Exciting a Spirit of Emulation Among the 'Plodholes': Agricultural Reform in Pre-Confederation Nova Scotia*

A COUNTRY IS WHAT ITS PEOPLE MAKE IT BE", wrote T.F. Knight in his 1862 prize essay Nova Scotia and her Resources. Full of mid-Victorian rhetoric about the importance of energy, intelligence, industry, and self-denial. Knight's musings led him into many an extravagant claim: Nova Scotia had "the healthiest climate under the sun", "a generous soil", "inexhaustible resources" and every prospect of taking "her place...in the advance car of the world's progress" as "the Great Britain of this Continent". Still, these were far from solitary enthusiasms. Celebrating the 113th anniversary of the settlement of Halifax in the same year. the exuberant Robert Grant Haliburton vowed that the "agricultural capabilities" of the province were "unsurpassed", and that its long-productive Fundy marshlands were "without a parallel in the history of agriculture".² So too Abraham Gesner compared the colony's "always productive" alluvial soils to the Banks of the Nile.³ And many others — from the irrepressible Sam Slick, created by R.G. Haliburton's father Thomas Chandler Haliburton in the 1830s, to visitors such as J.C. Myers in the late 1840s and J.F.W. Johnston in the 1850s recorded their faith in the quality and abundance of the colony's natural endowments. 4 But — and this was the point of Knight's emphasis on the creative power of people — potential was one thing, its realization another. For Knight, Nova Scotia was a "field for exertion", still in the adolescence of development. For Sam Slick, Nova Scotians were either "asleep or stone blind" to the many

- 1 T.F. Knight, Nova Scotia and her Resources. Prize Essay. Published by order of the Nova Scotia Commissioners for the International Exhibition (Halifax, 1862), pp. 80, 81, 87.
- 2 R.G. Haliburton, The Past and Future of Nova Scotia: An Address on the 113th Anniversary of the Settlement of the Capital of the Province (Halifax, 1862), p. 29.
- 3 A. Gesner, The Industrial Resources of Nova Scotia (Halifax, 1849), pp. 167-71.
- 4 T.C. Haliburton, The Clockmaker or The Sayings and Doings of Samuel Slick of Slickville (Halifax, 1837); J.C. Myers, Sketches on a Tour Through the Northern and Eastern States, the Canadas and Nova Scotia (Harrisonburg, 1849), p.282; J.F.W. Johnston, Notes on North America, Agricultural, Economical and Social (Edinburgh, 1851), pp. 10-16.

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"natural privileges" of their country. R.G. Haliburton, addressing himself to "the Past and Future of Nova Scotia" also felt that there was little cause for celebration in the present appearance of the provincial countryside. "No one", he claimed, could "pass, even through the best districts of Nova Scotia, without feeling how little justice has been done to the fine natural capabilities of our soil". In Cape Breton the state of farming was "absolutely deplorable"; even in the Gaspereau Valley of fertile Kings County, "one of the most lovely spots in the province", many fields bore nothing but "weeds and wild strawberries".

The consensus of mid-19th century opinion was firm. In Nova Scotia "the business of farming...[was] in a backward state, and comparatively unremunerative".6 According to the noted British agricultural chemist J.F.W. Johnston. who passed, quickly, between Halifax and Annapolis Royal in 1849, the province was "not made to yield half so much food as Great Britain, in proportion to the number of people employed in agriculture" and the reasons for this "comparative deficiency of produce" lay in "a want either of skill or of persevering industry on the part of the cultivators". Others made much the same point in more colourful, if ultimately cliché-ridden, anecdotes. So J.C. Myers reported on the oft-criticised Scottish highlanders who lived in a "stationary condition", wanting "cleanly habits", and mired in ignorance, on the rich soils of northeastern Nova Scotia. At the very core of their mismanagement lay their practice of cropping "the newly cleared ground year after year without manuring it, till the dung of their horses and cattle accumulated round their doors, and became even to them an intolerable nuisance". Then these benighted settlers simply "pulled down their log cabins and removed them to a distance". Observing this response, "several of their more knowing neighbours offered to cart away the manure for a small remuneration". So things continued until the Highlanders realized how

- 5 Knight, Nova Scotia, p. 83; T.C. Haliburton, "The American Eagle", in The Clockmaker is a pointed example of Slick's argument. R.G. Haliburton, The Past and Future, pp. 27-8.
- Prospectus of the "Colonial Farmer", Central Board of Agriculture Papers [hereafter C.B.A.], RG8, vol. 10, no. 68, Public Archives of Nova Scotia [P.A.N.S.]. In a letter to William Scott on 21 April 1853 E.M. Macdonald announced that he had "determined not to go on with the 'Provincial Farmer' at present"; although he had received some subscriptions he could not "make it pay expenses" without assistance from C.B.A., RG8, vol. 14, no. 24, P.A.N.S. Since I first consulted many of the Pictou County Records on which much of this paper is based, the RG8 materials have been further inventoried and listed by the staff of P.A.N.S. The new arrangement basically maintains the original chronological order, but there has been some displacement of container numbering. A conversion list is available at P.A.N.S., where the excellent finding aid completed in 1987 includes details of the original numbering as necessary. In essence, the Pictou County material referred to here as RG8, vol. 14, no. 24 is now to be found under RG8, vol. 18, nos. 7-220.
- 7 Johnston, Notes, vol. 1, pp. 11-5.

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their manure was being used. Then, Myers reported with a final malevolent twist, they "required those who removed it to execute the task gratuitously".8

Few denied that farming made some gains over the years. Nova Scotia's population rose from fewer than 40,000 to 275,000 in the half century to 1851. New farms were taken up, forests were cleared, and agricultural production increased. At mid-century, 840,000 acres of Nova Scotian land was "improved", fully two-thirds of the colony's household heads described themselves as farmers, and agricultural commodities made up some 15 per cent of Nova Scotian exports. Writing at the end of the decade, after soliciting information about farming from all corners of the province, the colony's Superintendent of Education readily conceded that "like every other branch of industry in the social economy" agriculture had had its "ebbings and flowings", but insisted that those who recalled the Nova Scotia of 25 or 30 years before could not dispute the "very decided advancement" that had taken place in "farming affairs". 10 Still, such progress was expected on the frontiers of 19th century settlement. The real question in the minds of most contemporary commentators was framed by James Ross of Faddan Farm near Rawdon in 1855, when he asked whether Nova Scotian farming was "what, with a little prudence, it might be".11

According to several mid-19th century observers, Nova Scotian agriculture was "in a transition state" that rendered it peculiarly diverse. Shaped by the circumstances of pioneering, it was also heir to the enlightment of the British agricultural revolution. As a result, argued J.W. Dawson, the author of pamphlets advocating "improved farming", Nova Scotian farms ran the gamut, from "the

