

**The March of Mechanization on Saskatchewan Farms
During the Second World War**

**Prepared for the
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“Winning the Prairie Gamble”**

by Joan Champ

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1. Introduction

Saskatchewan agriculture was profoundly transformed during the Second World War. Improved crop yields, combined with the wartime demand for increased food production to meet both export and domestic needs, revived western farms after the ten hard years of the Great Depression. The war years from 1939 to 1945 also witnessed a marked trend towards greater farm mechanization in Saskatchewan.

During the drought and depression of 1930s, western farmers could not afford to repair or replace their machines. By 1939, prairie agriculture was beginning to get back on its feet, and farmers were ready to exercise their increased purchasing power and buy new machines. The war, however, intervened.

Farm machinery manufacture and import were severely curtailed to address the need for the industrial production of war machines. Starting in 1941, tractors and combines were rationed and made available to farmers by permit only. As a result, the march of mechanization advanced at a relatively slow pace throughout the war years. MacPherson and Thompson argue, however, that the delay proved to be advantageous for prairie farmers. The war, they say, dictated that the pace of change would be somewhat more deliberate than it would have been under peacetime conditions. In addition, they assert, when new machines finally became available after the war, they were far superior to those previously available.¹

Conflicts arose, however, due to the requirements of the wartime situation. “The need for diverting a maximum of industrial capacity to war production implied a curtailment of farm machinery manufacture and import,” J.D. Neilson and M.E. Andal wrote in their 1945 survey of machinery needs in Saskatchewan. “On the other hand, the requirement of increased food production necessitated the supply and effective distribution of a minimum number of essential machines.”² Saskatchewan farmers struggled valiantly to produce more food at a time when they were severely restrained by the lack of adequate implements and machinery.

¹Ian MacPherson and John Herd Thompson, “An Orderly Reconstruction: Prairie Agriculture in World War Two,” in *Canadian Papers in Rural History*, Vol. IV, Donald H. Akenson, ed. (Gananoque, ON: Langdale Press, 1984), 23-24,

²Canada. Department of Agriculture. Economics Division, *Farm Machinery Requirements in Saskatchewan*, J.D. Neilson and M.E. Andal, authors (Saskatoon: University of Saskatchewan, July 1945), 1.

2. Background

The trend towards farm mechanization and away from horse power began in 1917 when the Ford Motor Company introduced the Fordson tractor. Further improvements to the tractor, including power take-off, were pioneered in the 1920s. The usefulness of the farm tractor was greatly increased when Allis-Chalmers made rubber tires standard equipment in the mid-1930s. Combines were also developed during the 1920s. The first successful use of a combine in Canada was at the Dominion Experimental Farm at Swift Current in 1922 when the Massey-Harris Reaper Harvester No. 5 was tested.³

The Saskatchewan Royal Commission on Agriculture and Rural Life speculated in 1955 that, “had serious economic depression and drought not occurred during the 1930s, the change from horse to tractor power would have been complete by the early 1940s.”⁴ Due to economic hardship, however, horses remained the primary source of farm power in Saskatchewan during the 1930s. As the Table I below shows, the number of horses declined only slightly during the Depression.

**TABLE I: HORSES AND TRACTORS IN SASKATCHEWAN
1921, 1932, 1941**

Date	No. of Farms	No. of Horses	Horses per Farm	No. of Tractors	Tractors per 10 Farms
1921	108,300	1,080,300	10	10,830	1
1931	120,045	997,426	8	43,308	3
1941	120,442	803,893	7	54,014	4

Source: Saskatchewan Archives Board. R-266, IV.27. Saskatchewan Department of Agriculture, Agricultural Statistics, “Farm Implements.”

The Saskatchewan Royal Commission found that tractor sales in the province dropped from over 8,000 in 1928 to about 300 in 1931.⁵ Farm machinery replacement remained at a low level throughout the decade. Unable to afford the price of repairs or gasoline, prairie farmers relegated their tractors and other equipment to deserted fence corners where they silently but steadily deteriorated.

³Canada. *Report of the Royal Commission on Farm Machinery, 1971*. Dr. Clarence L. Barber, Commissioner (Ottawa: Information Canada, 1971), 38.

⁴Government of Saskatchewan, Royal Commission on Agriculture and Rural Life, “Mechanization and Farm Costs,” Report No. 2 (Regina: Queen’s Printer, 1955), 31.

