

## Computerized Inventory of Publications

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## Computerized Inventory of Publications

### Abstract

Computerized inventory control of publications became a necessity at the Canada Department of Agriculture because of the large number of titles on hand and the ever-increasing number of requests we receive.

# Computerized Inventory of Publications

J.C.M. L'Arrivee

Computerized inventory control of publications became a necessity at the Canada Department of Agriculture because of the large number of titles on hand and the ever-increasing number of requests we receive.

Before going into the specifics of computerized inventory control, let me provide you with some background information and a few statistics.

Canada's 22 million inhabitants depend on the Canada Department of Agriculture's 10,000 employees to provide them with all the required federal agricultural services. These services range from pesticide licensing to supervision of racetrack betting, from animal disease control to development of new plant varieties, from food product inspection and grading to farm income stabilization and crop insurance programs, and from basic research to computerized farm management advice. The work of the Department not only touches the life of every Canadian, but it also has considerable impact on the international scene.

The Information Division, which is the public relations arm of the CDA, employs a staff of about 90 people of which fewer than 30 are Information Officers. This small group has the responsibility of disseminating new knowledge resulting from agricultural research conducted at more than 47 centers across the country. In addition, it keeps the agricultural industry and various agricultural Boards and Commissions fully informed about the policies and activities of the Department.

The Director of the Information Division is supported by two Assistant Directors — one for operations, the other for programs — plus an administration section.

The operations group deals with the media. It consists of an English and a French press unit, plus audio-visual, radio-TV, and other technical units dealing directly with the public.

The programs group deals with publications. It consists of an English and a French editing unit, plus periodicals, graphic design, research, and production units.

## The Problem

We produce a large number of books, manuals, pamphlets, brochures, reports, bulletins, directories, and periodicals — in both official languages. Some 300 new, revised or reprinted publications are produced annually. This mass of technical and non-technical publications is then catalogued and stored in one of three storage depots.

Keeping track of the on-hand quantities of each publication, in each of the two languages, has been a monumental job — a time-consuming job full

of possible errors in tabulation. For example, sometimes we'd get a monthly report showing a deduction of 6,000 to 10,000 copies from non-existent stock or, at other times, we'd be surprised to suddenly find that we still had 4,000 or 5,000 copies when the records showed a nil balance. In the past, before computerization, we'd reorder a reprinting only after being told by the Distribution Unit that a particular publication was out of stock.

Departmental policy is that publications requested be made available *at all times* and *without delay* and, of course, in the language requested. Needless to say, before computerization, many Canadians had to wait 2, 3 or 6 months for a publication. In a country such as ours, where the summer season is so short, any delay in receiving required information can be annoying for the farmer or consumer. Therefore, clearly something had to be done to improve the service to the Canadian public.

### Enter the Computer

A suitable program using Fortran and our in-house facilities (keypunch, Cyber 72 'Control Data' computer, card reader and comterm line printer) was designed for us by one of our programmers.

- The English and French titles of all our publications
- The number of the publication
- A receipt column for stock additions
- A discount column for publications sent out
- A 'reorder-point' column based on historical depletion rate (allowing for a 6-month reprinting time).
- The Julian date of the last entry for each publication.

This material provided us with two master lists: An English listing of 425 titles (see Table 1) and a French listing of 275 titles.

Table 1.