- Myers, Sketches, pp. 299-300; the stereotypical nature of this account is well-revealed by the appearance of a close variant of this tale in the introduction of John Young, The Letters of Agricola (Halifax, 1822); Alan R. MacNeil, "Cultural Stereotypes and Highland Farming in Eastern Nova Scotia, 1827-1861", Historie Sociale Social History, XIX (1986), pp. 39-56 offers a broader treatment; see also D. Campbell and R.A. MacLean, Beyond the Atlantic Roar (Toronto, 1975), passim, and G. Wynn, "Deplorably Dark and Demoralized Lumberers"? Rhetoric and Reality in Early Nineteenth Century New Brunswick", Journal of Forest History, 24(1980), pp. 168-87 for additional comment.
- G. Wynn, "A Region of Scattered Settlements and Bounded Possibilities. Northeastern America, 1775-1800", The Canadian Geographer, 31(1987), pp. 319-38; R. MacKinnon and G. Wynn, "Nova Scotian Agriculture in the 'Golden Age': A New Look", in D. Day ed., Geographical Perspectives on the Maritime Provinces (Halifax, 1988), pp. 47-59. One might also note, following J. Gwyn, "A Little Province Like This': The Economy of Nova Scotia under Stress, 1812-1853", Canadian Papers in Rural History, VI (1988), pp. 192-225, that this was, essentially, extensive growth (attributable to population increase) rather than intensive growth marked by the rise of output and income at a rate in advance of population expansion.
- 10 Dr. Forrester, Report on Agriculture for 1859, C.B.A. Papers, RG8, vol. 12, no. 9, P.A.N.S.
- 11 James Ross, Remarks and Suggestions on the Agriculture of Nova Scotia (Halifax, 1855), p. 30.

first rude attempts of the half-lumberer-half-farmer of a new country" to those whose occupants practiced some of the principles of "formal and scientific husbandry". In Dawson's view it was crucial to shift the balance from one to the other. The "wasteful methods of culture" characteristic of new-settled areas doomed the soil to gradual deterioration, and the settlers to impoverishment. The multitude of tasks that engaged the versatile pioneer held back the development of particular skills that came with specialization. The failure to house, to care for, and to breed stock selectively reduced their quality and the returns from raising them. In the doctrine of the day, "intelligence and enlightened skill" were essential aids to successful labour. "If we enquire into the condition of the agricultural population, in every country where farming forms the great business of the people", wrote E.M. Macdonald of Pictou in the prospectus of a newspaper to be called the Colonial Farmer, "it will be found that their various stages of wealth or comfort forms a sort of sliding scale exactly corresponding with their several degrees of scientific skill and enlightment". In the country with the several degrees of scientific skill and enlightment.

In Nova Scotia and elsewhere in British North America, as indeed in the world beyond, enormous effort was devoted to spreading these and other essential tenets of agricultural reform. From the late 18th century onward, enthusiasts promulgated the advantages of crop rotation, selective breeding, the integration of livestock raising and cultivation, and the application of labour-saving machinery to agriculture. Their ambitions were given shape in a phrase — to "Speed the Plough" — that echoed through the 19th century Maritime colonies, though the observation in a Saint John, New Brunswick, newspaper in 1827, that a great deal of effort was being spent "Coying science to dignify the labours of the plough", may have been even more revealing of the reformers' essential

- 12 J.W. Dawson, Contributions toward the Improvement of Agriculture in Nova Scotia; with Practical Hints on the Management and Improvement of Live Stock, Compiled from Youatt, Johnston, Young, Peters, Stephens &c (2nd ed., Halifax, 1856), pp. 1-10.
- 13 Prospectus of the "Colonial Farmer".
- J.D. Chambers and G.E. Mingay, The Agricultural Revolution 1750-1880 (New York, 1966) and E. Kerridge, The Agricultural Revolution (London 1967) offer broad surveys of English developments. K. Hudson, Patriotism with Profit: British agricultural societies in the eighteenth and nineteenth centuries (London, 1972) and H.S.A. Fox, "Local Farmers' Associations and the circulation of agricultural information in nineteenth-century England", in H.S.A. Fox and R.A. Butlin, eds., Change in the Countryside: Essays on Rural England, 1500-1900 (Institute of British Geographers Special Publication, No. 10, London, 1979), pp. 43-63 deal with the work of provincial and local societies but they allow the improvers to speak for themselves by depending upon the records of those involved in the movement. There is a general review, with a short bibliography, of the spread of English ideas, and changes in English agriculture in the 19th century in F.M.L. Thompson, "Countrysides. The Revolution in world agriculture", in A. Briggs, ed., The Nineteenth Century (London, 1970), pp. 119-42. More

purposes.¹⁵ Everywhere, agricultural societies were the cutting edge of reform endeavours. Broadly modelled on societies established in England and Scotland as the agricultural revolution gained momentum in the 18th century, they were intended to disseminate the new knowledge, to foster discussion of sound agricultural principles, and to reinforce the conviction of those who had implemented the new methods.

In Nova Scotia, this story of agricultural encouragement began in 1789. Responding to the difficult economic circumstances of the late 1780s, Bishop Inglis, Governor Parr, and other Halifax gentlemen established a "Society for Promoting Agriculture in Nova Scotia" with directors drawn from across the province. Convinced that colonial farming "was carried on...without system", they sought to enlighten Nova Scotian farmers by publicizing the principles of British agriculture, and to encourage change by offering premiums and medals to those most successful in raising the quality and quantity of their produce, but their initiative foundered as economic activity in the colony quickened after

