

Retail Trade and Services Survey For Williston, North Dakota

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Introduction

A retail trade and services survey covering 21 western North Dakota counties was conducted in March, 1970, by the Cooperative Extension Service, North Dakota State University. The survey was conducted by mail, and the results represent approximately a 10 per cent sample of the households in the area.

This report applies to the area served by the trade center of Williston for selected goods and services. The Cooperative Extension Service is in the process of conducting similar studies in other areas of North Dakota. Studies encompassing the entire state are expected to be completed in 1972.

The purpose of the study was to identify the trade areas of selected trade centers and to determine the inter-town relationships.

Types of Trade Centers

A trade area consists of a trade center and the surrounding area which it supplies with goods and services. Each trade center and trade area is part of a system of trade centers and trade areas covering an entire region.

The number and size of businesses a trade center can support depends upon the number, charac-

teristics and income of the people in its trade area and its location in relation to other trade centers. People are attracted to a trade center for a variety of reasons, including convenience, selection of goods and services, quality, price, preference for brand name, and personal relationships.

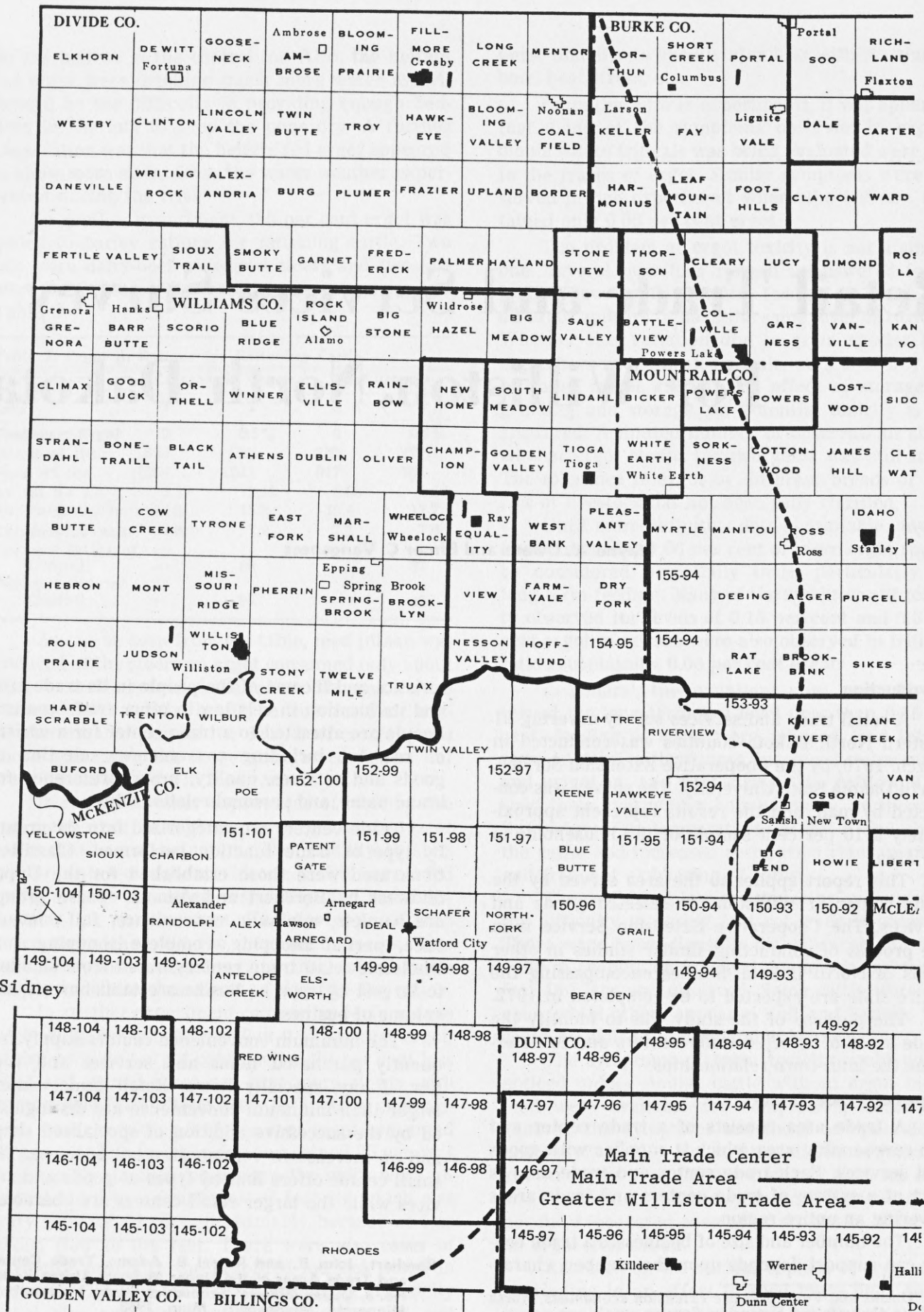
Trade centers are categorized into six groups by type of trade function performed. Classifications used were those established for the Upper Midwest by Borchert and Adams.¹ These groups are hamlets, minimum convenience, full convenience, partial shopping, complete shopping, and wholesale-retail trade centers, rated from smallest to largest by type of business establishments and volume of business.

