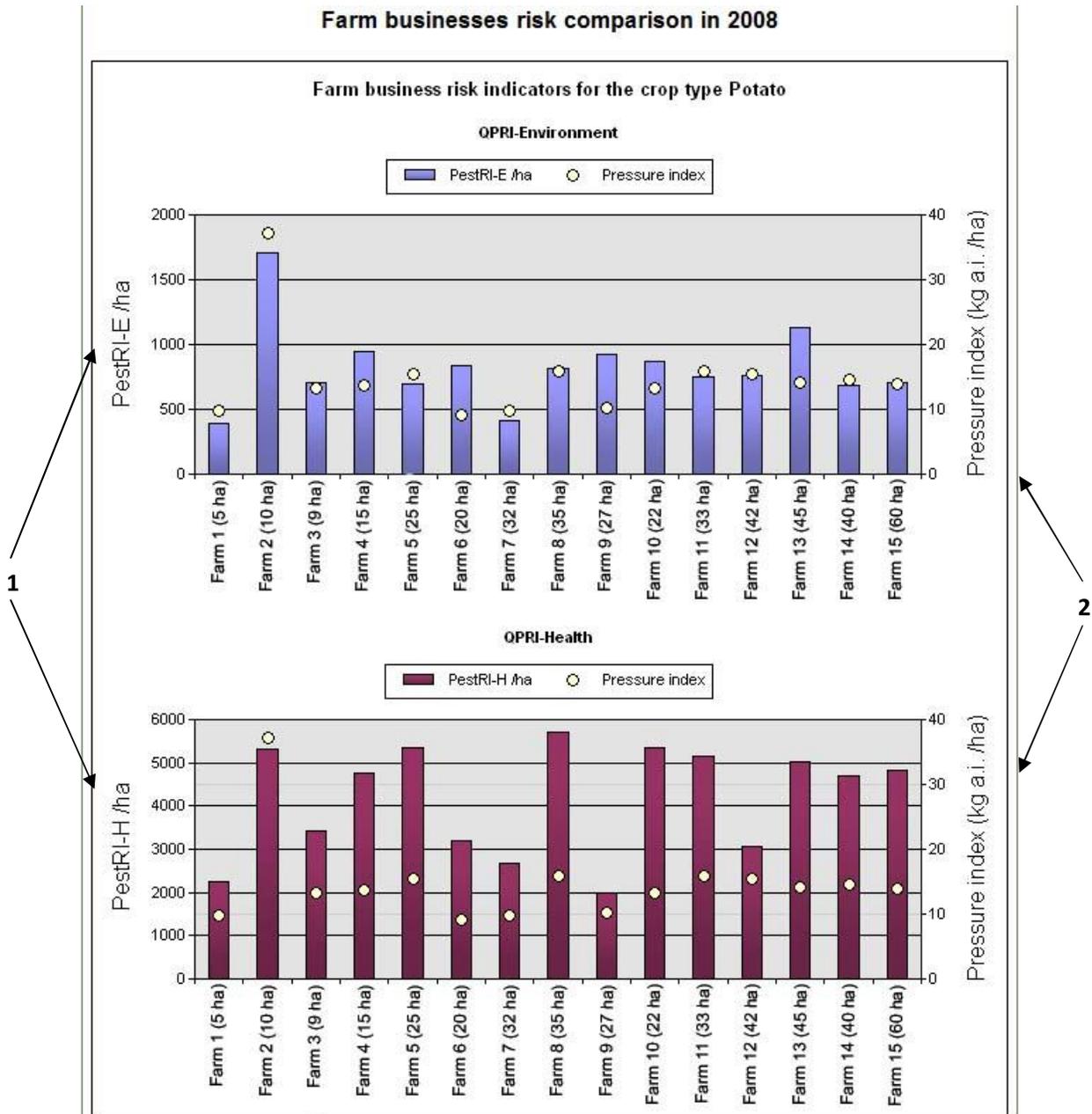
Farm businesses risk comparison in 2008

1. This side of the graph displays the scale for the PestRI-Environment (PestRI-E) and PestRI-Health (PestRI-S) indicators, represented in bar form.