⁵“Mechanization and Farm Costs,” 31.

By the end of the Depression, the pent-up demand for new farm machinery in Saskatchewan, and indeed across Canada, was enormous. The federal government's Special Committee on Farm Implement Prices found in 1937 that a backlog of farm machinery requirements estimated at \$200,000,000 had accumulated across Canada during the difficult years.⁶ In 1939, only 38 percent of Saskatchewan farmers had tractors. According to Robert E. Ankli, *et al*, "horse farmers no longer wondered *if* they should buy a tractor but *when* they would be able to afford the capital outlay."⁷ Then the Second World War broke out.

3. Problems in the Early War Years

The revival of Saskatchewan agriculture coincided with the outbreak of the Second World War. After a decade of drought, dust and grasshoppers, rain clouds appeared and the land responded. In addition, the expectation was that wheat production would increase in order to meet the food demands of war. Suddenly, farmers had money in their pockets and were on the market for new machines.

It has been estimated that by 1940, the farm machinery industry in Canada was dominated by four major firms which controlled both the production and distribution of implements and parts.⁸ In 1941, tractors accounted for about 40 percent of the industry's total sales. Combines accounted for only 9 percent of total sales, although they were growing in importance. Production for individual implements at that time was relatively small.⁹

⁶Canada. Special Committee on Farm Implement Prices, *Minutes of Proceedings and Report, No. 20* (Ottawa: 1937), 1294. The normal annual requirement for farm machinery was estimated at \$51,700,000.

⁷Robert E. Ankli, H. Dan Helsberg and John Herd Thompson, "The Adoption of the Gasoline Tractor in Western Canada," in *Canadian Papers in Rural History*, Vol. II, Donald H. Akenson, ed. (Gananoque, ON: Langdale Press, 1980), 33. The Saskatchewan results of a survey commissioned by the National Committee on Agricultural Engineering reported a higher figure. This study estimated that 46.8 percent of Saskatchewan farms used tractor power only; 24.3 percent used a combination of tractor and horse power; and 27 percent continued to use horses only. "The Machinery Farmers Need," in *The Country Guide* (October 1945).

⁸*Report of the Royal Commission on Farm Machinery, 1971*, 39. The four companies were Massey-Harris, John Deere, International Harvester, and J.I. Case.

⁹*Ibid*, 40.

According to J.K. MacKenzie, a writer for *The Country Guide*, however, the farm machinery business in 1940 was, “out of control.” Until about 1945 when the system of franchised dealers was introduced, the Canadian farm implement industry sold its products through local agents. High-pressure sales methods, carried over from the horse-and-buggy days, involved over-selling and high selling prices. Machinery prices were “loaded,” MacKenzie charged. “It would be interesting to know what percentage of the ultimate price of any given machine is made up of travelling expenses, wages, car allowances, entertainment for baulky prospects, unreasonable trade-in allowances and other equally useless expenditures,” he wrote.¹⁰

To make matters worse, MacKenzie asserted, sales of farm machinery were not based upon product knowledge by either the producers or the users. The important research work done during the 1930s by the Dominion Experimental Farm at Swift Current and the University of Saskatchewan’s College of Agriculture had had little impact on the production and selling price of machines. “A governmental agency,” he wrote,

possessed of the knowledge and authority to disseminate authentic and up-to-date information on the design, utility, operating costs and general worth of all machines having a place in our agriculture would put the user in the position of knowing what he wants and knowing when he wants it. This would cost the user far less than the present practice of getting biased information from a dozen varied sources. Armed with this information he could go to the branch house and demand an unloaded price.¹¹

A farm machinery survey carried out over two years by the Swift Current Experimental Station in the early 1940s highlighted the inefficiencies of the situation in Saskatchewan. According the *The Country Guide*, this survey showed that: “1) practically every farm is from 50 to 200 percent over-equipped with machinery; 2) working hours for every piece of machinery are very low per season; 3) the total hours of useful life of machinery on most farms is only about 60 percent of what the machine is capable of; and 4) lowest cost of operation and the greatest returns result from the best balance between land and equipment.”¹²

MacKenzie predicted disaster if things did not change. “The only sure cure lies in a serious co-operating of producer and consumer,” he warned. “If this can’t be done voluntarily there appears

¹⁰J.K. MacKenzie, “Are Farm Implements Too Expensive?” in *The Country Guide and Nor’-West Farmer* (April 1940), 42.