The minimum convenience centers supply frequently purchased items and services and very few, if any, specialty items. Retail trade centers larger than minimum convenience are distinguished by the successive addition of specialized shops and an increase in volume of retail business. The small center offers limited types of goods and services while the larger retail centers are character-

¹Borchert, John R. and Russel B. Adams, *Trade Centers and Trade Areas of the Upper Midwest, Urban Report No. 3, Upper Midwest Economics Study, University of Minnesota, Minneapolis, Minn. 1963.*

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MAIN TRADE AREAS AND GREATER WILLISTON TRADE AREA



ized by increasing degrees of specialized functions. The larger trade centers offer a wider range of business and professional services in addition to more retail outlets than the small center.

Classification of Goods and Services

Retail trade is composed of convenience and specialty items. Convenience items are purchased frequently and can generally be purchased with a minimum of effort and travel. Examples of convenience items are food, drugs, hardware, banking and gasoline.

Specialty items are those which are purchased infrequently and have a wide range of selection in price, quality, color, etc. These are generally major purchases and are usually available only at larger trade centers. Examples of specialty items are women's clothing, furniture, television sets, large appliances, cameras, and plumbing and heating supplies. Medical, dental and hospital services are examples of specialty services, requiring a high degree of specialized training and sophisticated equipment.

Delineation of Trade Areas

Trade areas were determined for trade centers of minimum convenience size or larger in the three counties of Williams, Divide and McKenzie. Identifiable trade areas were determined for Crosby, Watford City, Tioga, Ray and Williston in North Dakota, and that area in North Dakota from which Sidney, Mont., drew trade. Montana and Canada were not surveyed, so the trade centers' penetration into these areas was not determined.

Main trade areas were determined by two criteria. Respondents were asked to name the trade center which they considered to be their main trade center. Further determination was made by tabulating where most of the respondents of an area purchased 50 per cent or more of most items. The trade areas as determined in the study are delineated on the map.

Williston has the largest trade area, including approximately 58 townships and a main trade area population of 16,400. Ray has the smallest trade area with a population of about 1,000, including about five townships. Watford City has the second largest trade area, encompassing about 37 townships and a population of 3,700. Crosby is second in population with 4,400 residents. Tioga has a main trade area of about 14 townships with a population of 3,000.

Williston Patrons

A total of 1,118 respondents to the survey lived within the six main trade areas outlined. Of these

1,118 respondents, 1,011 or 90 per cent purchased one or more of 28 selected items in Williston. The distance patrons traveled to shop in Williston is shown in Table 1.

Table 1. Distance from Williston for all respondents purchasing some item in Williston.

