

# The Gardeners of Vimy

## Canadian Corps' Farming Operations during the German Offensives of 1918

S.F. Wise

The "Gardeners of Salonika" was Georges Clemenceau's jibe at the French and British divisions tied down in entrenchments round the Greek port for a good part of the First World War, because all they seemed to do was dig, rather than launch a Balkan offensive.<sup>1</sup> The Canadian Corps, from Field Marshal Haig's perspective, was similarly removed from the war when Lieutenant-General Sir Arthur Currie, strongly supported by the Canadian government, refused to accept the piecemeal breakup of the Corps to help shore up the British line during the great German offensive which began in March 1918. Haig never forgave this rebuff, and his diary is studded with unfavourable comparisons of the Canadians with the Australians, who permitted their divisions to be detached from the corps organization and shifted to menaced sectors of the Western Front.

As a result of Currie's action, which Lord Derby, the British Secretary of War, forced Haig to accept, three of the four divisions which made up the national army were restored to Canadian command, occupying the Vimy bastion and lines extending from it northward. The Corps had last fought in a major operation in October/November 1917, at Passchendaele; it was not to be employed again (except for small operations incidental to holding a substantial portion of the front) until the climactic battle of Amiens in August 1918. In the interim, while the Allies fought with their backs to the wall to stem the great series of German onslaughts, the Canadians, secure in the immensely strong lines they had created around Vimy, were given opportunity to rest and to train for the moment when they would be used to spearhead a renewal of the Allied offensive against the German army.<sup>2</sup>

The Canadians held a vital and extensive part of the Allied line, and were obviously performing a major defensive function during the long weeks of the German offensive, even though their relative inaction occasioned much British resentment. In that sense they bear little resemblance to the Gardeners of Salonika. In another, however, they were the genuine article, and can legitimately be termed "The Gardeners of Vimy," for during the spring and summer of 1918, as well as guarding the Vimy lines, the Canadian Corps was also involved in battle zone farming in a big way. How did the Corps come to be engaged in an essentially peaceful and bucolic enterprise, especially during such a critical period?

This activity was completely unknown to me, until a few references in the enormous finding aid to Record Group 9 in the National Archives of Canada piqued my curiosity. The Canadian Corps, as a large fighting formation of over 100,000 men, required many non-fighting units and sub-units to support it in the field, supply it, provide it with reinforcements, medical services, legal and police services, and so on. All its parts generated masses of paper, and much of this is deposited in Record Group 9. Among this immense volume of documents is to be found a memorandum of early 1918 entitled "Suggested Establishment for Agricultural Employment Coy.," signed by Major F.C. Washington, who is identified as "Canadian Corps Agricultural Officer." Why did the Corps need an Agricultural Officer and an Agricultural Employment Company? The story that emerges from fragmentary evidence is incomplete, yet while hardly of cosmic significance, is an unusual and interesting one.



*Two Canadian soldiers helping French peasants at farm work.*

Washington's memo does not answer either question, because it is simply a set of administrative recommendations that wound up on the desk of the Corps Commander. It provides for an establishment of five officers - himself at the Corps level and one for each of the Canadian divisions in the field - a French interpreter, a Company Sergeant-Major and a Quartermaster Sergeant, 8 Sergeants, 8 Corporals, 8 Lance Corporals, a shoeing smith Corporal and 5 shoeing smiths who were privates, and 325 other ranks, including 5 cooks and a stenographer! A one-ton truck, 36 heavy draft horses and 18 general service wagons completed the establishment. The whole, Washington thought, "should be sufficient to do all agricultural work required in this area, as soon as seeding has been completed."<sup>3</sup>

Sir Arthur Currie supported Washington's recommendations in a letter to the administrative branch of British First Army, the formation to which the Canadian Corps belonged for most of 1918. He pointed out that the Corps "has been providing a considerable number of personnel for agricultural work," some to help French farmers in the Corps area, about 60 men "employed under the French Agricultural Officer at Arras," and 150 men needed "for Corps and