¹¹MacKenzie, 43.

¹²Fry, 23.

to be considerable justification for drastic regulation of producer and consumer alike.”¹³ Regulation soon appeared in the form of wartime machinery rationing — a development that had a profound impact upon the pace and effectiveness of farm mechanization in Saskatchewan.

4. Rationing and Quotas

On January 19, 1942, the Canadian Wartime Prices and Trade Board, through the administrator of farm and road machinery, issued Restriction Order No. 1, rationing the production and sale of farm machinery. This order put into effect in Canada quotas similar to those announced in the United States on December 28, 1941. By October 1942, machinery was made available to Canadian farmers by permit only.

The wartime regulation of farm machinery was imposed in order to free up steel and labour urgently required for the production of war munitions. Farm implement manufacturers were required to plan production schedules in accordance with quotas of a specified percentage of their 1940 production output. Percentages varied according to the type of implement; some types of plows, for example, were restricted to as low as 50 percent of 1940 levels.¹⁴ Rationing was determined based upon the relative urgency and national need for a proper distribution of limited supplies of farm machinery and parts. This led to the elimination of certain styles of machinery such as the larger 16-foot combine, and established a level of standardization in an effort to achieve more economical use of raw materials.¹⁵

Wartime regulation also resulted in the institution of ceiling prices for farm machinery. The Wartime Prices and Trade Board ensured that machinery prices could increase only within limits. In 1944, a tariff exemption was placed on all farm equipment, and this also contributed to keeping prices within the reach of farmers. According to MacPherson and Thompson, “This wartime regulation was in part fortuitous, for it prevented the pell-mell rush to purchase equipment that had followed World War One, and directed new machines to farmers who could use them to best advantage.”¹⁶

¹³MacKenzie, 43.

¹⁴United Grain Growers Ltd., “Farm Machinery Restrictions,” in *The Country Guide* (February 1942), 29.

¹⁵United Grain Growers, 29; Fry, 7.

¹⁶MacPherson and Thompson, 24.

Difficulties soon arose as officials tried to determine essential requirements of farm machinery given the changing agricultural situation during the Second World War. In their study to determine postwar farm machinery needs, Neilson and Andal stated that “increases in farm purchasing power, with the accompanying increase in effective demand for equipment, made it increasingly difficult to distinguish between demands related primarily to the availability of purchasing power and those related to direct needs.” The authors noted that farmers’ machinery needs became increasingly pronounced as the war progressed, “with expressed demands for equipment far outrunning the amounts being made available.”¹⁷

The farm machinery companies also struggled to meet consumer demands during the war. In March of 1942, shortly after the restrictions were imposed, *The Country Guide* interviewed branch managers of five of the largest implement companies operating in western Canada. “By one and all,” the editor H.S. Fry wrote, “we were assured that while the closest co-operation would be necessary between farmers and the implement companies, it did not appear that real hardship should result to anyone as a result of the quotas.” Fry continued:

Some lines and particularly certain sizes of machinery that were made in 1941 will be discontinued for the time being. It will probably be necessary to make certain substitutions of materials in some cases. New designs of implements, which in the ordinary course of events are continually being made, will not be put on the market to any extent. This is largely because new machines require new tools and the time of machinists, and their time can be utilized otherwise to better effect. The tendency will be to standardize sizes and designs as far as practicable, rather than to provide variety.¹⁸

By 1943, however, stricter restrictions were imposed, limiting the production of tractors and farm machines to only 25 percent of 1940 output. As a result, repair services became the most important activity for the farm machinery industry during the war years. Cockshutt Farm Equipment, for example, introduced a farm equipment conservation program, stating that Canadian agriculture was now in crisis. “Proper conservation and care of farm equipment was never so important,” the Cockshutt pamphlet stated.¹⁹

In its 1943 catalogue, Massey-Harris Company Ltd. urged farmers to order repair parts early. “The time to replace broken or worn parts is immediately after the past season’s work,” the

¹⁷*Farm Machinery Requirements in Saskatchewan*, 2.

¹⁸Fry, 7.