Distance	Farmers		Nonfarmers		Total	
	No.	%	No.	%	No.	%
Under 5 miles	15	4	318	54	333	32
5 - 9.9 miles	5	1	1	-	6	1
10 - 19.9 miles	36	8	9	2	45	4
20 - 39.9 miles	103	24	68	11	171	17
40 - 75 miles	250	58	188	32	438	43
75 miles and over	23	5	6	1	29	3
Total	432	100	590	100	1,022	100

Table 1 shows that 24 per cent of Williston farm patrons lived from 20 to 40 miles from Williston, with 58 per cent traveling from 40 to 75 miles to patronize Williston concerns. This is in contrast to non-farm patrons, 54 per cent of whom lived in or within five miles of Williston, with 43 per cent living from 20 to 75 miles from Williston. Sixty per cent of all Williston patrons lived from 20 to 75 miles from Williston. Three per cent of all patrons traveled more than 75 miles to trade in Williston.

Williston provides goods and services to customers from a large area, with both farm and non-farm respondents being dependent upon Williston for goods and services.

Patronage by Trade Center

The number of people who shop in a particular center is one of the factors that determine the number and size of establishments a center can support. The number of people who shop in a center and the percentage of their total shopping done there is an indication of economic activity in the center.

The number of respondents who shop in Crosby, Williston, Watford City, Ray and Tioga for 28 selected items was determined. A further determination was made of the number who purchased 50 per cent or more of each of the items in each of the five centers. These data are shown in Table 2.

A total of 1,022 respondents indicated that they made some purchase of at least one of the 28 items in Williston. Of these, 684 made some food purchase and 497 said they purchased 50 per cent or more of their food in Williston. The convenience items which most patrons purchased in

Table 2. Number of respondents making any purchase and number who purchased 50 per cent or more of selected items in five trade centers.

	Name of Trade Center									
	Williston		Watford City		Tioga		Crosby		Ray	
	Number who Purchased		Number who Purchased		Number who Purchased		Number who Purchased		Number who Purchased	
	Any amount	50% or more	Any amount	50% or more	Any amount	50% or more	Any amount	50% or more	Any amount	50% or more
(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	
Convenience Items										
Food	684	497	194	156	95	85	168	139	36	31
Restaurant	681	532	185	151	76	57	140	106	33	20
Appliances	714	612	168	134	79	68	152	117	36	26
Auto Repair	639	538	192	158	88	75	167	139	34	26
Electrical Repair	599	539	169	144	80	75	140	121	39	33
Barber	506	467	168	153	87	84	163	157	40	38
Beautician	500	472	176	167	90	83	136	132	29	25
Legal Services	639	601	190	176	69	63	175	170	5	3
Drugs	694	632	196	174	115	104	170	150	24	13
Banking	597	533	213	201	72	65	173	170	62	58
Building Supplies	560	480	213	195	82	73	177	162	53	42
Hardware	645	524	200	166	90	78	158	133	39	29
Specialty Items										
Furniture	852	787	87	53	65	47	131	102	1	-
Clothing	880	712	188	123	82	48	168	109	17	2
Women's Coats	781	717	118	78	31	22	101	81	2	1
Eye Doctor	603	580	144	133	8	8	143	132	-	-
Medical Doctor	746	688	179	156	113	103	156	133	-	-
Hospital	715	681	155	143	98	94	132	121	-	-
Dental	639	623	117	106	71	67	177	175	-	-
Total Patrons	1,022		253		148		238		92	
No. of MTA Respondents ²	565 ¹		178		108		187		38	
Farm Production Items										
Farm Machinery	201	145	127	114	13	8	98	82	29	15
Farm Machinery Repair	225	142	123	106	13	8	97	75	22	16
Tractor Fuel and Oil	93	82	81	75	11	9	58	47	15	14
Commercial Feed	98	85	79	69	12	7	33	27	10	9
Crop Seeds	133	105	77	74	6	6	39	32	13	12
Fertilizer	87	79	66	64	8	8	28	26	14	14
Other Farm Chemicals	104	90	74	68	11	11	49	43	15	15
Veterinary Services	205	188	115	111	-	-	16	16	3	3
Veterinary Supplies	201	163	115	106	11	10	52	43	4	3
Total Farm Patrons	432		159		42		147		42	
Farm MTA Respondents ²	177		100		25		119		15	

¹Adjusted for smaller sample in Williston City.