specific studies include W. Conze, "The Effects of 19th century Liberal Agrarian Reforms in Central Europe", in F. Crouzet, W.H. Chaloner, and W.M. Stern, eds., Essays in European Economic History, 1789-1914 (London, 1969), pp. 53-81. J.H. Galloway, "Agricultural Reform and the Enlightment in Late Colonial Brazil", Agricultural History, 53 (1979), pp. 763-79. R.C. Loehr, "The influence of English Agriculture on American Agriculture 1775-1825", Agricultural History, 11 (1937), pp. 3-15 and D.B. Marti, To improve the soil and the mind; agricultural societies, journals and schools in the Northeastern States 1791-1865 (Ann Arbor, 1979). K. Kelly has considered the Upper Canada case in "The Transfer of British Ideas on Agriculture to Nineteenth Century Ontario", in B.S. Osborne, ed., The Settlement of Canada: Origins and Transfer (Kingston, 1976), pp. 70-93 and in "The Transfer of British Ideas on Improved Farming to Ontario during the first half of the nineteenth century", Ontario History, 63(1971), pp. 103-111. For the Maritimes there are two brief studies that reflect the perceptions of those who developed agricultural societies. J. White, "Speed the Plough", M.A. thesis, University of New Brunswick, 1976 and E. Vass, "The Agricultural Societies of Prince Edward Island", Island Magazine, 7 (1979), pp. 31-7, as well as the works of J.S. Martell cited below. There is, perhaps, no pithier encapsulation of the ethos of agricultural improvement than that provided in a letter from S.H. Stewart, Secretary of the Royal Agricultural Society of Jamaica, to Hon. J. McNab of Nova Scotia's C.B.A.. Writing in the City Hotel, Halifax, on 2 September 1844, part-way through an extensive tour through the Western Hemisphere intended to establish correspondence among agricultural societies the length of the Americas, Stewart reflected: "It is true the productions of the West Indies and this Country are different but the principles of Successful agriculture are the same in all countries and in many cases the details as regards manures, implements and modes of culture are similar. Besides the improvement of the breeds of Stock is equally important in all countries. On these grounds interchange of communication as to facts as well as experiments and their results would probably be of mutual advantage". RG8, vol. 8, no. 240, P.A.N.S. In similar vein see "A.Y.", "To the societies for the encouragement of agriculture in the British Empire", Annals of Agriculture, 41 (1804), pp. 25-7.

1793. Local societies in Kings and Hants counties, founded at about the same time as the Halifax organization, survived but were little more successful in effecting improvement. Full of ideas they were chronically short of money with which to implement them. According to Agricola, who renewed the campaign for agricultural improvement with a series of 64 "Letters", most of which were published in the Acadian Recorder between 1818 and 1821, colonial agriculture was in a bleak state after the poor summers of 1815 and 1816. The principles of vegetation "were grossly misconceived"; most Nova Scotian farmers knew little of summer-fallows; there was no systematic rotation of crops; and the state of the land was of a piece with all the other circumstance of agricultural debasement. "But none of this", argued Agricola "was inevitable". Properly conducted, farming could be the foundation of Nova Scotian prosperity; with due attention to scientific husbandry, the colony could be liberated from its dependence on the United States. 17

Spurred by Agricola's pen, supported by Lieutenant Governor Lord Dalhousie, and given point by the languishing economy, enthusiasm for the improvement of Nova Scotian agriculture blossomed after 1818. Agricola's letters outlined the latest principles of vegetation and tillage. Collected and published in a single volume in 1822, they offered a catechism for reform, full (according to the knowledgeable J.F.W. Johnston) of "sound knowledge", "honest common sense" and "warm but prudent zeal", and "as a whole superior to any other book of the time". 18 Early in 1819 the colonial Legislature incorporated a Central Board of Agriculture intended to disseminate information calculated to direct "the enterprise of...farmers...into that course of proceeding...most conducive to the general prosperity", to offer "judicious premiums" for agricultural improvement, to import and distribute seeds, stock and implements, and to correspond with local societies. Between 1819 and 1824 annual grants (ranging from £800 to £1557, and totalling just over £7000) were provided for these purposes, and the Board also received £1400 in subscriptions and donations. Twenty-seven new local agricultural societies were established in the six years after 1818; with the Kings and Hants societies, and that set up on the West River of Pictou in 1817, they were potential nodes for the spread of reform.¹⁹

The growth of outlying societies could not, though, compensate for weakness in the centre. The subscription list of the Central Board shrank from 235 in 1819

¹⁶ J.S. Martell, "The Achievements of Agricola and the Agricultural Societies 1818-1825", P.A.N.S. Bulletin II, no. 2 (Halifax, 1940), pp. 6-7.

¹⁷ Young, Letters, introduction.

¹⁸ Johnston, Notes, p. 12.

¹⁹ Martell, "Achievements", pp. 14-7 offers a brief summary. More detail can be found in the C.B.A. Papers.

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to 79 in 1824. A year later the Assembly declined to vote more money to the Board, which still had a considerable sum on hand. Two of the local societies were already "languishing or nearly extinct" and "different portions of spirit and activity" marked the others. When the charter of the Central Board came up for renewal in the House, in 1826, the bill was lost. Robbed of the funds that had come to them from the Legislative grant, and without Agricola's enthusiasm at the hub of agricultural affairs after his election (as John Young) to the Assembly in 1825, the county societies soon atrophied. 20 Only one — Kings — survived into the 1840s. Although an Agricultural committee of the Assembly disbursed various sums for the importation of stud horses and cattle and for the erection of oat mills in the years after 1826, by 1840 it seemed clear that a lack of steady support had "arrested the progress and damped the energy and zeal" of the colony's "Farming Population". 21 Acting on this realization in 1841, the Legislature granted £500 a year to a new Halifax-dominated Central Board and set aside an annual sum of £75 per county (totalling £1275) for local societies. Relations between the Halifax Board and the outlying organizations were expected to be close, but local societies were guaranteed at least £25 provided they raised £10 from their members, and were generally more independent of the Board than had been the case in the 1820s.22

Stimulated by the prospect of financial support, local agricultural societies sprang up across the colony. Twelve new societies came into being between 1837 and 1840. By the end of 1841 Nova Scotia had 22 independent agricultural societies and seven more with subsidiary branches. Four years later the Central Board recorded correspondence with 38 local societies. Although renewal of the Agricultural Act in 1845 reduced the allocation to the Central Board from £500 to £200 per year, and cut the funds for local societies by a third (to £50 per county) while allowing them to be divided among four rather than three organizations, the number of societies remained at approximately this level through the decade, as those that failed were replaced by new ventures. With rural communities wracked by the consequences of the potato blight and the failure of wheat crops in the late 1840s, the societies assumed new importance as sources of information about harvests, and as providers of seed and assistance.²³

- 20 Martell, "Achievements", pp. 2, 15, 48.
- 21 Report of the Agricultural Committee of the House of Assembly, 30 January 1840, reprinted in part in J.S. Martell, "From Central Board to Secretary of Agriculture, 1826-1885", P.A.N.S. Bulletin II, no. 3 (Halifax, 1940), p.23. Martell maintains that two societies, Kings and West River Pictou, survived into the 1840s. The West River Society was essentially moribund in the early 1840s. See West River Pictou Agricultural Society Papers, RG8, vol. 14, no. 24, P.A.N.S.
- 22 Again these developments are summarized by Martell, "From Central Board".
- 23 R.J. Morgan, "Poverty, wretchedness and misery. The Great Famine in Cape Breton 1845-51", Nova Scotian Historical Review, 6, 1 (1986), pp. 88-104.

