

## **2005 Crop Protection Survey Apple Growers**



	CONFIDENTIAL
	when completed Collected under the
	authority of the
	Statistics Act,
	Revised Statutes of Canada, 1985,
	Chapter S-19.
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· · · · · · · · · · · · · · · · · · ·	For interviewer use only
Ce questionnaire est disponible en français.	completed 005 1 Partial 005 4
oc questionnume est disponible en mangais.	Refusal 005 2
	No contact 005 3
Ir	operation 004 00
· ·	of operator 004 12
	of business 004 13
TO THE RESPONDENT:	ant data from Canadian
The objective of this survey is to collect more accurate pesticide use and pest manager farmers to help researchers, government agencies and farm organizations document as	
pesticide use and pest management systems.	
Your responses will help ensure that there are accurate and sound data available อก the	crops you produce.
Every questionnaire counts, SO please respond.	
	dia a ta tanàna da adda
This is a voluntary survey conducted under Section 8 of the Statist. S Act. Your cooperations are that the information collected in this survey is accurate.	ition is important to
All information will be kept confidential under the Staustics Act.	
Please refer to the 2005 calendar year when ans vering the questions.	
In order to avoid duplication, Statistics Ganaca will add the responses you provide in thi	is survey to the
information you supplied for the 2005 Fr. 't and Vegetables Survey. The combined inform	
strictly for statistical purposes and published in aggregate form only.	
STEP 1: Change or correction to the address label (if required)	
1 Are there any changes required to the address label?	
	41
Corporation name	"
Corporation name	
	12
Operator name	
	13
Contact name	
	16
Area code Telephone contact person Telephone ope	erator
17 18	
R.R. Box No.	
	19
Number and street name	19
Number and street name	19
Number and street name	19
	21



## For interviewer use only

Based on label information, enter last digit of	
contact telephone number:	→ Column number
Enter number of orchard listed in Step 2:	→ Row number

Use this table to select orchard

			Last D	igit of th	ie conta	ct's tele	phone r	umber		
# of	0	1	2	3	4	5	6	7	8	9
orchards										
1	1	1	1	1	1	1	1	1	1	1
2	1	2	2	1	2	1	2	1	1	2
3	1	2	1	3	2	1	2	3	<b>∢</b> 3	1
4	1	4	3	3	2	1	2	2 🚄	3	1
5	4	5	3	1	5	2	2	. 4	1	3
6	5	1	2	1	3	6	4	3	2	5
7	7	2	1	3	2	4	6	=	6	4
8	6	4	2	3	8	5	6	1	3	7
9	5	8	5	4	9	2		6	7	1
10	8	4	5	3	7	6	1	2	9	10