Divisional Farms which supply food for Corps requirements. The total acreage to be placed under cultivation for this purpose is 1400, of which much will be cultivated for vegetables." Currie, as we shall see, had no problem with members of the Corps engaging in farm work. He did not believe, however, that this should be at the expense of battalions or batteries in the line, and proposed instead that an Agricultural Company, as laid out in Washington's draft, should be approved as a permanent farming unit, and its members should be replaced in their original units by reinforcements from the training establishment in Britain.<sup>4</sup>

Currie's readiness to engage in farming on the Western Front, though it may have been helped by his having grown up on a farm near Strathroy, Ontario, was in fact in conformity with policy laid down by the British government, which instructed GHQ to carry it out. As announced by Brigadier-General Lord Radnor, GHQ's Director of Agricultural Production, the policy was intended to address the "impending world shortage of food for human consumption." The British government had decided that "the English Armies undertake the growing of certain foodstuffs in the way of green vegetables and potatoes... on the lands on which they now find

*Two views of  
Canadian cavalry  
ploughing and  
harrowing ground  
where potatoes are to  
be planted.*



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themselves," and in addition do what they can to help "the French Agriculturalists and those of our other Allies." It was also hoped that the pressure on shipping, already great because of losses to German submarines, would be reduced somewhat. Lord Radnor's announcement set scales for vegetable production, authorized the

use of farming implements from derelict French and Belgian villages, ordered the appointment of agricultural officers for armies, corps, divisions and areas, laid down the chain of command within this structure, and outlined the manner in which any surplus beyond the needs of units and formations would be dealt with.<sup>5</sup>

What exactly did Radnor mean by directing that the British Armies, and by extension its Canadian, Australian and New Zealand components, were to grow vegetables "on the lands on which they now find themselves"? Major Washington clarified this for the Canadian Corps, pointing out that it was "not intended that ground which will be cultivated in the regular way by the French Population be used for this purpose." All lands farmed by the Corps would be in the Corps Area, adjacent to camps, training grounds, and other such establishments, and all of them not simply within sound of the guns but in the area immediately behind the Corps' defensive trench system. This included land which had been fought over and won by the Corps and long deserted by the French, some of it cratered or disfigured by fieldworks, battery positions and other surviving marks of the military uses to which it had been put by Germans and Allies.<sup>8</sup>

The 1,400 acres mentioned by General Currie was therefore not a single block of land, but scattered, in bits and pieces like the small holdings of a medieval village, behind the divisional areas and in the vicinity of battery positions. In early February the quartermaster branch of the Canadian Corps undertook an initial survey to discover how much land had been taken up by the formations and units of the Corps for farming, and found that progress varied considerably. "While some divisions have made very little progress, one Division has undertaken the cultivation of 300 acres. In addition to this, the Corps Agricultural Officer has two Corps Vegetable Farms, at Marqueffies and Berthonval, totalling nearly 200 acres." The leading division was undoubtedly the Fourth (General Watson), which in addition to a divisional vegetable garden of 125 acres boasted the 100-acre farm of one of its infantry brigades, then in reserve at Servins, and a large number of smaller plots. For example, each of its field artillery batteries had 2-acre gardens, and so did each of its field companies of engineers, while the divisional Machine Gun Battalion was farming 10 acres, and such units as the Signal Company, the Field Ambulance, and Divisional H.Q. itself were each cultivating 2 acres.<sup>7</sup>

As befitted a military organization, the instructions and planning for the farming operation were elaborate. We may take as an example the instructions issued by the First

Canadian Infantry Brigade, the premier brigade of the First Canadian Division, regarded by contemporaries and by many since as one of the finest divisions in the whole of the British Army on the Western Front. The First Division got a late start in the farming business, but got itself organized in March to catch up. Thus First Brigade Headquarters assured its infantry battalions and associated units that there was "plenty of ground for gardening in the forward area." If more land was required, the Agricultural Officer would rent it from the owners. Units were instructed that "small plots should be dug - large plots ploughed," to a depth of five or six inches. Do not, soldier farmers were told, "bring raw chalk to the surface." Lots of manure was readily available, since abandoned French farmhouses were distinguished by the presence of mountainous piles of rotting manure just outside the kitchen door; 20 to 30 loads of it should be applied per acre. It was to be thoroughly worked into the soil by cultivators or harrows, or by rakes and hoes in the smaller plots.<sup>8</sup>