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In 1849 the Agricultural Act was continued unchanged. The Central Board added the importation of seed wheat, livestock, and drain tiles to the publication of agricultural information in several provincial newspapers, and continued to encourage exhibitions and cattle shows. With minor variations in emphasis and execution these activities were sustained, with the support of the Legislature, for five years beyond the expiration of the Agricultural Act in 1852. But bent on economy, the Assembly withdrew this support in 1857. At the same time they cut the grants to local societies from £50 to £30 per county. As the number of societies began to fall, those that remained were brought under the authority of the Superintendent of Education, Dr. Alexander Forrester.²⁴ Convinced of the importance of a Central Board, Forrester finally secured its re-establishment in 1864. Larger, and more representative of the province as a whole than its predecessors, the Board was charged with familiar tasks: to encourage local societies; to import livestock, grains, seeds, vegetables etc; to publish agricultural information; and to receive the accounts and reports of the local societies. Generous financial provisions were established for local societies; those with at least 40 members contributing \$1.00 each received double the amount of their subscription income from the government, to a limit of \$200, subject to the provision that the total grant to each county not exceed \$240. Nine years later these ceilings were adjusted: a maximum of \$400 was allowed per county and \$250 per society. Thus encouraged, the number of societies rose from 37 in 1864 to 92 in 1884, before the Central Board was finally abolished and its powers and duties conferred upon a salaried Secretary for Agriculture in 1885.25

Three themes have structured interpretations of these developments. First, enthusiasm for agricultural reform has been seen as a product of hard economic times. Societies took root, and funds were allocated to their encouragement, when farmers struggled and the provincial economy sputtered. So major advances occurred in the doldrums between the arrival of the Loyalists and the prosperity that came with renewed war between Britain and France after 1793; when the recession that followed the War of 1812 was compounded by inclement summers; and during the commercial depression of the early 1840s. The corollary of this view is that good times for the province were bad times for the societies. J.S. Martell, who developed this interpretation, offered a lyrical encapsulation of it:

In the darkness of depression, most farmers seemed genuinely interested in...[the societies'] experiments; but when the dawn began to break and men saw that after all it was not necessary to adopt new-fangled ideas in

²⁴ Martell, "From Central Board", pp. 10-15.

²⁵ Ibid., pp. 15-22.

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order to make a living, only the exceptional farmer appeared anxious to change the old system. The others were content to follow their familiar furrows and get smaller returns.²⁶

Second, the Central Board declined in importance, at least until 1873, as the autonomy of local societies increased. So the first, benevolent, Board dominated the reform movement of the 18th century. The second Board, with Agricola at its centre, allocated the legislative grant to its various purposes and disbursed such funds as it saw fit to the local societies. In the 1840s the Assembly granted specific sums for the activities of the Central Board and the local societies. When these allocations were cut back in 1845, that for the Board was reduced by 60 per cent, that for the societies by a third. And when restraint really began to pinch, in 1858, the Central Board was abolished. Recreated in 1864, the Board was no longer dominated by Halifax gentlemen and it grew more diffuse when its membership was expanded in 1871. Only in 1873 was this trend arrested by new policies that established a smaller Board and gave the Government more direct responsibility for agricultural improvement.

Third, the emphasis of agricultural reform shifted from the encouragement of wheat cultivation to the improvement of livestock. Agricola stressed certain verities of the agricultural revolution — manuring, crop-rotation, the application of lime, deep ploughing — in hope of reversing the view that Nova Scotia was not a wheat country, and of securing its self-sufficiency in grain. But even he began to doubt the prospect of regular, successful wheat harvests in such a northern clime. By 1840 or so the "chief objective of both the societies and the Board...was the importation and improvement of livestock", and this inclination was only confirmed during the 1850s by the interest of Lieutenant Governor Gaspard Le Marchant in stock breeding. So far did this enthusiasm run that early in the 1860s Dr. Forrester was moved to criticize "the prevalent idea that the only thing required in this country for the improvement of agriculture is the improvement of the different kinds of stock" as a "great practical delusion".²⁷

Broadly useful as this outline is in charting fluctuating enthusiasm for the reform effort, it fails to illuminate the role of agricultural societies in their communities, and to assess their impact upon those who were, ostensibly, the focus of the reformers' zeal — the ordinary farmers who made up a majority of the colonial population. Nor are contemporary judgements reliable guides to the influence of agricultural reform on the countryside. Characteristically, those in

²⁶ Martell, "Achievements", p. 2. Gwyn, "A Little Province Like This", offers the best treatment of the fluctuations of the Nova Scotian economy during this period.

²⁷ Quoted by Martell, "From Central Board", p. 16.

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the van of improvement stressed the success of their endeavours. So, in 1791, it was claimed that "the best modes of farming are becoming a common topic of conversation and people begin to reflect seriously how they shall make the most of their farms". 28 Twenty-seven years later, Agricola discerned a spirit going forth to quicken and reanimate colonial agriculture and his correspondents, office holders in local societies, seconded his judgement in a dozen enthusiastic voices. "The impulse given to the Farming interest is permanent as well as powerful", wrote one; "There is an Evident change for the better", concluded another; "our society has been the means of introducing several improvements into the agriculture of the district", observed a third, "our fields are far better ploughed...we gather more manure and husband it better"; and so on.29 Similarly, representatives of 40 agricultural societies scattered across Nova Scotia in the 1850s were unanimous in the view that their organizations had been "productive of benefit to the cause of agriculture". Summarizing their responses, Superintendent of Education Alexander Forrester noted that although "some state one benefit and others another...all seem to dwell on the improvement that has taken place in the breed of livestock and in various implements of husbandry".30

Just as common, however, were trenchant critiques of Nova Scotian agriculture. To the condemnations of R.G. Haliburton, J.F.W. Johnston and J.C. Myers might be added a score of similar opinions pointing, variously, to the ragged, unkempt appearance of colonial farms, the wasteful, extensive nature of cultivation, the gap between British principles of crop rotation and the general Nova Scotian emphasis on hay, and the deficiencies of colonial livestock.³¹ Indeed, even the most enthusiastic supporters of agricultural reform occasionally