STEP 2: Questions about the orchards where APPLES were grown for sale in 2005.
2 What UNIT OF MEASURE will be used to report land areas? <sup>22</sup> This same unit should be used throughout the questionnaire.
(Check one circle only.)  O 01 Acres O 02 Hectares O 03 Arpents (Quebec only)
3 What was your total producing and non-producing apple area (all varieties) on this operation in 2005?
4 What was your total producing apple area (all varieties)?
5 How many orchards (varieties of apple, cultivars or plots) produced apples for sale?
Include:
▶ all areas of apples grown for sale to the fresh or processing markets in 2005;
<ul> <li>▶ all areas of apples grown for sale at roadside stands, farmer's markets or U-pick systems.</li> <li>Do not include:</li> </ul>
▶ apples grown for home use.
To save time, this interview will focus on one producing orchard only. First, we will list all producing orchards (varieties of
apple, cultivars or plots) in production in 2005. You can use your identification system (name, number or description) to report each orchard. Then, I will select one producing orchard (variety of apple, cultivar or plot) from the list.
report dues of characteristics and producing ordinary of apple, calaban of platy from the list.
6 What were your producing orchards in 2005?
If the respondent uses a different term than "orchard" (variety of apple, cultivar or plot) to describe the apple producing area, please specify here:
► If there are more than 10 producing orchards, list the 10 largest producing orchards.
Name, number or orchard description  Name, number or orchard description  Name, number or orchard description
2 7
3 4
5
Now, I will select one producing orchard from all producing orchards in 20, 5.
Interviewer action: enter the selected orchard (v. riety of apple, cultivar or plot) number
The selected producing orchard is:
7 What was the area of this selected orchard (variety of the cultivar or plot)?
8 How many bearing trees were in this selected c charo?
9 What year was the selected orchard planteu?
10 In 2005, if more than one, report the most important
a) which apple variety (or cultivar, was grown?
b) when did harvest star.
c) when did harves ' finis   ?
C) WHEN CHI HAZ TEES THINSTIF
STEP 3: Questions about herbicide, insecticide or fungicide applications from January 1 to December 31, 2005 on
he orchard selected in Step 2.
11 In 2005, did you apply any herbicides, insecticides, fungicides or other pesticides on the selected orchard?
$^{01}$ O Yes $^{02}$ O No If "YES", continue to question 12. If "NO" $\rightarrow$ Go to Step 4.
12 What format was used to keep records of herbicides, insecticides, fungicides or other pesticides applied to this orchard?  44  Was it? (Check all that apply.)
Written C Electronic/computer me C No record kept
13 What information is kept in your logs/record-keeping system?  Does it include the? (Check all that apply.)
45 ○ Date of application 48 ○ Product applied 51 ○ Temperature at application
oldentification of orchard 49 Rate of application 52 Targeted weed, insect or disease
Total area treated 50 Wind speed 53 Other, specify:
14 Did the company or person purchasing your produce require the use of specific herbicides, insecticides or fungicides as part of a contractual agreement?
O Yes O No No No tapplicable, the produce was not sold to a processor under a contractual agreement.

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STEP 3: Questions about herbicide, insecticide or fungicide applications from January 1 to December 31, 2005 on the orchard selected in Step 2  15 What chemicals were applied to the selected orchard in 2005? Report ALL CHEMICAL APPLICATIONS to the SELECTED ORCHARD in this table.  Include all applications to the SELECTED ORCHARD (Step 2) made by the respondent, a partner, an employee or a custom applicator.    Where necessary (more than 45 applications or lines), use additional tables supplied with the interviewer material.    Check if you use additional table   999	
Include all applications to the SELECTED ORCHARD (Step 2) made by the respondent, a partner, an employee or a custom applicator.	
► For pre-packaged mixes, enter the product code found in the <u>Interviewer Reference Guide</u> .  ► If the respondent mixed more than one product in the tank, use a different line for each product mixed.	
▶ If the code of a pre-packaged mix is not included in the list, report its name at the bottom of this table (p. 4).	
Column [1] Column [2] Col umn [3] Column [4]	Column [5]
application technique? or ha	s application was a loca alf row treatment, what
Line Date of application (Enter product name or code from the Interviewer Reference Guide)  (Enter product name or code from the Interviewer Reference Guide)  (Enter product name or code from the Interviewer Reference Guide)  (Enter product name or code from the Interviewer Reference Guide)	nt of the ORCHARD wa treated?
1 D D M M 101 per 401 501	601
2 D D M M 102 902 907 402 502	602

		Column [1]	Column [2]				Col imn [3]	Co I	olumn [4]	Colu	ımn [5]	
			Which product was applied?			What	was the rate of application?		at was the ion technique?	If this applica	reatment, v	what
	Line	Date of application	(Enter product name or code from the <u>Interviewer Reference Guide</u> )		4	(6	e.g. 1 litre per acre)	(Enter t	the application que code p. 4)	percent of the trea	e ORCHARL ated?	) was
ſ	1	D D M M 101	201	F		301	per 401		501			601
	2	D D M M 102	202			302	per 402		502			602
	3	D D M M 103	2.			303	per 403		503			603
	4	D D M M 104	204			304	per 404		504			604
	5	D D M M 105	2.05			305	per 405		505			605
	6	D D M M 106	206			306	per 406		506			606
	7	D D M M 107	207			307	per 407		507			607
	8	D D M M 108	208			308	per 408		508			608
	9	D D M M 109	209			309	per 409		509			609
	10	D D M M 110	210			310	per 410		510			610
	11		211			311	per 411		511			611
	12	D D M M 112	212			312	per 412		512			612
	13	D D M M 113	213			313	per 413		513			613
	14	D D M M 114	214			314	per 414		514			614
	15	D D M M 115	215			315	per 415		515			615
	16	D D M M 116	216			316	per 416		516			616
	17	D D M M 117	217			317	per 417		517			617
	18	D D M M 118	218			318	per 418		518			618
	19	D D M M 119	219			319	per 419		519			619
	20		220			320	per 420		520			620
	21		221	_		321	per 421		521			621
	22		222	_		322	per 422		522			622
	23		223	_		323	per 423		523			623
١		D D M M 124	224	4		324	424		524			624