Not only were specific instructions for preparing the soil issued to the gardeners of the Corps, but inspecting eyes were watching to see that the job was well done. Major B.W. Browne, the Deputy Assistant Adjutant General (DAAG), First Division, warned the Divisional Agricultural Officer in mid-March that "it has been noticed that some units are wasting quite a lot of good ground because of a few shell holes, and patches are left presumably on account of having a bit of couch grass or heavier growth than the remainder of the ground; further, headlands<sup>9</sup> are not marked out as they should be before commencement and consequently each individual ploughman begins and finishes where he feels disposed." The Agricultural Officer, therefore, was instructed to reprove units tolerating such discreditable practices, letting them know that it "requires no more labour to do the work in an orderly, workmanlike and proper manner than in a slipshod and careless way." Farm work, it was made clear, must be performed in a soldierly and uniform fashion. Browne's findings were disputed by Captain G.F. Dudley, Transport Officer of 2nd Canadian Infantry Brigade, who claimed that "the sector being cultivated by 2nd Can. Inf. Bde. is being farmed in an ordered manner, as near to 'home' conditions as is possible. Shell holes are filled in, couch-grass burned off before plowing, headlands marked



*A postcard of the Agricultural School at Berthonval. Berthonval was the site of one of the two extensive farms of the Canadian Corps HQ. Most likely the Canadians were farming lands formerly cultivated by the School.*

and straight." A month later Major Browne was back to the attack, seemingly giving good agricultural practice priority over the war. "It is reported," he wrote to units, "that unnecessary damage has been done to young crops during the digging of trenches in the cultivated areas. The attention of O's C. working parties should be drawn to this, and instructed to see that no such damage...is committed by men under their charge."<sup>10</sup>

Browne had been entrusted with responsibility for expediting First Division's farming program while still a captain, and knew he had the backing of the division's commander, Major-General Archibald (Batty Mac) Macdonell, and its former commander, General Currie. Because the Division had some catching up to do, he wrote to all units a memorandum marked URGENT:

Instructions have been received from the Canadian Corps that this Division must have 200 acres at least under cultivation for vegetable growing. A return has to be sent to the Corps within the next few days, giving map location, and a sketch of the ground selected by Units for this purpose.

Divisional Headquarters has approximately 100 acres to plough, and it will therefore be necessary for the other units in the Division to make up

the 100 acres which are still required to be put under cultivation... It is not desired to have this Division behind others in the Canadian Corps, so that what is required, is the united efforts throughout the whole Division to make this vegetable growing a success. Time is very limited and the need most pressing.<sup>11</sup>

Volunteers were not lacking. Even before Browne had circulated the Division, Lieutenant-Colonel D.M. Ormond, the officer commanding the 10th Canadian Infantry Battalion, had written to 2nd Brigade Headquarters that "this unit would be very pleased to commence a garden at once. Any area to WEST of ST. POL would be favoured." Ormond offered to farm 10 acres "if assurances could be given" that members of the unit assigned to the farm, together with unit transport, would not be moved. Obviously no such assurance was possible; instead, the 10th joined with the other infantry battalions in the 2nd Brigade, the 5th, 7th and 8th, to create the 2nd Brigade farm. By early March the Brigade commander had visited the site of the farm, and pronounced himself "very pleased with the progress that has been made. He regards this work as of great importance." It rather looks as if the 10th Battalion was still the most enthusiastic participant; it informed the Brigade transport officer that the battalion intended to put 50 acres of the Brigade Farm into potatoes, and since they needed 10 bushels

of seed potatoes an acre, or 500 bushels, they required transport. Behind the Corps lines was a light railway (or tramway) system, originally developed to bring ammunition and other supplies up as close to the fighting front as possible. The 10th Battalion, and presumably other units, appropriated the tramway to take delivery of its seed potatoes; they would like them delivered, noted the transport officer, "to ALOUETTE Siding, near AIX-NOULETTE Station on Light Railway."<sup>12</sup>