2. This side of the graph displays the scale for the pressure index, represented by the yellow dot.

3.2.3 Example of annual risk monitoring of a farm business
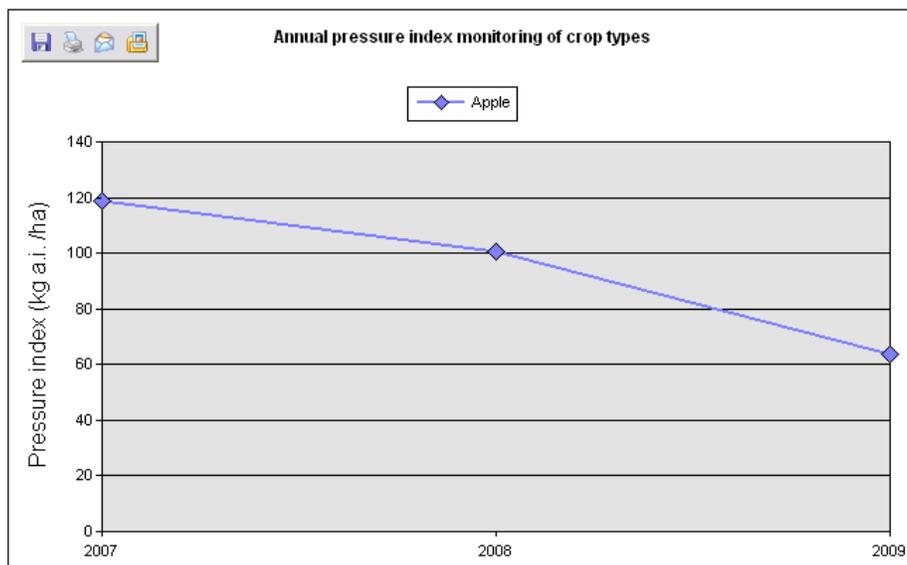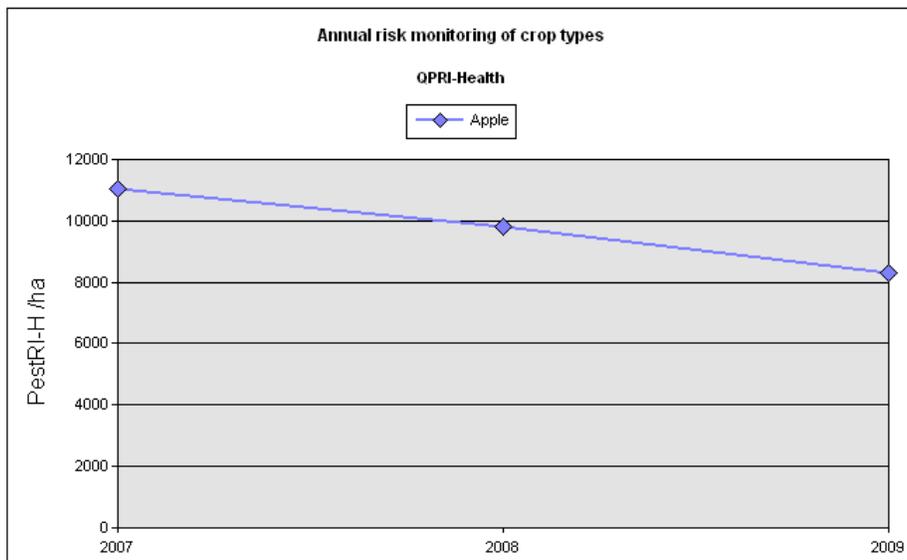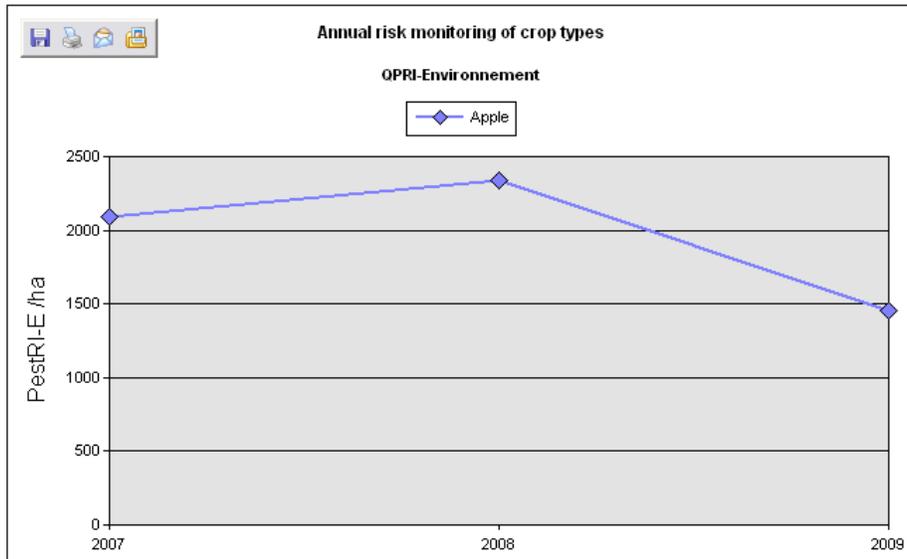
Annual risk monitoring of a farm business enables you to follow the evolution of risk to health and the environment from year to year for a single farm business.