- 28 Martell, "Achievements", p. 6.
- 29 Martell, "Achievements", p. 32; Petition of Pictou Agricultural Society to President and Members of the Central Board of Agriculture, 14 January 1820, RG8, vol. 6, no. 132, P.A.N.S.
- 30 Dr. Forrester's Analysis of Answers to his Questionnaire in 1859 reprinted in part from Journal of the Assembly of Nova Scotia (1860) in Martell, "From Central Board", pp. 25-9. In this context the comment by Harold Fox in note 121 of "Local Farmers' Associations", that "Associations attempted to attract members by self-congratulation", is worth notice. Fox points to a work by S. G. Finney, Hints to Landlords, Tenants and Labourers; or what landlords ought to do, what tenants can do, and what labourers would do if allowed... (1860), in which it was suggested that at the annual dinners of agricultural societies the toast "Success to the association" should be proposed by a "man who would base his speech on the advantages of such societies".
- 31 Examples can be found in A.R. MacNeil, "A Reconsideration of the State of Agriculture in Eastern Nova Scotia, 1791-1861", M.A. thesis, Queen's University, 1985. Gwyn "A Little Province Like This", pp. 207-9, paints a bleak picture of Nova Scotian agriculture ca 1850 ("It seems very much a story of decline and impoverishment...") although recognizing that the statistical evidence is thin, and that the late 1840s early 1850s were tough years for Nova

admitted the narrow limits of their achievements. Thus James Ross of Faddan Farm looked back over years of effort to improve colonial cattle in his *Remarks* and Suggestions on the Agriculture of Nova Scotia to conclude that there had been no "decided alteration" in the quality of provincial stock.³² And more than once, dedicated improvers lamented the way in the which their neighbours clung to old — and to their minds intolerable — habits. "Our farmers...scourge the land most unmercifully with white crops" wrote the secretary of one society in 1822; "when men have passed the meridian of life, there is a beaten track in their worldly pursuits from which it is hard to drive them" observed Alexander Forrester, resignedly, almost four decades later.³³

Scotian farmers due to crop disease and especially the widespread potato blight. Much of his discussion takes its tone from a set of comments by J. Irons, Secretary of the Central Board of Agriculture, who in 1850 wrote a pointed critique of the "unpropitious fate" of farmers selling hay in the Halifax market. I would not dispute Gwyn's conclusions that the province as a whole remained "far from self-sufficiency in agricultural products" in 1850 and, broadly, that a "mature and diversified economy... was still as distant in 1853-55 as it had been a half century earlier" (though I would phrase this rather differently — for quotes see Gwyn pp. 208, 222), but my sense is that his is too harsh a verdict on mid-19th century Nova Scotian agriculture. There were pockets of hardship; there were also pockets of prosperity, and the two were sometimes adjacent and interconnected as K.R. Bittermann, "Middle River: The Social Structure of Agriculture in a Nineteenth Century Cape Breton Community", M.A. Thesis, University of New Brunswick, 1987 demonstrates. The potato blight certainly created difficulties between 1845 and 1852; moreover, as Gwyn notes, wheat and hay production declined marginally on a per capita basis between 1828 and 1850. But production of other grains (largely oats, which were far more important than wheat in early 19th century Nova Scotia) was up more than 2-fold on a per capita basis over the same period. Nor, it seems to me, is it immaterial that Nova Scotia's population increased by almost 100,000 in the 15 or 16 years before 1853 (which is to say it grew by about 50 per cent), and that the rate of increase was probably greater in the decade or so after 1828. That per capita stock numbers and crop production generally remained fairly static through this period might well be considered a fair achievement. Like new settlers in most locations, most of those who drove up Nova Scotia's population were breaking new land much of it, by the 1840s, poor land (see Bittermann, "Middle River", and S.J. Hornsby, "An Historical Geography of Cape Breton Island in the Nineteenth Century", Ph.D. thesis, University of British Columbia, 1986) — and must have consumed rather more than they produced, at least initially. Such growth as there was (to maintain per capita stock numbers and crop production) was extensive growth, certainly, but it is perhaps better described as growth than failure, or decline.

- 32 Ross, Remarks, pp. 25-6. This sober verdict was echoed a few years later by Alexander Forrester who wrote "the benefits of the importation of stock, with the exception perhaps of the breed of pigs, have fallen far short of what they might and ought to have been". C.B.A., RG8, vol. 12, no. 9, P.A.N.S.
- James McGregor to John Young, Report of East River Pictou Agricultural Society, 19 April 1822, RG8, vol. 6, no. 144, P.A.N.S.; Dr. Forrester, C.B.A. Papers [1859], RG8, vol. 12, no. 9, P.A.N.S.

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To argue in the face of this contradictory evidence as did J.S. Martell — whose two brief studies published in 1940 remain the most significant work on agricultural improvement in Nova Scotia — that enlightment spread slowly and unevenly because most farmers were interested in the new methods but not all were in a position to adopt them, is surely to gloss over a crucial paradox.³⁴ Certainly many an enlightened farmer found frustrating the attitudes of his "incredulous countrymen" who needed to be convinced of the benefits of agricultural societies.³⁵ Others were frankly amazed "to observe the apathy, nay the positive indifference, of the *Plodholes* around" them to the virtues of system and science.³⁶ Far from being accepted, even in principle, by the majority of Nova Scotian farmers. the agenda of agricultural reform met resistance and disdain in many quarters of the colony. Yet the improvers persisted in their enthusiasm, arguing that the future was theirs. If the deep rut of habit was a barrier to change among old. established settlers, it was a less significant obstacle to improvement among young and vigorous farmers. Moreover, reformers consoled themselves, "the eyes of others" were upon them. If their neighbours were not "quick-sighted" as James MacGregor of the East River had it, neither were they "quite blind". The road to improvement might be long and difficult: "Farmers who cannot read. and who have not seen the world", reported the Secretary of one local society "must see the success of improved methods frequently repeated before they can be prevailed upon to give up their prejudice...". But in time even the most hidebound traditionalist would come "to imitate those who...[were] reaping more profits from their labours than themselves". 37 By these lights, example was as important as precept in encouraging change, and the great challenge before

- 34 Martell, "Achievements", and "From Central Board". It should also be clear, given the contrasts in contemporary assessments of Nova Scotian agriculture, that such appraisals need to be regarded with (more than usual) caution, and particular reference to their provenance. Agricultural reform is broached, in passing, but in more rigorous and analytical fashion in two recent theses: Bittermann, "Middle River" and MacNeil, "A Reconsideration". Bittermann has drawn a useful article from his thesis, "The Hierarchy of the Soil: Land and Labour in a 19th century Cape Breton Community", Acadiensis, XVIII (1988), pp. 33-55 which deals with many of its main points; the citations that follow are generally to the thesis because the points to which they refer are treated more fully there.
- 35 Report of New Glasgow Agricultural Society for 1843, RG8, vol. 14, no. 24, P.A.N.S.
- 36 Ibid.
- 37 James MacGregor to John Young, East River, 13 January 1824; same to same, 28 October 1825, RG8, vol. 6, nos. 141, 150, P.A.N.S. This emphasis upon profitability was shrewd. In the words of the progressive, 18th-century farmer George Culley, of Glendale in northern England, whose neighbours copied his methods, "Profit has overcome Prejudice" (cited by S. MacDonald, "The role of the individual in agricultural change: the example of George Culley of Fenton, Northumberland", in Fox and Butlin, eds., Change in the Countryside, p. 169). But it ignored the realities of mid-19th century Nova Scotia discussed in the final paragraphs of this essay.