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	Column [1]	Column [2]					Column [3]	Co	olumn [4]	C	olumn [5]	
Line	Date of application	Which product was applied?  (Enter product name or code from the Interviewer Reference Guide)			V		was the rate of application? e.g. 1 litre per acre)	applicat	ion technique:	or half rov percent of t	ication was a w treatment, the ORCHAR treated?	, what
25	D D M M 125	225	5			325	per 425		525			625
26	D D M M 126	226	6			326	per 426		526			626
27	D D M M 127	227	7			327	per 427		527			627
28	D D M M 128	228	3			328	per 428		528			628
29	D D M M 129	229	9			329	per 429		529			629
30	D D M M 130	230	)			330	per 430		530			630
31	D D M M 131	231	1			331	per 431		531			631
32	D D M M 132	232	2	4		ن32	per 432		532			632
33	D D M M 133	233	3			333	per 433		533			633
34	D D M M 134	234	1			334	per 434		534			634
35	D D M M 135	235	5			335	per 435		535			635
36	D D M M 136	2 7				336	per 436		536			636
37	D D M M 137	237	7	*		337	per 437		537			637
38	D D M M 138	6.4	3			338	per 438		538			638
39	D D M M 139	239	9			339	per 439		539			639
40	D D M M 140	240	ס			340	per 440		540			640
41	D D M M 141	241	1			341	per 441		541			641
42	D D M M 142	242	2			342	per 442		542			642
43	D D M M 143	243	3			343	per 443		543			643
44	D D M M 144	244	1			344	per 444		544			644
45	D D M M 145	245	5			345	per 445		545			645
		terviewer Reference Guide, please specify below:	(6	e.g. pow	product pu ders, emuls ates, granul	sifiable	e <u>Ap</u>		echnique codes olumn 4 above)			
Line	Name of formulated	product or PCP number	Г									4
		701					1= Broadcast spraying (boom	or non-boom				
							2= Band spraying		8= Chemigati	• .	ssure gun	
		703					3= Orchard airblast - axial far	1	9= Backpack	spraying		
		704					4= Orchard airblast - cross-flo	ow tower	10= Granular a	application		
		705					5= Spraying by airplane		11= Pheromon	es & pit trap		
$\square$		706	_				713 6= Spraying by helicopter		12= Other (spe Column 2)		ne in	
							7= Chemigation - low-pressure	drop tube				╝