But the Brigade Farm was undoubtedly a collective enterprise. An officer from the 10th Battalion was farm superintendent, but he had the assistance of eight soldiers from the 5th, 7th and 8th Battalions, as well as teams and men from all Brigade units and a cook from Brigade Headquarters. During the ploughing and planting season, "Work will be carried on at the Farm during all daylight hours, working two shifts." Second Brigade's progress mirrored that of the whole Division; by early May Major Browne was satisfied that farming in the First Division was a going concern, including the Divisional Headquarters Farm itself. "Please advise all concerned," he wrote with evident satisfaction, "that the Divisional Headquarters land for farming takes in everything WEST of the road running NORTH and SOUTH on the EAST side of the Cemetery to the Slag heaps at FOSSE 6," the Farm thus being in the vicinity of Lens.<sup>13</sup>

Once the land had been ploughed and cultivated, and readied for seeding, the most minute instructions were issued for each of the several vegetables on the authorized list (and therefore seeds were freely available from Radnor's organization). Some of the vegetables had to be started early and then transplanted. It was therefore necessary for each Divisional Farm to have a Nursery for seedlings of cabbages, kale, savoy cabbages, and leeks. The military farmers were instructed that an ounce of cabbage seed would produce a thousand plants, which should then be transplanted in June in rows 18 inches apart. "The plants are dibbled with a stick in a hole made in the ground and the plant inserted, the earth being afterwards pressed around the roots firmly." Precisely two feet should separate each plant in the row. Instructions for the other transplants were similar; and in all cases, reference was made *to* late varieties which could be harvested in the spring of 1919. (No one, high

or low, believed at this juncture that the war would end in 1918, and so another season of gardening was anticipated.)

The instructions are remarkable only for their detail. "The great secret of success" with beets was "to keep the weeds down." Thinning was the sovereign method for producing plentiful healthy carrots; the same was true for turnips and swedes. Potatoes, however, needed special treatment, especially after harvesting, when they should be "put in a damp pit, well dried by a trench and covered with earth and ventilated by means of a pipe on ground level and through the top by a wisp of Straw." Whether this mysterious advice derived from Canadian practice, or from English farming, is not clear, but it does not seem likely that such methods are still employed.<sup>14</sup>

Major Washington, the Corps Agricultural Officer, was convinced that if Corps farmers followed the advice he had circulated, a bountiful harvest could be expected. When one considers that the population from which the Corps was drawn was still, in the majority, rural (though not overwhelmingly so, as it had been in the late nineteenth century), there must have been many, even in among the more urbanized officer class, who smiled and shook their heads over his optimism. Washington was confident enough of the prospects of agriculture behind the trench lines to circulate a table containing his projections for the harvest. Table I is a faithful, if slightly more orderly, version of it. If one acre of shell-torn ground, properly cultivated, would yield 25,860 pounds of vegetables, not to speak of potatoes, an important separate category for Major Washington, it is little wonder that his enthusiasm knew no bounds.<sup>15</sup>

It looks very much as if most formations and units responded to the gardening scheme with some degree of real enthusiasm, but the same could not be said for the Canadian reaction to another initiative from Lord Radnor's organization. This was the "Piggeries" plan, announced by Radnor in a policy document issued through Haig's Headquarters. "In order to save shipping, and to give the men a change of diet," he wrote, "it is considered that Pig Farms on a large scale should be established in Army and Line of Communication Areas." A central fund,

Vegetable	% of Area	Number of Plants or Amount of Seed needed to plant Area	Probable Yield in Pounds
1. Cabbage	30% - 48 poles	3,500 plants	10,000 lbs.
2. Kale	20% - 32 poles	2,250 plants	6,750 lbs.
3. Savoy	10% - 16 poles	1,600 plants	2,500 lbs.
4. Leeks	5% - 8 poles	3,000 plants	1,250 lbs.
5. Beets	5% - 8 poles	5 oz. seed	1,000 lbs.
6. Carrots	15% - 24 poles	12 oz. seed	1,000 lbs.
7. Turnips	10% - 16 poles	5 oz. seed	2,240 lbs.
8. Swedes	5% - 8 poles	2 1/2 oz. seed	1,120 lbs.
<b>Totals</b>	150 poles = 4840 yards = 1 acre		25,860 lbs

administered by Radnor, would advance to Armies the money to buy piglets, but military pig farmers were warned that "no issues of goods or forage in kind will be made from Army stocks, nor will purchases of these be made from money advanced. The feeding of the pigs will be entirely from the swill produced by units."<sup>16</sup> In excruciating detail, instructions were sent out advising on the correct method of constructing sties (they should face south, and have sloping floors; brick or stone buildings were best, because pigs prefer to be cool.) Swill should be heated occasionally, to give piglets a dietary fillip. Large numbers of military swineherds were not required: "it is considered that three men should be sufficient to tend and feed 150 pigs." Slaughtering was to take place under the superintendence of the Army Service Corps and the Veterinary Corps.