²MTA - Main Trade Area.

Williston were appliances, drugs, food, and restaurant services. Specialty goods and services which attracted the most respondents to trade in Williston were furniture, clothing and women's coats. Farm machinery repair, farm machinery, veterinary services and veterinary supplies were the farm production items secured in Williston by most farmers. In most cases, the specialty items attracted more customers to trade in Williston than did convenience items. Other centers generally

attracted more customers for convenience items than for specialty items.

Except for Williston, the respondents buying more than 50 per cent of any one item in a given trade center generally lived within the center's main trade area. The data show movement of respondents across trade area lines to make purchases. Most patrons made purchases at two or more trade centers. A comparison of the total patrons for each center with the number of main trade

area respondents indicates that all centers drew some customers from other trade areas.

The data indicate that all centers studied supply most of the convenience and farm supply items to residents of their trade area and that Williston supplements the smaller centers, especially for specialty items.

Towns Patronized

Respondents living within the Williston main trade area were studied to determine where they purchased 50 per cent or more of each of the 28 items. The number of respondents outside the Williston main trade area who purchased 50 per cent

Table 3. Trade centers where Williston main trade area respondents purchased 50 per cent or more of each item plus purchases in Williston by other main trade area respondents (343 Williston main trade area respondents - 177 farm and 166 nonfarm).*

Item	Trade Center Where Williston Main Trade Area Respondents Purchased 50 Per Cent or More of Item							Respondents Outside Williston Main Trade Area Purchasing Items in Williston	
	Williston	Minot	Crosby	Watford City	Sidney	Hamlets	Others	50% or More	Less Than 50%
Convenience Items									
Food	251	-	-	2	2	98		26	144
Restaurant	256	1	1	6	3	54	Minneapolis 1	74	124
Appliances	291	2	1	2	7	48	Out of area 2, Ray 2, Minneapolis 1, Harvey 1	107	88
Auto Repairs	261	2	5	3	3	74	Devils Lake 1, Dickinson 1, Tioga 1	67	70
Electrical Repairs	262	-	1	2	1	66	Ray 4	69	45
Barber	250	-	7	7	5	46	Ray 6, Other 3	19	29
Beautician	240	-	5	8	2	44	Ray 1, Tioga 2	26	17
Legal Services	299	3	2	8	-	20		96	34
Drugs	328	-	7	2	1	4	Minneapolis 1, Other 1, Tioga 3	88	55
Banking	290	3	5	17	2	29	Out of area 1, Ray 9, Devils Lake 1, Other 2	37	48
Building Supplies	241	1	7	16	3	78	Ray 3	33	46
Hardware	253	-	-	4	6	94	Ray 1, Other 1	66	91
Specialty Items									
Furniture	321	3	5	-	5	5	Billings or Great Falls 1, Bottineau 1, Other 2	252	59
Clothing	322	10	4	5	4	2	Out of area 6, Minneapolis 3, Bismarck 1	184	143
Women's Coats	296	21	1	2	6	1	Glendive 1, Harvey 1, Other 1, Out of area 6, Minneapolis 5, Bismarck 1	229	48
Eye Doctor	274	65	10	6	1	-	Out of area 1, Regina 1, Minneapolis 2	126	15
Medical Doctor	327	3	7	2	4	-	Out of area 1, Other 1, Tioga 3	143	52
Hospital	327	4	3	2	1	-	Out of area 1, Fargo 1, Minneapolis 1, Bismarck 2, Tioga 4, Other 1	138	26
Dental	298	2	17	1	9	-	Out of area 1, Estevan 4, Regina 2, Tioga 3, Minneapolis 1, Stanley 3, Harvey 1, Other 1	117	12
Farm Production Items									
Farm Machinery	122	-	2	4	2	48	Ray 6	23	36
Farm Machinery Repairs	112	-	1	6	1	56	Ray 3, Stanley 1	30	62
Tractor Fuel & Oil	81	-	1	5	1	85		1	5
Commercial Feed	73	-	-	1	4	54		12	6
Fertilizer	77	-	-	2	1	52	Ray 3	2	6
Veterinary Services	123	-	-	10	3	-	Ray 1, Powers Lake 4, Other 3	65	14
Veterinary Supplies	112	-	-	9	3	16	Other 1, Tioga 1	51	31

*Represents 3 per cent sample in city of Williston and 10 per cent in rest of Williston main trade area.

or more of the listed items in Williston was also determined. These data are shown in Table 3.