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select	ed in Step 2		
	nich practices do you use in you? (Check all tha		s orchard in 2005?
81 81 81 81 82	O Use the highest labell Replace nozzles at lea Maintain sprayer trave Maintain low boom he	ed water volume ast every three years el speed less than 16 km/h ight	Spray only when wind speeds are low (less than five km/h) Spray only when wind blows away from sensitive areas Maintain lower pressure or use low-drift nozzle Use protective shrouds or cones around sprayer boom Other, specify:
17 In 2	2005, for the selected orcha	rd, was the incidence of IN	SECTS compared to the last five years?
	(Check one circle only.)	01 O Much less	02 ○ Less 03 ○ About the same
		<sup>04</sup> O More	05 O Much more  tion 18. Otherwise → Go to Question 19.
40.140			
	lat do you plan to do during fill you? (Check all tha		o reduce your <u>INSECT</u> problems?
	951 O Scout for insect of	or damage presence	849 O Take actions to disrupt insect reproduction or development
	952 O Use forecasting s	•	850 O Increase rate of insecticide applications
	Switch to a difference of the same of the		851 O Other, specify:
	O Apply all addition		
19 ln 2	2005, did you deal with any l		,
	02 O <b>No</b> 01 O	Yes	
<b>&gt;</b>	If yes, what was the main in	sect?	
20 ln 2	2005, for the selected orcha	rd, what was the MOST PR	EVALENT INSECT you had to control?
	If there was no significant in	sect problem, enter "0" and s	kip to Question 22.
21 Wh	at did you do to control the	MOST PREVALENT INSEC	<u>T</u> ?
Di	d you? (Check all tha	t apply.)	
	857 O Apply in:	secticides throughout the	growing season
	858 O Time ins	ecticide applications to tar	get the insect at din rent obvelopment stages
		What were the develo	,
		If not applicable, go to r	Cal val of Hymphal stages
	862 O Take oth	er steps to disrupt the rep	O Adult
	062		or, hological development of this insect
	865 O Release	beneficial organisms ເບົາງ	n. ol this insect
	866 O Manage	this orchard and its surrou	nding area to attract beneficial organisms
22 In 2	2005, for the selected orcha	rd, was the incidence of DI	SEASES (fungus, bacteria, mildew) compared to the last five years?
	(Check one circle only.)	Of Much reas	02 ○ Less 03 ○ About the same
	(encon encourage emply	04 O More	05 O Much more
	If the answer is "More" or "	fuc more", continue to ques	tion 23. Otherwise → Go to Question 24.
23 Wh	nat do you plan to do (urin	th, pext growing season t	o reduce your <u>DISEASE</u> problems?
		that apply)	5 100000 your <u>5-102-102</u> prositino.
	953 O Scout fur disease	damages	954 O Use forecasting systems
	869 O Increase rate of fu	•	873 O Alter soil fertility or water management
	870 O Switch to a different	ent fungicide	Other, specify:
	<sup>871</sup> O Apply an addition	al fungicide	876
24 In 2	2005, did you deal with any <u>l</u>	NEW DISEASES in this orc	hard? <sup>877</sup>
	<sup>02</sup> O <b>No</b> <sup>01</sup> O	Yes	
<b>&gt;</b>	If yes, what was the main di	sease?	878
25 Fo	r the selected orchard, what	was the MOST PREVALEN	IT DISEASE (fungus, bacteria, mildew) you had to control?
		sect problem, enter "0" and s	077
	iat tools/methods did you or EVALENT DISEASE?	your advisor use to make	decisions on when to apply fungicides in this orchard to control the MOST
		880 O A set applica	tion schedule (calendar spraying)
Wa	s the decision based on?		orts and thresholds
	(Check all that apply.)		casting/warning services
			litions (degree days, moisture)
		O Advice from	•
		885 O Advice from	a chemical salesperson
		887 O Other, specif	v: 888

STEP 4: Questions about WEED, INSECT, DISEASE AND OTHER PEST MANAGEMENT PRACTICES in 2005 for the orchard