the improvers was to excite a spirit of emulation across the countryside, so that all might recognize "the path to profit fair before" them.³⁸

Different communities naturally responded to this challenge in different ways, and any attempt to measure the impact of agricultural improvement upon the Nova Scotian countryside must be sensitive to local circumstances. In the end there are dozens of subtly-nuanced stories to be told about the activities of reformers and the reactions to their ideas among the rank and file of the populace. Here a single case-study, focussed on the agricultural societies of Pictou County, must serve to illustrate and suggest broader patterns of provincial development. Distinguished by the relative richness of its documentary record, Pictou well serves the task of exemplification. Distant from Halifax, encompassing an area of approximately 720,000 acres (291,000 hectares), and running back from the Northumberland shore of the colony to elevations of 300 metres and more, early 19th century Pictou County was both distinct and diverse (Figure 1). First

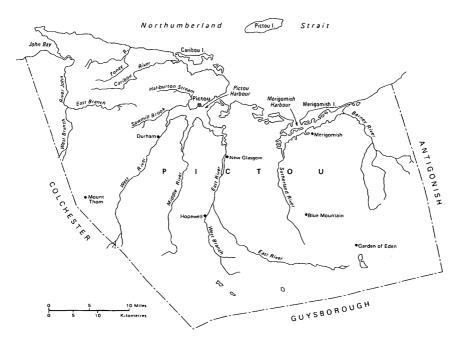


Figure 1: Pre-Confederation Pictou County (author).

³⁸ Report of East River of Pictou Agricultural Society, 19 April 1822, RG8, vol. 6, no. 144, P.A.N.S.

settled by whites in the late 18th century. Pictou became the centre of Protestant Scottish settlement in the colony after 1800. In 1827 it counted over 11 per cent of Nova Scotia's population with almost 14,000 people. A quarter century later the county had over 25,000 residents; almost 70 per cent of its households worked the land. A decade later its 28.785 people made up 8.7 per cent of the colonial total. Initially concentrated on Pictou Harbour (and the lower valleys of the rivers that run into its three broad arms), on the land bordering Merigomish Harbour to the East, and in the Caribou River and River John drainage basins to the west, settlement climbed back up the hills through the 1820s and 1830s. By mid century, parts of the County fell into each of the three broad settlement zones that characterized the colony. Fisherman who farmed ten or twelve acres and kept a handful of cattle predominated in many of the districts that fronted on Northumberland Strait. High in the backlands of the county, in areas such as Garden of Eden and Dalhousie Mountain, settlers made a living from farm and forest. In between, the majority of Pictonians occupied more productive farms that together comprised a substantial proportion of the mid-19th century colony's core farming zone (Figure 2). District by district through this part of the

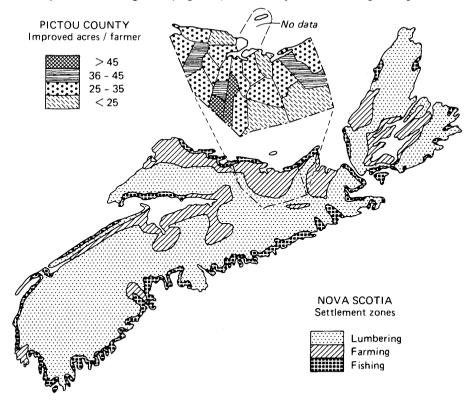


Figure 2: Agricultural patterns in Pictou County in 1851 (author).

county, the extent of improved land averaged 25 to 60 acres per family. Here mixed farms yielded hay, potatoes, oats, and — collectively — more than twice as much wheat as grew in any other county; their stock characteristically included milch and "other" cattle, sheep, pigs and poultry, as well as a horse (or more rarely a pair of oxen).³⁹

Pictou County's first — and Nova Scotia's third — county agricultural society was established on West River in January 1817. Its second — and Nova Scotia's twentieth — came into existence on the East River three years later. When Ebenezer McLeod and James MacGregor responded, on behalf of their respective organizations, to Agricola's 1825 inquiry about the influence of local societies on county agriculture, neither acknowledged any doubts about the good they had done. A new esteem and respectability surrounded agriculture; fields were better ploughed and better managed; reason and intelligence were triumphing over "the folly of...[their] fathers"; in a few short years the farmer had become "more of a gentleman than formerly". Of course the battle for improvement was far from won. The gentlemen of West River considered "agriculture both a science and an art capable of progressing for an indefinit [sic] time" and their counterparts to the East recognized the need "to continue the Society for some years (perhaps ages) longer".40

Anxious to demonstrate to the Legislature the importance of continued financial support for agriculture, Agricola might well have delighted in these responses. But he, and their authors, surely knew how glibly they exaggerated. MacGregor, indeed, sought to rein in his own enthusiasm. "The first motions of life are slow and feeble", he wrote in the final paragraph of his report. "Time is requisite to give them quickness and strength where the best nurture is enjoyed; but where it is wanting the progress must be sometimes doubtful and the growth always stunted. Such is our Society, and such is the agriculture of our river...". In truth, both East and West River societies were fledgings. When legislative support was denied all agricultural societies in 1826, the East River society was not long in collapsing. On West River, society members continued to attend quarterly meetings for several years. In 1829 and 1830 they petitioned the Assembly for financial aid. But by the end of the 1830s enthusiasm had dribbled away; if the society existed it was, apparently, in name only.41

³⁹ MacKinnon and Wynn, "Nova Scotian Agriculture", passim.

⁴⁰ Ebenezer MacLeod to John Young, 11 January 1826; James MacGregor to John Young, [January 1826], RG8, vol. 5, nos. 56, 65, P.A.N.S. Sometimes referred to as the Pictou Society, the West River Society of the 1820s is known consistently by this title here.

⁴¹ See the two items re. the West River Society dated 1841 and 1845 in RG8, vol. 14, no.24; the items in RG8, vol. 6, nos. 120-54; and 3 petitions in RG5, Series P, vol. 51, nos. 65, 79 and 96, P.A.N.S.