The data show that 251 of the 343 Williston main trade area respondents purchased half or more of their food in Williston. Other centers where Williston main trade area respondents purchased half or more of their food were Watford City, 2; Sidney, 2; and hamlets, 98. Twenty-six respondents from other trade areas purchased half or more of their food in Williston. Over 70 per cent

Table 4. Per cent of all Williston patrons making any purchase and per cent purchasing half or more of item in Williston and estimated per cent of business secured from all respondents by Williston concerns (1,022 respondents — 432 farm and 590 nonfarm).¹

Item	Per cent of All Williston Patrons		
	Making Any Purchase	Purchasing 50 Per cent or More of Item	Estimated Per cent of Business Secured by Williston Concerns ²
Convenience Items			
Food	67	49	45
Restaurant	67	52	47
Appliances	70	60	53
Auto Repairs	63	53	47
Electrical Repairs	59	53	46
Barber	50	46	40
Beautician	49	46	41
Legal Services	63	59	51
Drugs	68	62	55
Banking	58	52	46
Building Supplies	55	47	42
Hardware	63	51	46
Specialty Items			
Furniture	83	77	67
Clothing	86	70	62
Women's Coats	76	70	60
Eye Doctor	59	57	49
Medical Doctor	73	67	59
Hospital	70	67	58
Dental	63	61	53
Number of Patrons	(1,022)	(1,022)	(1,022)
Farm Production Items			
Farm Machinery	47	34	30
Farm Machinery Repair	52	33	31
Tractor Fuel & Oil	22	19	17
Commercial Feed	23	20	17
Crop Seed	31	24	22
Fertilizer	20	18	16
Other Farm Chemicals	24	21	18
Veterinarian Services	47	44	38
Veterinary Supplies	47	38	33
Number of Patrons	(432)	(432)	(432)

¹Williston patrons were residents of the following main trade areas: Williston, 565; Sidney, 16; Crosby, 140; Tioga, 98; Ray, 38; Watford City, 154; Newtown, 4; Dickinson, 6; and Killdeer, 1.

²Estimated per cent of business may be 12 per cent high or low due to coding procedures.

of the Williston main trade area respondents purchased half or more of their convenience items in Williston. Watford City, Crosby, Sidney and hamlets were the major competitors to Williston for convenience items.

More respondents from the Williston main trade area purchased 50 per cent or more of the specialty items in Williston than they did convenience items. Minot was the major competitor for specialty items. Most farmers in the Williston main trade area purchased their farm production needs in Williston. A considerable number of farmers secured farm production needs, except veterinary supplies and services, at hamlets.

Specialty items attracted the largest number of respondents from outside the Williston main trade area to trade in Williston. In most cases, those respondents who purchased any amount of a specialty item in Williston purchased 50 per cent or more of the item there.

Penetration of Various Businesses

A summary of purchases made by all Williston patrons for the goods and services classified as convenience, specialty and farm production is shown in Table 4. This table indicates the penetration of Williston concerns into the greater Williston trade area. There were 1,022 respondents who made some purchase of one or more of the items listed in Table 4.

The convenience items that attracted the highest percentage of patrons to trade in Williston were appliances, drugs, food and restaurant.

Clothing and furniture were the specialty items which attracted the most patrons to trade in Williston. In most cases, the specialty items attracted a higher percentage of total business from all patrons than either convenience or farm production items. Williston did not attract a high percentage of farmers to purchase farm production items. Major farm items supplied by Williston were farm machinery, machinery repair and veterinary supplies and services.

Marketing Farm Products

The centers where Williston farm patrons said they marketed their farm products are shown in Table 5.