¹⁹Cockshutt Farm Equipment, *The Cockshutt Farm Equipment Conservation Program; How You Can Get Ready for 1943 Now!* (Brantford, ON: 1942), 1)

company advised, “not just before you take the machine into the field at the start of the next season.”²⁰ Many farmers, unable to secure the new machines they needed, had their old machines overhauled and reconditioned by their local implement dealer. The 1943 Massey-Harris catalogue advertised to this effect:

Massey-Harris dealers are equipped to take in your old machine — in some cases, even, machines that have stood idle, discarded for years — and turn them out rebuilt, reconditioned and repainted to look like new. The work, in most cases, is done right in the dealer’s own service department where skilled mechanics, specialists in Massey-Harris machines, strip the machine down part by part and do a thorough job of overhauling, replace worn parts where necessary, tune up moving parts and make adjustments to provide best working efficiency.²¹

5. How Saskatchewan Farmers Coped

In Saskatchewan in 1941, more than 15 farmers’ sons per 100 farms left for either the Armed Forces or war industries. In addition, more than 20 hired workers entered the Armed Forces for every 100 Saskatchewan farms hiring help. The net loss of farm workers in the province between 1940 and 1941 was relatively large compared to the rest of Canada. Farmers reported that one strategy they employed to address the labour shortage was increased use of machinery.²²

Professor Evan A. Hardy of the University of Saskatchewan contended that Saskatchewan farmers were literally forced to change from horse-operated equipment to power equipment during the war years. The irony was that, as Hardy pointed out, because of the labour shortage this expensive power machinery was at the mercy of inexperienced operators. In an interview for *The Country Guide* he stated:

The major problem facing the Saskatchewan farmer is not one of power, or one of machinery, but one of skilled farm labour capable of operating power machinery. A large proportion of power machinery in Saskatchewan has been operated by the young and middle-aged man [now involved in the war effort]. ... Many older farmers who have been relieved of active operation of their power machinery are

²⁰Massey-Harris Company Ltd., “Farmers’ 1943 Handy Catalogue,” 4.

²¹Ibid, 4.

²²Canada. Department of Agriculture, *Farm Labour in Wartime (A Survey of Farm Labour on 5,218 Farms in Canada in February and March 1942)*, B.A. Campbell and J. Coke, authors (Ottawa: July 1942), 4-7, 14.

finding that they have tractors and big power units which their sons and hired help have operated; and that they must operate and be responsible for the maintenance of this equipment this year. They do not know much about such equipment and are anxious to learn more about it. There are many young people who have not, as yet, been responsible for farm work, who will have to operate equipment and do not know the performance of such equipment.²³

In a 1944 study for the federal Department of Agriculture on mechanization and wartime changes on farms in the Elrose-Rosetown-Conquest area of Saskatchewan, R.A. Stutt observed that older farmers were working harder than ever before. Stutt calculated that the average age of farm operators in the area of study was 55 years.²⁴ These farmers, especially those located on larger sized farms, had been “forced to shift their activities from a supervisory capacity to a position of an active farm labourer.” Stutt continued:

These men, many of whom normally would be retiring, were obliged to work more hours per day and more days per week, particularly in the rush spring and fall periods. ... More operators on the large-sized farms worked harder, used more power and equipment, tended to let the small jobs and details go undone, and changed from threshing to combining, than was the case in pre-war years. ... A relatively large number, 37.5 percent, indicated that they planned to retire from active farming [in the immediate post-war period].²⁵

Stutt also found that a number of important changes had taken place in farming practices in the Elrose-Rosetown-Conquest area. In particular, he found that farm mechanization had reached a relatively high level in the area by 1944 (see “Case Studies” below). “Any change in type of machine effecting a saving in labour and time and fitting into newer methods of cropping practice found ready favour,” Stutt reported. “This was due mainly to the backlog of replacement of machines from the period of the thirties and the increased farm purchasing power following the outbreak of war.” Another reason for increased mechanization was the shortage of farm labour in the region — a reduction of almost 12 percent between 1939 and 1944.²⁶

²³“Care of All Power Machinery,” in *The Country Guide* (April 1943).

²⁴About 69 percent of the farm operators were between 50 and 69 years of age and 8.0 percent were 70 years or over. Only 1.7 percent were less than 30 years, 8.4 percent were less than 40 years and 23.7 percent were less than 50 years. Canada. Department of Agriculture, *The Pattern of Mechanization and Wartime Changes on Farms in the Elrose-Rosetown-Conquest Area of Central and West Central Saskatchewan, 1944*, R.A. Stutt, author. Ottawa: 1948, 26.