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selected in Step 2.	CES III 2005 for the orchard
27 In 2005, which practices did you use to avoid the MOST PREVALENT DISEASE (fungus, bacteria, mildew) in t	this orchard?
Did you? (Check all that apply.)	
(Спеск ан шак арруу.)	
Plant certified disease-free transplants  Select the plant variety known to be most resistant to the major disease threats in your area	
891 C Eliminate possible sources of inoculum, such as cull piles, pruning residue or volunteer plants	in nearby fields
Clean equipment moving into this orchard to reduce risk of transporting disease spores or inoc  Adjust fertilizer levels to prevent excessive levels of nutrients in the root zone and foliage	eulum
894 O Test your soil for micronutrient imbalances that can promote certain diseases	
O Alter the timing of fertilization and/or water applications	
28 In 2005, did you use any of the following practices in this orchard for WEED management?	
Did you?	
(Check all that apply.)  829 O Mulch  831 O Use a cultivator or rotary hoe  830 O Plant a cover crop  832 O Chop or remove pruning residue	
833 O Other, specify:	834
29 In 2005, for the selected orchard, was the incidence of <u>WEEDS</u> compared to the last five years?	.1
(Check one circle only.)  O Much less  O Less  O About the same	4
<sup>04</sup> O More O5 O Much more	
If "More" or "Much more", continue to question 30. Otherwise $\rightarrow$ Go to Question 31.	
30 What do you plan to do during the next growing season to reduce your <u>WEED</u> problems?	
Will you? (Check all that apply.)	
836 Switch to a different herbicide  837 Apply an additional herbicide  841 O Other, specify:	842
838 O Increase rate of herbicide applications	843
STED 5. Quanties about ward insect and disease DESISTANC to showing amplications for y	YOUR ENTIRE ORERATION
STEP 5: Questions about weed, insect and disease RESISTANUE to chemical applications for y	our <u>ENTIRE OPERATION</u>
31 In 2005, did you use any of the following practices to prevent weet insects and disease resistance to chemi	ical products?
Did you? (Check all that apply.)	
Always rotate chemical families (or groups)  897 O Select more pest resistant crop varieties 898 O Semetimes rotate chemical families or yrouss) 899 O Reduce post populations through non	
Sometimes rotate chemical families or crow, so, so Reduce pest populations through non-	-cnemical means
32 On YOUR FARM, to what extent, if any are weeds becoming resistant to HERBICIDES?	
Are weeds becoming? (Check one sircle only.)	
01 ○ Very resistant Resistant 03 ○ Slightly resistant 04 ○ Not resistant	O Don't know
33 On YOUR FARM, to what `xten', if any, are insects becoming resistant to <u>INSECTICIDES</u> ?	
Are insects becomin? (Check one circle only.)	09 O Don't know 903
O Very resistant O Resistant O Slightly resistant O Not resistant	09 O Don't know 903
34 On YOUR FARM, to what extent, if any, are diseases becoming resistant to <u>FUNGICIDES</u> ?  Are diseases becoming? (Check one circle only.)	
01 ○ Very resistant 02 ○ Resistant 03 ○ Slightly resistant 04 ○ Not resistant	09 O Don't know
STEP 6: Questions are about the herbicide, insecticide or fungicide products that you would ha	eve liked to use if they had
been registered for application on APPLES in 2005	ive incu to use if they flud
35 What are the herbicide, insecticide and fungicide products that were <u>NOT</u> registered for use on APPLES in	
2005 that you would have liked to use if they had been registered in your province?	
<ul> <li>▶ List chemical products that are available in other provinces or countries.</li> <li>▶ If necessary, use the comment box on page 8 to provide further details or explanations.</li> </ul>	(If available, enter PCP number
Product name  905 ○ None ➤ Go to question 36.	or product code found in the Interviewer Reference Guide.)
Product name	907
908	909
3 4	913
914	915