There is no better illustration of the difficulties faced by most of Nova Scotia's early agricultural societies than that provided by James MacGregor's dolorous correspondence with Agricola during the early 1820s. Faced with the large task of improving the farming skills of "emigrants from the mountainous parts of Scotland, where their fathers were little occupied with either ploughing or reading", the ability of MacGregor and others to effect change seemed "small in every respect...". Eight months later the dour Scot confessed that he "expected the society to flourish far otherwise than it does"; a year on, "motion...[was] yet slow". In 1822 increased wheat yields from the best fields of the district were welcome evidence that agriculture was "creeping forwards". But, reported MacGregor ruefully, in January 1824, "The meeting in July was forgotten by the greatest part of the mem[bers] and by me among the rest; so that it did not take place". There was no quorum at the October meeting in 1824 and three months later the Society's 1824 executive was asked to serve through 1825.⁴² That the West River Society fared rather better was largely attributable to the support and leadership it drew from the town of Pictou. Several of the county's principal merchants played large roles in the affairs of that society, sustaining interest in its meetings and earning accolades for the products of their farms. But these were gentlemen farmers indeed; when agricultural prices fell in 1821, they immediately reduced the number of labourers in their employ and left the secretary of the society with "few materials for a report".43

When, on the second day of February 1837, "a number of gentlemen of Pictou" meeting in the Royal Oak Tavern "resolved to form an agricultural society" they allowed little in the way of lasting achievements to the earlier organizations on East and West rivers. Petitioning for Legislative aid, they described agriculture in Pictou as "in as low a condition as it is possible to imagine it". Nor were the reasons hard to find: "There has not...been a change of seed of any description introduced for many years, the cattle and stock have been so ill-attended that they are everywhere degenerated...and many of our Farmers are literally reduced to a state of the greatest want". 44 In mid-February the Rules and Regulations of the new society were proclaimed and its nine member committee of Management was enjoined to adopt "the most efficient and active measures to improve the Agriculture of the County by the introduction

⁴² RG8, vol. 8, no. 5; RG8, vol. 6, nos. 129, 130, 131, 140, 144, 148, 150, 151, P.A.N.S.

⁴³ D. Ross to John Young, West River, 22 February 1822, RG8, vol. 6, no. 137, P.A.N.S.

⁴⁴ Minute Book of the Pictou Agricultural Society [hereafter P.A.S. Minutes], 27 February 1837, Places Pictou County microfilm, Municipal Records, Pictou Minute Books, P.A.N.S. Petition of J.W. Harris Esq., President of the Pictou Agricultural Society to the House of Assembly, P.A.S. Minutes, 23 March 1847. This society is referred to herein as the Pictou Society; the lower case is used to embrace all agricultural societies in the county.

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of Stock seeds, implements of husbandry, books and papers in husbandry, by premiums and by all other practicable ways and means whatsoever".⁴⁵

Dependent on subscriptions — set at 10s but reduced by half in December 1837 — and the support of the leading citizens of the county, the new Pictou society was remarkably active with limited means. Although attendance at meetings was oft-times thin, the enthusiasm of a few, and the momentum of its recent start, carried the society into the 1840s. When government aid to local societies was made available in 1841, the Pictou society received an allocation of £25, and was joined in the campaign to improve county agriculture by three new societies spawned by the prospect of financial support from the legislature. The New Glasgow Society formed on 23 April 1841, and that on the River John, which held its first meeting on 13 May 1841 divided the remaining £50 allocated for the county between them. The Maxwelton Society, also formed in April 1841, failed to collect the £10 required from its members until later in the year, and as the fourth society in the county was thus excluded from the government's largesse until 1845, when the smaller sums provided for each county could be divided four ways.46 Then the Maxwelton Society received £10 per annum, and the three other societies £13 6s 8d each.⁴⁷ On the East River a small group of enthusiasts formed themselves into the Springville Scientific Agricultural Society in 1850, and when the River John Society collapsed in 1852 they quickly applied for a portion of the provincial grant. Again the newcomer was allocated £10; the Maxwelton and New Glasgow societies received £12 10s; and Pictou £15.48

These were not insignificant sums. The relatively generous allocations of the 1840s created pointed rivalries between claimants. Disappointed at their failure to secure a grant, members of the Maxwelton Society argued their right to funds on the grounds that the county was divided into three townships, and that theirs alone was deprived of aid while the River John and Pictou societies served a

- 45 P.A.S. Minutes, 13 March 1837.
- 46 John Stewart to Secretary of the C.B.A., 24 April 1841, RG8, vol. 14, no. 24, P.A.N.S.; Rules and Officers of the River John District Agricultural Society, 15 May 1841, RG8, vol. 14, no. 24, P.A.N.S.; John Mitchell to T. Smith, Merigomish, 19 March 1842, same to same, 26 July 1845, both in RG8, vol. 14, no. 24, P.A.N.S. Despite the spelling on the broadsheet in Figure 3, the township after which the society took its name was generally rendered Maxwelton.
- 47 Report of Maxwelton Agricultural Society, 5 March 1846, RG8, vol. 14, no. 24, P.A.N.S.; Annual Report of New Glasgow Agricultural Society, 28 December 1846, RG8, vol. 14, no. 24, P.A.N.S. The sums allocated the River John Society are inferred.
- 48 Simon Holmes to James Irons, 11 November [1852], same to same, 16 July 1852, Springville Agricultural Society Report, 1853, all RG8, vol. 14, no. 24, P.A.N.S.; Annual Report of Hopewell [New Glasgow] Agricultural Society, 15 January 1854, Annual Report of Merigomish [Maxwelton] Agricultural Society 1853, both RG8, vol. 14, no. 24, P.A.N.S.

single administrative district. The Pictou Society often stressed its central position and early establishment in support of its arguments for the allocation of the government grant to one society in each county. Without the cognizance (and funds) of the Central Board, wrote the disgruntled (and unduly pessimistic) Maxwelton Secretary from Merigomish in 1842, "this society will immediately cease to exist". Three years later, members of the Pictou Society reported that "owing to the decrease of the Provincial Grant our operations have been but limited". And shortly after the grant-in-aid was reduced to £30 per county in 1857, petitions from Pictou societies urged re-instatement of the Central Board to foster importations of stock, seed, and implements, and requested more liberal financial support of their activities. "Unless additional aid is allowed by the Legislature", wrote the President and Secretary of the Maxwelton Society in 1860, "agricultural societies, however much to be lamented, will soon be numbered with the things that were".49

From 1817 onward, each of these societies engaged, with various degrees of commitment, in a wide range of activities. On balance, the Pictou Society was probably the most energetic. Less dependent upon the Central Board than its predecessor, and with a more dynamic membership than the other mid-century organizations, it took the lead in the importation and distribution of stock, seed and implements, encouraged the dissemination of improved agricultural knowledge, and organized fairs, exhibitions and ploughing matches. Thus it illustrates what a vigorous society might be. But it cannot stand as measure of all. To suggest the variant patterns, the several spheres of agricultural society activity are here considered in turn.