²⁵Ibid, 24, 26. The labour decrease on larger farms (over 550 acres) was 15.5 percent.

²⁶Ibid, 21, 23.

The severe rationing of farm machinery during the Second World War initiated other changes in farm management, including the hiring of custom work and the establishment of farm machinery co-operatives. The neighbourly exchange of farm labour was a much more important factor in Saskatchewan farm operations than in ordinary times. In January 1943, the Western Section of the National Committee on Agricultural Engineering approved basic hourly rates for custom farm work. The basic rates did not include operating costs, which included fuel, oil, grease (or feed for horses) and labour.²⁷ There was considerable movement of combines from farm to farm under the supervision of “Win-the-War” committees. Machine operators were reimbursed by the federal and provincial governments for costs if they moved machines more than fifty miles.²⁸

In 1943, the Co-operation and Marketing Branch of the Saskatchewan Department of Agriculture introduced guidelines for the formation of co-operative machinery associations — another attempt to address the scarcity of farm machinery. The Branch stated:

Farm operations depend to a greater extent on the ability and initiative of the individual than almost any other type of business or occupation. For this reason, the farmer is apt to be more of an ‘individualist’ when asked to support a co-operative farming enterprise than almost any other type of community project. This does not alter the fact that farmers can save themselves time and money by pooling equipment, and labour resources and conditions confronting the average ‘family farm’ suggest that this will continue to receive increasing attention.²⁹

The government recommended that a small group of six to ten farmers be formed, with a good manager and sound financing. Farmers in the North Battleford area established a machinery co-operative at the end of the war, when farming equipment was still in short supply. In a 1978 interview a former member of this co-operative, Thomas Mewhort, described how it worked:

A group of us got together and bought a tractor... We appointed a manager and worked the machinery mostly ourselves. The machinery was worked continuously in the spring during seeding. We decided through mutual agreement whose farm would be worked first. We tried to lay it in a circle in order to reduce travel time and make it fair for everybody -- we would do so many hours work depending on the acreage. It wasn't hard and fast — it was flexible — if one farm was ready we would go there. Working night and day it didn't take long. We were around the circle in fairly good time — there was nobody left too late. Those

²⁷“Machine Custom Work Charges,” in *The Country Guide*” (March 1943).

²⁸MacPherson and Thompson, 23.

²⁹“Co-operative Machinery Associations,” in *The Country Guide* (April 1943).

who worked the machinery were paid an hourly rate. The farmer would pay the Secretary-Treasurer. Rates were set according to the university. Hilly land cost more than flat land. Most of the men took a turn. We had three hired men and three tractors working eight-hour shifts. The machinery co-operative broke up due to personality clash. Certain members of the group couldn't get along with certain other members of the group. The advantage of the co-op was that there was a lot less investment per acre. A small farmer had the advantage of machinery that did the job pretty quick.³⁰

6. Case studies

Several surveys of the farm machinery situation in Saskatchewan were conducted during the years of the Second World War by the federal Department of Agriculture. One study conducted by M.E. Andal examined changes in 123 farms in west central Saskatchewan and 141 farms in northern Saskatchewan between 1942 and 1947. Another study by an agricultural economist from the University of Saskatchewan, R.A. Stutt (cited above), looked at the pattern of farm mechanization in the Elrose-Rosetown-Conquest area of the province in 1944. Both studies discovered that the progress of farm mechanization had already reached a relatively high level by 1945. "This trend," Andal concluded, "was encouraged during the period from 1942 to 1947 by the labour shortage and *in spite of machinery shortages*."³¹

Andal found that there had been a substantial increase in capital expenditures on farms in both areas covered by his study. He attributed this to the large backlog of machinery requirements together with improved purchasing power. "Prices for farm products increased nearly twice as much as the prices of goods and services purchased by farmers between 1941 and 1946," he wrote. "This price relationship was favourable to the farmer."³² The same period witnessed a substantial increase in farm operating costs. For example, tractor expenses (fuel, oil, grease and repairs) rose nearly 150 percent in west central Saskatchewan, and nearly 200 percent in northern Saskatchewan.³³

³⁰Saskatchewan Archives Board. Oral History Collection, "Mechanization of Saskatchewan Farms," Tape A-1582. Thomas Mewhort interviewed by Don Forsyth, September 21, 1978.

³¹Canada. Department of Agriculture, *Changes in the Farms of West Central and Northern Saskatchewan, 1942-3 to 1947*, M.E. Andal, author (Ottawa: 1951), 9 [my italics].