	ENGLISH PUBLICATIONS			
	LAST UPDATE PUBLICATION	ON 77185 AT DISCOUNTS	13,09,25, RECEIPTS	863 PUBLICATIONS ON THE FILE ON HAND REORDER PT LAST UPDATE
SNOW AND WIND CONTROL FOR FARMSTEAD	1461E	-150	0	4493 4000 77185
COMBINES OPERATION AND ADJUSTMENT,	1464E	0	0	6940 2000 77180
CONTROL OF NEMATODES IN TORACCO.	1465E	0	2000	2125 500 77172
FARMING POTENTIAL OF THE CON NORTHWEST,	1466E	0	0	7270 3000 77151
WYASKA GRAIN ELEVATORS,	1467E	-25	0	7245 3000 77172
GROWING BUCKWHEAT,	1468E	+200	0	3400 3000 77185
INTEG CONTROL OF GREENHOUSE WHITEFLY,	1469E	+25	0	4570 2000 77172
SAINFOIN FOR WESTERN CANADA,	1470E	-105	0	5135 3000 77185
NEW FRUITS FROM SUMMERLAND B.C.,	1471E	-50	0	5530 2000 77164
HATCHERY SANITATION,	1472E	-50	0	1235 1000 77160
MANAGING CRESTED WHEATGRASS PASTURES,	1473E	-125	0	6125 2000 77172
EST. COSTS OF SWINE PRODUCTION,	1474E	-150	0	10925 4000 77180
WILD CAT GENE POOL,	1475E	0	0	600 500 77087
FRESH CANADIAN VEGETABLES,	1476E	+2342	0	31905 20000 77185
LOWBUSH BLUEBERRY PRODUCTION,	1477E	-125	0	3555 2000 77185
HOME STORAGE ROOM FOR FRUITS AND VEGS.,	*1478E	-1025	0	2135 8000 77185
TOMATO DISEASES,	1479E	-260	0	13375 3000 77185
BEEF CATTLE PERFORMANCE SELECTION	1480E	-100	0	7755 4000 77185
SHEEP DISEASES IN CANADA,	1481E	-135	0	7461 3000 77172
FIELD SPRAYERS,	1482E	+295	0	8775 4000 77185
DAIRY DIPS AND DRESSINGS,	1483E	-910	0	15405 10000 77185
SWINE DISEASES,	1484E	+360	0	6844 6000 77185
PLANNING AN ANTI-MOSQUITO CAMPAIGN,	1485E	-125	0	5875 3000 77185
WYASKA POLLUTION AND AGRICULTURE,	1486E	-300	0	14345 10000 77172
GROWING SOYBEANS,	*1487E	-380	0	3800 4000 77185
IRRIGATION ON THE PRAIRIES,	1488E	+305	0	7465 3000 77164
MANAGING A SMALL POULTRY FLOCK,	1489E	+1365	10000	8635 5000 77185
FOAM FOR FROST PROTECTION OF CROPS,	1490E	0	0	3094 2000 77066
PAVING ON THE FARM,	1491E	-80	0	10147 3000 77185
DISEASES AND PESTS OF POTATOES,	1492E	-767	0	23376 6000 77185
WASHING FIELD PEAS,	1493E	-130	0	8555 2500 77180
BEEF PRODN IN THE ATL. PROV.,	1494E	-50	0	8105 4000 77180
ALFALFA LEAF-CUTTER BEES FOR W. CAN.,	*1495E	-75	0	3582 4000 77185
THE METRIC SYSTEM FOR FARMERS	1496E	-175	0	66745 20000 77160
GRAIN DRYING,	1497E	-350	0	6277 3000 77185
EGGS AND EGG PRODUCTS,	*1498E	-900	0	3695 5000 77185
BLACK FLIES,	1499E	-150	0	10430 5000 77180



## L'Arrivee: Computerized Inventory of Publications

Two other features were incorporated into the program: (1) the numbers of discounts were summed up to appear on the last line of each printout, and (2) an asterisk was made to appear in front of publication numbers when the 'On-hand' value reached a point *below* the 'Reorder' value.

Finally, both English and French master lists were subdivided into four sub-lists:

- Research Branch publications
- Information Division publications
- Consumer Division publications
- Reorder publications

The first three sub-lists are used to keep the major responsibility centers (contributors) informed on the current status of their publications, whereas the last sub-list is a summary of all asterisk-marked publications obtained from the two (English and French) master lists.

### Operations

Raw data for the computerized inventory control is supplied by the Distribution Unit at weekly intervals. As requests for publications are filled, the number of publications removed from stores is tabulated for each publication (see Table 2).

Table 2. PUBLICATION INVENTORY TALLY SHEET

E = English      1      S = Small Order      2  
 F = French            B = Bulk Order     

3 4 5 6  
     
 Year      Month

Pub. #	# sent	Pub. #	# sent	Pub. #	# sent	Pub. #	# sent	Pub. #	# sent
9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40	41-44	45-48
1201	25	124	50	1246	50	1385	100	1600	50
1447	50	1460	100	1479	200	1481	25	1059	50
1106	150	1396	50	1058	50	1551	500	1177	50
1592	50	1370	50	1605	50	1514	50	1481	100
1476	50	1590	25	1381	50	1451	50	1482	50
892	100	1606	50	1611	500	861	25	5003	25
1386	35	1595	40	1386	50	1461	25	1386	100
1200	25	892	100	1591	25	1283	100	1378	1000
1579	25	1500	50	1339	50	5099	50	992	25

Once a week, usually on Monday, these tabulations are sent to our Key punching Unit along with any new publication numbers and titles (see Table 3) and publication inventory changes (see Table 4). One or 2 days later, a weekly summary printout is received showing the total number of English and French publications sent by the Distribution Unit (see Table 5). Last year, some 3 million copies of various publications were sent out on request.