Williston was not a major grain marketing center for patrons who purchased goods and services in Williston. Only 14 per cent of the farmers marketed grain in Williston. Fifty-two per cent of the farm patrons marketed their grain at hamlets. Proximity of markets rather than size of marketing

Table 5. Trade center where Williston patrons marketed most of their farm products (432 farm respondents).

Trade Center	Number and Per cent Marketing Products							
	Grain		Livestock		Dairy Products		Poultry & Poultry Products	
	No.	%	No.	%	No.	%	No.	%
Williston	60	14	200	46	47	11	31	7
Dickinson	-	-	16	4	-	-	-	-
Sidney	3	-	45	10	1	-	2	-
Crosby	31	7	1	-	14	3	7	2
Tioga	6	1	1	-	-	-	1	-
Watford City	51	12	37	9	24	6	16	4
Killdeer	7	2	6	1	1	-	2	-
Ray	15	3	1	-	4	1	2	-
Newtown	16	4	1	-	-	-	-	-
Hamlets	225	52	2	-	6	1	20	5
Others	4	-	12	3	9	2	2	-
No Response	14	3	110	25	326	75	349	81
Total	432	100	432	98*	432	99*	432	99*

*Does not total 100% due to rounding.

center seemed to be the major factor in grain marketing.

Williston was the predominant livestock market center, with over half of those selling livestock listing Williston as their livestock market. Sidney and Watford City were the only other livestock market centers listed by over five per cent of the farmers.

Williston and Watford City were the centers listed most often as market places for dairy products. Only 19 per cent of the farmers said they marketed poultry and poultry products. Williston, Watford City and hamlets were listed most often as the market place for these products.

Summary

Williston is the dominant trade center in northwestern North Dakota. This center has a larger primary trade area and a greater volume of retail sales than any other trade center in the area. Its main trade area extends 75 miles from north to south and 40 miles from east to west in North Dakota. Its penetration into Montana was not determined.

The area from which Williston draws patrons to purchase 50 per cent or more of some items includes all of Divide, McKenzie and Williams counties and has a population of over 29,000. The trade centers of Watford City, Ray, Tioga and Crosby are all within the greater Williston trade area. Over 60 per cent of Williston's patrons live more than 20 miles from Williston. Most of the patrons for other centers live within 20 miles of the center.

The larger trade centers such as Watford City, Crosby and Tioga provide many of the same goods

and services as provided in Williston. The business establishments in these centers were in direct competition for many items offered in Williston. They depend on Williston for some items, especially specialty goods and services.

The hamlets are primarily farm service centers in which farmers market their grain and purchase farm production items such as tractor fuel and oil.

Williston's trade area includes towns that are partial shopping, full convenience, or minimum convenience centers. These centers in turn have shopping areas which include smaller centers and their trade areas. Thus, there is a complex system of trade centers and trade areas with each size center dependent upon the next larger center to supply needed goods and services. Respondents in the area indicated that they shopped at all levels of retail trade centers.

Conclusions

Results of the retail trade and service survey show that each community in the three counties of Williams, Divide and McKenzie is part of a complex system of trade centers and trade areas.

The study indicated that if a respondent desired a particular commodity or service, he normally made some purchase at the trade center level at which it was offered, so there is a movement of people from the smaller to the larger trade centers. The larger trade centers served to supplement the goods and services offered by successively smaller centers. The trade areas in the three-county area formed a pattern of trade relationships, with Williston the dominant center. Because of this relationship, any significant economic or social development in any of the trade areas will have an effect on most other centers, because their interests are closely allied.

Improved methods of transportation and communication have made it possible to commute to jobs and to shop for goods and services over a wide area, making it imperative for community leaders to look beyond their individual trade areas when planning for the future. Trade areas in which people have common interests and dependencies with other areas are in a position to cooperate and plan together to more effectively implement programs for progress. People with common interests work well together, so the area served by Williston is a logical one in which communities could cooperate to plan and implement social and economic programs to secure maximum human satisfaction for the residents of the three-county area.