³²Ibid, 12.

³³Ibid, 14.

By 1947, the net worth of farm operators in the west central area had increased nearly 100 percent, and by over 100 percent in the northern area. The large increase in farm expenses in northern Saskatchewan, Andal concluded, was due in part to the change from the “general pioneering” type of organization to a more specialized and commercial type of farm. “With this change, there was a changeover from horse power, for which no cash outlay was required for feed, to tractor power, with relatively high operating costs.”³⁴

TABLE II: SURVEY OF MECHANIZATION ON SELECTED SASKATCHEWAN FARMS BETWEEN 1943 AND 1947

West Central Saskatchewan - 123 Farms			
1943	80 tractors	19 combines	55 one-way discs
1947	104 tractors	42 combines	88 one-way discs
Northern Saskatchewan - 141 farms			
1943	57 tractors	1 combine	13 one-way discs
1947	95 tractors	10 combines	33 one-way discs

Source: Canada. Department of Agriculture, *Changes in the Farms of West Central and Northern Saskatchewan, 1942-3 to 1947*, M.E. Andal, author (Ottawa: 1951), 9.

Stutt also found that a tremendous pent-up demand for machinery in his area of study had resulted in increased mechanization during the war years. “In the Elrose-Rosetown-Conquest area in 1943 a very high proportion of the field operations was done by tractor power,” he wrote (see Table III below). That same year, 87.7 percent of the area farmers combined their crops. “Straight combining was the general rule, 44.4 percent of the farmers having their own combine and 27.6 percent hiring a combine,” Stutt explained.³⁵

Despite the rationing of farm machinery that was in effect in 1942 and 1943, Stutt found that new equipment was not uncommon in west central Saskatchewan in 1944. “The replacement situation with respect to combines in this area appears to be particularly bright,” he noted. “Nearly one-half of the combines in the area were five or less years of age at the time of the survey.” Farmers in the survey area indicated a pronounced preference for the larger, self-propelled combine. Stutt found that tractors were replaced “at a very rapid rate” on large farms during the war years. “Practically all the farms having two or more tractors were over 850 acres in size and 13.3 percent of the second tractors were purchased since 1939,” he observed.³⁶

³⁴Ibid, 20, 35.

³⁵Ibid, 6.

³⁶Ibid, 12, 14.

**TABLE III: CHANGEOVER FROM HORSE POWER TO TRACTOR POWER
IN WEST CENTRAL SASKATCHEWAN DURING WORLD WAR II**

Year	Farms Using Horse Power Only	Combination Horse/Tractor	Farms Using Tractor Power Only
1939	27 percent	24.3 percent	46.8 percent
1945	12.9 percent	14.5 percent	69.5 percent

Source: Canada. Department of Agriculture, *The Pattern of Mechanization and Wartime Changes on Farms in the Elrose-Rosetown-Conquest Area of Central and West Central Saskatchewan, 1944*, R.A. Stutt, author. Ottawa: 1948.

According to Stutt's survey, a major change in agricultural practice during the war years was the trend towards the use of the one-way disc. In the Elrose-Rosetown-Conquest area, 32.5 percent of farmers had switched from ploughing to surface tillage in the preparation of the land. Some of the reasons for this change were technical and scientific advances, knowledge gained from actual farm practice over the years, and most importantly, the scarcity of farm labour. "By using a one-way disc," Stutt explains, "they were able to handle the cropland or in many cases to increase it with a reduced labour staff."³⁷

7. Later War Years

Further studies were conducted by the provincial and federal governments during the final years of the Second World War in an effort to predict Saskatchewan's farm machinery requirements for the postwar years. These studies found that the age of most machines on farms was relatively advanced due to the low level of replacement during the Depression and during wartime. A Saskatchewan Department of Agriculture survey of 1,736 farms across the province revealed that there was a "general preponderance of older types of machines" such as the steel-wheeled tractor at the time of the study. "Tractors on farms had an average age of about nine years; combines, five years; one-way discs, six years; cultivators, eleven years; grain seeders, thirteen years; disc harrows, fourteen years; and horse binders, fourteen years."³⁸

The studies predicted that the demand for farm machinery and equipment would be extremely heavy for the immediate future. In fact, H.L. Patterson, author of a federal government study released in early 1945, found that demand for farm machinery on the prairies seemed to have

³⁷Ibid, 23-24. First introduced into Western Canada in 1927, the one-way disc retained the non-trash-burying features of the disc harrow and the depth control, together with effective weed killing features of the disc plow. It was used extensively not only as a tillage machine but also as a seeding machine.