The pressure index helps explain how the amounts applied affect the level of risk. For example, decreasing the amounts does not necessarily diminish the risk. In 2008 the amounts applied dropped but the risk to the environment rose.

If a number of crops are entered for the same farm business, a separate annual risk assessment will be displayed for each crop as well as an overall portrait for the entire farm business.

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3.2.4 Example of annual risk monitoring of a number of farm businesses

Annual risk monitoring of farm businesses

QPRI-Environnement

Legend: Farm 1, Farm 2, Farm 3, Farm 4, All farm businesses

PestRI-E /ha — axis 0 to 1200, years 2007–2008

Annual risk monitoring of farm businesses

QPRI-Health

Legend: Farm 1, Farm 2, Farm 3, Farm 4, All farm businesses

PestRI-H /ha — axis 0 to 6000, years 2007–2008

Annual risk monitoring of a number of farm businesses also allows you to follow the evolution of health and environmental risk from year to year.

This type of compilation only takes into account the overall risk for each farm business and cannot be broken down by crop. For information on how to compile risks by crop, see the graphical compilation of annual monitoring of a farm business (3.2.3, *page 16*)

Note that the "all farm businesses" curve represents an average of the risk and the pressure index for all the farm businesses in your account. It enables you to compare one business with all the businesses together.

To display this type of compilation more clearly, select only a few farm businesses at a time to avoid overlapping curves.

4. Viewing and Editing Entered Data

1. Select search criteria to find the records you want to view, edit, or delete.

2. Click on "Find" to launch the search.

3. To delete a batch data entry, select the farm business and batch entry you want to delete.

4. Click on "Delete Data Entry Records" to delete all the records in the batch data entry.

4.1 Example of how to view, edit, or delete a record

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1. These buttons allow you to toggle between the records provided by the search.

2. These buttons allow you to edit, delete, or print the record.

4.2 Example of how to edit a record

1. If you edit and save the name of a farm business, all the records for that farm business will display the new name.

2. If you edit and save the name of a field or the crop typed, all the records from **that year** will be changed. If you edit and save the area of cultivated field, you have to change all records of the field for that year because the amount sprayed will not be changed.

3. All entered data in these fields can be edited. The changes will be applied only to the selected record and will in no way affect other records.

4. Click here to save your changes.

QPRI methodology document

Download it at:

http://www.inspq.qc.ca/pdf/publications/750_IRPeQ_anglaisHauteRes.pdf

Registered Pesticides

For a list of **registered pesticides** for the selected crop and target pest(s), visit the following websites:

SAgE pesticides
www.sagepesticides.qc.ca

Pest Management Regulatory Agency
http://www.hc-sc.gc.ca/cps-spc/pest/index-eng.php

Contact us if you have any questions about QPRI *Express* ✓ for the agricultural sector

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