At least in the Canadian Corps, piggeries were not pushed by authority with the same vigour as vegetables, a tribute to common sense. Brigadier-General J.M. Ross of the 5th Canadian Infantry Brigade thought that brigades were not the right formations to manage pig farms, because of their frequent moves. Such disruptive changes would "defeat the project, the success of which depends upon the suitable housing and careful feeding of the animals." The CRA of 2nd Division told Division HQ that "this formation has no proposals to submit, please," while the 4th Canadian Infantry Brigade observed that in the trench lines "there is no refuse or swill available, and it would be difficult to produce food for young pigs in this uncultivated district." Perhaps, 6th Brigade suggested helpfully, raising pigs was something Division Headquarters staff might take on?

When, in July, the Quartermaster General of the British Army directed that "all large centralised pig farms already in existence will be abolished, and the keeping the piggeries on a small scale will be left in future to individual enterprises on the part of Units," no dissent was heard from the Canadian Corps, and it is probable that pigs never took wing there.<sup>17</sup>

Did the Canadians maintain their gardening project throughout the spring and summer of 1918, despite the German attacks? To what degree was their garden project unusual? If they were able to maintain it, how successful was it? Unfortunately, it is not possible to give a complete answer to any of these questions, but what evidence there is permits some conclusions.

In the first place, the Canadian Corps was by no means alone in its front-line farming. Since First British Army, of which it was a part until late July, was also relatively exempt from German attack during the spring and summer, other formations within it also engaged in farming. On the other hand, it seems most unlikely that Fifth British Army, which bore the brunt of the initial German attack on 21 March, was permitted the necessary period of consolidation, and the same holds for Third British Army, its neighbour.<sup>18</sup> The operational records of the Australian Corps, which I have examined for the May-August 1918 period (when elements of this Corps were with both Second and Fourth British Armies), are silent on the subject, and since Australian divisions were in action for most of the period of the German offensive, it would appear that farming was out for them. It is quite possible, however,

that other elements of Second Army in Flanders did some farming, as would rear echelon British units. It should be noted that agricultural activities were by no means unusual to the rear of German divisions, since the bulk of the German Army on the Western Front had been on the defensive from the early days of the war, and its divisions, once in position, tended to stay put. It has been remarked that "the German system of allocating divisions to a sector of front was a far more permanent one than that of the Allies. Once posted to a sector, a German division stayed there to attack, defend, or hold trenches for as long as possible."<sup>19</sup> As a result, German divisions exploited the French countryside for foodstuffs, including operating their own farms.<sup>20</sup>

On 27 March 2nd Canadian Division was ordered to the Third Army front; it was not to return to the Canadian Corps until 1 July. What became of its gardening operations? The 2nd Division area was taken over by the 2nd (Lowland) Division; did this mean that the Scottish formation took over its gardens as well? Second Division's Agricultural Officer was Lieutenant R.E. Ferguson; on 8 May he was told by his divisional DAAG that "It is proposed to retain possession of the Farm throughout the season, and you will please note that you are not to vacate or give up the property without definite instructions being received from these Headquarters. Kindly keep this Office advised of progress which is being made." This seems explicit enough, but to make doubly sure that the Scots did not interfere with the divisional farm, Second Division HQ approached the 2nd Division, and received assurance from its commanding officer that "I have no objection to your Divisional Agricultural Officer and farm personnel carrying on operations at the Divisional Farm." Presumably, when during the first week of May the First, Third and Fourth Canadian Divisions were pulled out of the line to begin a long period of intensive training in infantry-tank collaboration and open warfare that was to continue until July, each division adopted a similar expedient, and continued to farm its acreage with "farm personnel" of the division.<sup>21</sup> In fact, we know that this was so, because of an order issued by Brigadier-General G.J. Farmar, the BGGs "A" of the Canadian Corps, on 25 July 1918, virtually on the eve of the Battle of Amiens, and sent to all divisions:

In order to ensure that all crops In the Canadian Corps Area are harvested as soon as they are ready, Area Commanders are authorized to call on units In their area to supply whatever assistance In the way of men and horses required by the Farmers. The Corps Commander is extremely desirous that everything possible should be done by units in this Corps to ensure that no waste of crops occurs through lack of labour to harvest, and this assistance should be given whenever the exigencies of the service permit.<sup>22</sup>

How successful was the farming operation? On 21 August, just as the Canadian Corps was leaving the Amiens sector for a new theatre, First Army held a Conference on Agriculture at its Headquarters, at which the Canadian Corps was represented. The Army Agricultural Officer announced that in the Army Area, 3,600 tons of potatoes had been produced, and were now available for distribution. The minutes betray the existence of some friction over the mode of distribution; "it was realised that some Divisions and Units might feel dissatisfied at the potatoes grown on a farm worked by them being issued broadcast," but this was a labour-saving solution which would "work most simply and smoothly from the supply point of view." One can imagine the scarcely suppressed grumbling on the part of diligent farmers like the Canadians at this piece of authoritarian legerdemain; in any environment other than the military there would have been bitter argument. On the other hand, First Army was not impolitic enough to attempt to impose the same kind of mechanism upon the vegetable farmers, whose produce would become available "in large quantities" by the beginning of September. The meeting concluded with planning for the 1919 crop year, and the warning that "manure on lands rented for horse standings and in rented stables belong to the British Government.. In future it was to be dumped on the vegetable farms where possible," instead of being allowed to fall into the hands of grasping French peasants.<sup>23</sup>

Unfortunately these minutes disclose nothing about the productivity of Canadian Corps farming operations, and there does not seem to be any documentation giving such information. Nor (with one exception) is there any account of farming at the unit level in any of the battalion or other units histories of the CEF. The exception is Lieutenant-Colonel H.M. Urquhart's history of the 16th Battalion, a unit of the 3rd Infantry

Brigade of the 1st Canadian Division. The 16th farmed 105 acres near Bully Grenay, with seeds and young plants provided by "Q" Branch. Farming staff were chiefly men with low medical categories (most of them B2) drawn from non-fighting units in the divisional area, plus teams and drivers from battalion transport and field artillery batteries. The 16th Battalion's farmers scrounged old plows and harrows they found on the battlefield, and rented some from French farmers. The harvested crop was testimony to the farming skills of the unit, exceeding Major Washington's estimates in every respect - 278 tons of potatoes, 22 tons of turnips, 79 tons of cabbages, 8 tons of carrots and 3 tons of beets - an unheralded triumph which may well have been matched by many other Canadian units during their long respite from active military operations.<sup>24</sup>