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STEP	7: Questions abo	out the	chara	cter	ristic	s of th	e ope	erato	r(s) ar	nd ag	gricul	ural	pera	ition a	s of I	Dece	mbe	r 31	, 200	)5.		
36 WI	hich of the following	hest des	scribes	s this	s farm	onerat	ion?							916								
	<b>3</b>		(Check																			
			(000.			le propi	ietors	hin														
	(If the operation is a					rporatio		_	compai	nv)												
	or hobby farm, checor 3).	ck 1, 2				rtnershi				-5,												
	or sj.					operativ	•	omm	unal or	erati	on (e o	Hutte	erite c	olony)								
						ner, spe		,0,,,,,,	unui Op	, ci ati	JII (C.g	i, Hatt	crite e	ololly)								917
					J Ou	ici, spc	Ciry.															-
37 Ar	e you the person wh	o looked	l after	the d	day-to	-day cr	ор та	nagen	nent de	ecisio	ns on	this op	eratio	n?		918	Yes	O 01	<sup>1</sup>	No O	02	
38 Ho	ow many operators (o	decision	-makeı	rs) 18	8 year	s of ag	e and	over v	vere re	spon	sible fo	or this	opera	tion?							L	919
39 WI	hat was the age of:																					
If t	here was only one ope	erator, er	nter the	age	in the	box for	Opera	ator 1.														
	<sup>1</sup> Operator 1?																					920
	<sup>2</sup> Operator 2 (minimu	um age 1	8) <b>?</b>																	I	L	921
40 WI	hat is the highest lev	el of edu	ıcatior	n con	nplete	ed by th	e ope	rator(s	s)?							,	<b>(</b>	922			923	3
lf t	here was only one ope	erator, er	nter the	e leve	el of ed	ducation	in the	box fo	or the O	perat	or 1.				_		<u>∩</u> ,6i	rator	<u>1</u>	<u>Op</u>	erato	<u>r 2</u>
	<sup>1</sup> Some elementary of	or secon	dary (	high)	scho	ool (inclu	ıde up	gradeo	d and s	pecial	educa	tion)						O <sup>01</sup>	1		0	01
	<sup>2</sup> Completed second	dary (hig	h) sch	ool (g	gradu	ation ce	rtificate	e or eq	ıuivalen	nt)								O 02	2		0	02
	<sup>3</sup> Some post-second	dary, inc	luding	som	e coll	lege or	univer	sity c	ourses			7						O 03	3		0	03
	<sup>4</sup> Completed college school, agricultural														rocatio	nal		O 04	4		0	04
	<sup>5</sup> Completed univers	sity degr	ee pro	gran	n (incl	ude bac	helor's	degre	ee and a	above	)							O 05	5		0	05
41 Ho	ow many years has th	he most	experi	ence	ed ope	erator o	n this	farm ı	า <sub>ะ</sub> าage	d a fa	arm bu	siness	s?								Ι	924
	<b>, ,</b>							7	12													1
									7													
STEP	8: Agreement to	share o	lata				7	<u> </u>														
	J																					
					$\overline{}$																	
Th	ank you for taking th	ne time t	o parti	cı, at	te in c	our surv	ey. In	order	to avo	id du	plication	on, Sta	tistics	s Canad	la has	enter	ed in	to a	data	sharin	g	
thi	reement under Secti is survey. The agreer formation be kept co	ment r. n	ui) es t	that r	no na	mes or	addre	sses c	or any o	other	identif	ier be s	share	d with t	hese (	depar			•		m	
			<u> </u>																			
42 Do	you agree to share	this info	rmatio	n wit	th:																	
				a)	Agric	culture a	and A	gri-Fo	od Can	ada?					Yes	0	01	No	O 02			925
				b)	Heal	th Cana	da?	_							Yes	0 '	01	No	O 02			926
				c)	Envi	ronmen	t Cana	ada?							Yes	0 '	01	No	O 02			927
	order to extend the r th the 2005 Fruit and		-				-									on fro	m thi	s su	rvey			
43 Do	you agree that Stati	istics Ca	nada d	comb	oines	informa	tion f	om th	is sur	ev w	th the	inform	ation	VOL								
	ovided on the 2005 F												ation	you	Yes	0	01	No	O 02			928
44 W	ould you like to recei	ive a sur	nmary	repo	ort of	the surv	ey re	sults?							Yes	0	01	No	O <sup>02</sup>			931
	If "YES" continue to	Questio	n 45. If	f "NO	" → G	o to Ste	p 9															
45 WI	hat is your e-mail (or	mailing	) addre	ess?	Your	addres	s will	NOT b	e shar	ed wi	th any	other (	gover	nment o	depart	ment.						
	Enter "MAIL" if the r	responde	nt pref	ers to	o rece	ive the r	eport l	by mai	l.													
	E-mail address				Ι								Ι		Ι		I		I	Ι		932

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Farm operator comments	Check if you wrote comments	
nterviewer comments	Check if you wrote comments 934	
<u>INTERVIEWER EXIT CHECK . IST</u>		
Interviewe lde. 'ification		
Number or contact		
Travel time to intervie	er view date.	
Interview sta		
Interview fini	ishing time: 940 H H M M O 01 a.m. O 02 p.m. 941	
<b>&gt;</b>		
Circle fully comp		
DK in the margin for questions "E R in the margin for questions refused		
All unusual situations are explained in the "Commer		
A farm status code has been entered on the	cover page	
A questionnaire status has been entered on the		
If you marked "Change of operator", "Out of "Refusal", or "No contact" on the cover page, the explained in the "Comments" section	situation is	

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