³⁸SAB, R-266, IV.27, Saskatchewan Department of Agriculture, Agricultural Statistics, "Farm Implements; Summary and Conclusions," ca 1945.

risen much more than the production of machines had declined during the war.³⁹ Nielson and Andal's survey for the federal Department of Agriculture in July 1945 found that the machines most urgently needed were the larger, "more important" farm machines.⁴⁰ "It seems difficult to believe," *The Country Guide* commented, "but the [Saskatchewan] survey nevertheless shows that more combines, swathers, power binders, one-way discs and trucks are likely to be required in the next two years than are estimated to be in use at present."⁴¹ (See Appendix : "Status of Selected Farm Machinery in Saskatchewan at the End of the Second World War.")

There was a definite trend towards larger sizes of machines in all areas of the province by the end of the war years. In addition, there was a pronounced trend towards machines with rubber wheel equipment. "Farmers appear to be strongly aware of the advantages of rubber mounted tractors, combines, swathers, etc., with regard to lighter draft and comfort," Neilson and Andal reported, "and showed a distinct preference for this type in comparison with steel mounted machines."⁴²

8. Conclusion

At war's end, the farm machinery industry was not in a position to meet the huge demand that had built up on Saskatchewan's farms over the previous fifteen years. In the fall of 1945 *The Country Guide* reported that there was still an acute shortage of essential raw materials such as iron castings and sheet steel. And, despite the return of many thousands of war veterans and the curtailment of war production, farm implement manufacturers were still experiencing a shortage of labour. "Although the output of farm machinery for 1946 is scheduled to show a 24 percent increase in tonnage," the *Guide* stated, "it is hardly likely that there will be much effect on actual output for some months to come."⁴³ In an advertisement in *The Country Guide* in April 1946, International Harvester Company of Canada Limited announced that tractors were coming "as fast as we can build them," but that farmers could not be sure of getting a new one that spring. "It will take time to build the equipment and to fill the great demand in every dealers' community," IHC stated.⁴⁴

³⁹Canada. Department of Agriculture, *The Farm Machinery Outlook in the Prairie Provinces*, H.L. Patterson, author (Ottawa, January 1945), "Foreword."

⁴⁰*Farm Machinery Requirements in Saskatchewan*, 27.

⁴¹"The Machinery Farmers Need," in *The Country Guide* (October 1945).

⁴²*Farm Machinery Requirements in Saskatchewan*, 37.

⁴³*Ibid.*

⁴⁴International Harvester Company of Canada Limited, "Coming As Fast As We Can Build Them" [advertisement], in *The Country Guide* (April 1946), 32.

In the late 1940s, farmers were still clamouring for new farm machinery. It was not until the early 1950s, however, that the slow but steady march of mechanization finally accelerated into a full gallop. Farm machinery sales exploded upwards in 1951. Four years later Saskatchewan Royal Commission envisioned that the impact of mechanization on the province's family farms would be far-reaching:

While the tractor is the pivotal machine in the process of farm machine technology, it is only the beginning of a series of economic and social consequences for Saskatchewan agriculture. The purchase of a tractor starts a chain reaction: it makes necessary the adding of new tillage and harvesting machines to replace those formerly used with horse power; it initiates a significant change in the structure of farm costs; and, since power machinery economizes on time of operation and labour, it makes possible, and even necessary, the acquiring of additional acreage. As agriculture becomes more highly commercialized, farm credit, land tenure, agricultural markets, and farm science assume new significance.⁴⁵

The family farm in Saskatchewan had entered a new era.

**TABLE IX: MACHINES ON SASKATCHEWAN FARMS
1926 - 1951**

Machine	1926	1951
Tractor	26,700	106,700
Combine	6,000	43,000
Truck	3,300	50,000
Car	52,000 65,000 (1931)	63,000
Binder	129,177 (1931)	70,584
Threshing Machine	27,046 (1931)	19,221

Source: Ralph Hedlin, "Machines Have Changed Saskatchewan," in *The Country Guide*, May 1955, pp. 10, 86.

⁴⁵"Mechanization and Farm Costs," 1-2.

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