## Notes

1. See Alan Palmer, *The Gardeners of Salonika* (New York, Simon and Schuster, 1965), p.71. Clemenceau was writing in his own paper, *L'Homme Enchaîné*.
2. According to General E.L.M. Burns, then a staff captain, the story in the Canadian Corps was that the Germans had exempted them from their offensive in order to negotiate a separate peace with Canada. (*General Mud: Memoirs of Two World Wars* (Toronto, Clarke Irwin, 1970), p.66.) For an overview of the Canadian Corps during the spring and summer of 1918, prior to the Amiens operation, see S.F. Wise, "The Black Day of the German Army: Australians and Canadians at Amiens, August 1918," in Peter Dennis and Jeffrey Grey, eds., *1918: Defining Victory: Proceedings of the Chief of Army History Conference 1998* (Canberra: Department of Defence, Army History Unit, 1999), pp. 1-32.
3. National Archives of Canada [NAC] Record Group [RG] 9, III B 1, Vol.942, "Suggested Establishment for Agricultural Employment Coy."
4. *Ibid*, Currie to First Army "A", 19 February 1918.
5. NAC RG 9, Vol.4044, Radnor, "Statement of the policy to be adopted by Army, Corps, Area and Divisional Officers under the Directorate of Agricultural Production," 7 February 1918.
6. NAC RG 9, III C 3, Vol.4023, Folder 1 File 4, Washington to First Canadian Infantry Brigade, Houdain, 19 January 1918.
7. NAC RG 9, III C 3, Vol.4044, A.Q.M.G. Canadian Corps to Divisions and Heavy Artillery, 8 February 1918.
8. NAC RG 9 III C 3 Vol.4032, Folder 1, File 2, Headquarters First Canadian Infantry Brigade to 1st (Western Ontario) Battalion, "Notes in reference to Garden Scheme," 25 March 1918.
9. The strip of land left at the end of the furrow to turn the plough.
10. NAC RG 9, III C 3 Vol.4023, Folder 1 File 4, Major B. Browne, DAAG, 14 March, 25 April 1918; *Ibid*, Vol.4044, Folder 1, File 7, Capt. G.F Dudley to Staff Captain 2nd CIB, 15 March 1918; *Ibid*, Vol.4023, Major Browne to units, 25 April 1918.
11. NAC RG 9, III C 3, Vol.4044, Folder 1 File 7, Capt.Browne to all units, 10 February 1918.
12. NAC RG 9, III C 3, Vol.4044, Capt. G.F. Dudley to 2nd CIB, 10 March 1918.
13. NAC RG 9, III C 3, Vol.4044, Ormond to H.Q. 2nd C.I.B.; *Ibid*, Vol.4023, Folder 1 File 4, 2nd Canadian Infantry Brigade, Correspondence on the Brigade Farm, 5 March, 10 March, 22 March 1918; Browne to units, 6 May 1918.
14. The planting instructions came from Major Washington, and can be found in NAC RG 9, III C 3 Vol.4032, 1st C.I.B. to 1st (Western Ontario) Battalion, 25 March 1918. Puzzled farmers were instructed to "Consult your Corps or Divisional Agricultural Officer ... if in doubt what to do."
15. For Washington's table, see RG 9, III C 3, Vol.4032, Folder 1, File 2, "Notes In reference to Garden Scheme."
16. NAC RG 9, III C 3, Vol.4094, Folder 34 File 8, "Establishment of Piggeries," February-March 1918. All subsequent material on pig farming is drawn from this folder.
17. NAC RG 9 III C 3 Vol.4030, Quartermaster-General to First Army, 16 July 1918.
18. On 21 March the airfield at Mons-en-Chaussée, the base for No.5 Squadron RNAS and ten miles behind the front, came under German shellfire and ground staff began to load stores for evacuation. Interrupting this chore to answer a telephone, a staff member fielded a headquarters inquiry about the progress of vegetable planting! Martin Middlebrook, *The Kaiser's Battle: the first day of the German spring offensive* (London, Allen Lane, 1978), pp. 156-157
19. *Ibid*, p.43.
20. See, for example, Ernst Junger, *The storm of steel: ... the diary of a German storm-troop officer on the Western Front* (London, Constable, 1994), p.64. Lt. Junger (73rd Regiment, 111th Division) toured his division's "back areas, to see the great organization that had been conjured up practically out of nothing," including a dairy farm, a piggery, a sausage factory and a farming operation.
21. NAC RG 9 BI Series 3 Vol.945, DAAG to Lt. Ferguson, 8 May 1918; Major General Commanding 2nd (Lowland) Division to Second Canadian Division Headquarters, 17 May 1918.
22. NAC RG 9, III C 3 Vol.4076, Brig. Gen. G.J. Farmar to First Canadian Division, 25 July 1918.
23. NAC RG 9, Vol.4076, "Extracts from Minutes of Conference on Agriculture held at First Army Headquarters," 21 August 1918.
24. H.M. Urquhart, *The History of the 16th Battalion (The Canadian Scottish) Canadian Expeditionary Force in the Great War* (Toronto, Macmillan, 1932), pp.245-246.

S.F. Wise is Professor Emeritus of History at Carleton University. He recently delivered a paper on the Canadians and Australians at the Battle of Amiens which was published in *1918: Defining Victory* edited by Peter Dennis and Jeffrey Grey. He is currently working on a book dealing with the same topic.