Computer printouts of English and French master lists as well as the four sub-lists are obtained twice a month (or more often, if desired). Printouts show cumulative values for discounts and receipts, which are zeroed out after each month-end printout.

PROGRAM	DP 62259		PUNCHING INSTRUCTION:
PROGRAMMER	C. O'Brien		DATE 77 171

  

STATEMENT NUMBER	CONT	FORTRAN STATEMENT																																																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45									
1442E						S	W	I	N	E	P	R	O	D	U	C	T	I	O	N	A	N	D	M	A	N	A	G	E	M	E	N	T																				
1442F						L	A	P	R	O	D	U	C	T	I	O	N	P	O	R	C	I	N	E	T	S	A	G	E	S	T	I	O	N																			
1608E						A	N	N	U	A	L	F	L	O	W	E	R	S	F	O	R	C	A	N	A																												
1610R						S	H	E	E	P	H	U	S	B	A	N	D	R	Y	I	N	A	T	L	A	N	T	I	C	C	A	N	A																				
1611E						C	L	E	A	N	E	R	F	E	E	D	L	O	T	C	A	T	T	L	E																												
1612E						L	A	N	D	S	C	A	P	I	N	G	T	H	E	H	O	M	E																														
1617E						P	H	O	T	O	S	*	B	E	E	F	C	A	T	T	L	E	/	L	E	S	B	O	I	V	I	N	S																				
1618E						P	H	O	T	O	S	*	D	A	I	R	Y	C	A	T	T	L	E	/	L	A	V	A	C	H	E	L	A	I	T	I	È	R	E														
1620E						P	L	A	N	N	I	N	G	Y	O	U	R	M	I	L	K	H	O	U	S	E																											
1636E						C	A	N	A	D	I	A	N	C	H	E	E	S	E	G	U	I	D	E																													

Table 4. INFORMATION DIVISION PUBLICATION INVENTORY CHANGES

Transaction Type I	Year			On hand or number received 15-20	Re-order Point 21-25	Data Coding Instructions
	3	4	5 6			
	7	7	0 7			
R	1538	E		5000		1. Transaction Type: A = Add D = Delete C = Change R = Shipment received  9-12. Pub No.: Publication number  13. E or F: E = English F = French  14. R I C (used on Add only) R = Research; I = Info Div; C = Consumer  15-20. On hand or number received: If transaction type = A or C enter the number on hand If transaction type = R enter the number received
A	1628	E	R		3000	
A	1631	F	R		1000	
A	1601	F	I		2000	
R	1341	E	C	40000		
R	1505	F		8000		
R	1391	E		10000		
R	1558	E		15000	5000	
R	1558	F		5000	1000	
A	1644	E	I	10000	4000	
C	1502	E			1500	

Table 5. Weekly Summary of Publications Sent Out

LAST UPDATE COMPLETED ON 77185 AT 13.09.25.  
 SUMMARY TABLE FOR PUBLICATIONS SENT OUT

	ENGLISH	FRENCH	TOTAL
BULK ORDERS	61055	21211	82266
SMALL ORDERS	11653	3075	14728
TOTALS	72708	24286	96994

UPDATE COMPLETED ON 77194 AT 11.05.07.



Based on the Reorder sub-list, an "Action Request" form is sent to the responsibility center for each publication in short supply. Usually, within 1 to 3 weeks we receive the financial authority to reprint, or within 2 to 4 months we receive a revised manuscript for printing.

### Costs and Benefits

Since we have been using in-house computer facilities and our own keypunching personnel, the actual costs have been minimal. The weekly summary reports average \$1 to \$2 actual computer time (70 to 90 sec). The monthly and semi-monthly printouts also average between \$1 and \$2 each. These costs are absorbed by our Data Processing Unit. No estimate of costs for keypunching, machine rental, cards and printout paper have been calculated.

On the positive side we have the following benefits:

- We save about one man-year of clerical labor in data collection and tabulation.
- We have far more accuracy in the inventories of our more than 700 publications.
- We are able to maintain an almost continuous supply of each publication.

Therefore, as a result, we can render better service to our clients — which is our *raison d'etre* and our objectives.



## Campaign Media Research Results

David A. Zarkin

Taking the guess work out of publicity campaign planning is the result of three years of research by the University of Minnesota's Agricultural Extension Service for consumer-oriented housing short courses. In contrast to other AES programs, the housing curricula rely on user charges, publication distribution in excess of \$10,000 annually, staff salary and overhead commitments of about \$75,000 and in-kind contributions of about \$250,000.