As an importer of agricultural machinery and other instruments of husbandry the Pictou Society was without peer in the county. Barely a month after the society was initiated, its committee considered it "expedient to introduce Willis' vertical straw and hay cutter" and opened correspondence with the President of the Central Agricultural Society of Prince Edward Island to ascertain the usefulness of the different threshing machines and other implements recently introduced there. In September, committee member and Pictou pharmacist J.D.B. Fraser imported from Boston, for the benefit of society members, a "Plow

49 John Mitchell to T. Smith, Merigomish, 26 July 1845, same to same, 19 March 1842, both in RG8, vol. 14, no. 24, P.A.N.S.; George Patterson to T. Smith, 7 February 1845, RG8, vol. 14, no. 24, P.A.N.S. e.g. Petition of Office Bearers of Pictou Agricultural Society to General Assembly, 13 February 1849, RG8, vol. 14, no. 24, P.A.N.S. Petition of William Smith and John Cameron to Assembly, [1860], RG8, vol. 14, no. 24, P.A.N.S. Petition of Members of Pictou Agricultural Society to Hon. House of Assembly, P.A.S. Minutes, 19 February 1861. The Maxwelton Society was known for four years in the 1850s as the Merigomish Society; in general the former name is preferred in this essay. The New Glasgow Society was sometimes referred to as the Hopewell Society. For clarity this title is avoided here.

called a cultivator for Drilling Turnips Potatoes &c". In 1838 hay and straw cutters and another cultivator were imported and inquiries were made, again in Boston, about "the best and most approved Portable Threshing machines and their price including the 2 Horse Power". Four years later the Society offered for sale a variety of forks, scythes, hoes and hay rakes. 50 Behind these initiatives lay hopes of encouraging the transfer of technology. When one of Prouty's Ploughs was imported in 1842 it was specifically to serve as a model. With the horse rake brought into the county in the same year, it was "to be kept in the meantime for patterns" and members of the Society were allowed to use each of these implements only "under the direction of the Committee". So too in 1849 an Eagle Plough, a Side Hill Plough and a grain cradle, as well as several hay forks were retained by the society as samples. Nor was the effort in vain. In 1843 three Pictou craftsmen — James Allan, William Murdoch and Donald Munro — each manufactured iron ploughs; Allan's was declared the best after testing with a dynamometer; and all three were shipped to Halifax, for exhibition and sale as "Provincial manufactures" by the Central Board. A year or so later "enterprising" local mechanics Murdoch and Adamson were manufacturing copies of American implements "on an extensive scale" and horse rakes, "hardly thought of" a few years earlier, were reported to be "in pretty general use".51

Far more attention was paid to the introduction and distribution of seeds. All societies made this a fundamental part of their operations, and seriously incomplete though the record of imports is, it is evident that substantial quantities of new seed entered the county through their efforts over the years. Clover was of first importance, and English red clover was clearly favoured, although "American" and "yellow" varieties were tried. Known imports rarely exceeded 225 lbs. per

- 50 P.A.S. Minutes, 29 March 1837, 9 September 1837, 5 May 1838, 1 October 1838, 13 May 1842. In 1838 the society's initial interest was in one of Green's hay and straw cutters and in the Common Duck and Hand Cutting machines. In contrast, imports by the Maxwelton Society appear to have begun only in the later 1840s. Robert Murray, Report of Maxwelton Agricultural Society, 22 December 1847, RG8, vol. 14, no. 24, P.A.N.S.
- 51 P.A.S. Minutes, 19 January 1842, 13 May 1842, 13 May 1844; J. Stiles to T. Smith, 15 September 1843, William Murdoch and Donald Munro to T. Smith, 29 April 1844; James Allan to T. Smith, 12 June 1844, George Patterson to T. Smith, 22 August 1844, Report of Pictou Agricultural Society 18 January 1845, all RG8, vol. 14, no. 24, P.A.N.S. Similarly the Merigomish [Maxwelton] Society voted in 1853 for "the purchase of improved agricultural implements As Patterns and then to encourage the Mechanics of the place to make at Home". William Smith, Report of Merigomish Agricultural Society 1853, RG8, vol. 14, no. 24, P.A.N.S. That such gains as there were small and local is suggested by the acerbic judgements on the exhibition held in the Province House Halifax: the "Industrial Exhibition of 1854 is a disgrace to the mechanical skill and enterprise of Nova Scotia"; "A few stoves of home manufacture might be seen looking very lonesome amidst a lot of Yankee importations", cited in Gwyn, "A Little Province Like This", p. 193.

annum — approximately sufficient to seed 20 or 25 acres if mixed with fescue, rye- and meadow-grasses, in the quantities recommended by agricultural handbooks — and fluctuated widely; the boldest of guesses would suggest that at least a ton of imported clover seed was distributed in Pictou in the two mid-century decades. ⁵² Seed wheat introductions were also significant — the Pictou Society alone brought in more than 200 bushels between 1841 and 1850 — but here there was much more experimentation with varieties. Oats were distributed in almost equal quantity, if apparently less variety. No other seeds approached these three in importance. There were occasional introductions of other species — including rye-grass, barley, potatoes, timothy, vetches, pease and turnips — but quantities were small: a bag of pease in 1820, and a total of 60 lbs. of turnips of 4 varieties, in 1820 and 1850, for example.

The experimental, even adventitious, nature of the societies' seed importing activities is well suggested by the efforts of the Pictou Society. In the late 1830s, it ordered for distribution among its members, Timothy seed (21 bushels) and Red Clover (1 barrel, then 200 lbs.); Timothy was tried again in 1841, but 1859 saw a venture with Hungarian grass; and English clover was acquired from various sources on several occasions during the 1840s. Generally, the results were considered satisfactory, but the expensive experiment with vetches in 1842 was a "total failure". At maturity they proved, according to members, "to be nothing more or less than the 'wild pea'; and no more like the vetches which our Scotch farmers had been accustomed to cultivate in Scotland than flax is like wheat". In the fall of 1837 members of the society sought early red wheat from Canada, and the next year they tried two small samples of wheat - possessed of "excellent qualities" and "highly approved of" - from Prince Edward Island. Both varieties — Cape or Woolmer's wheat, and Canada Wheat — were available to members by the bushel in 1839, as was a small quantity of "Chevalier Prolific Ten-rowed wheat". In 1841 and 1842 the society brought in 50 bushels of Tea Wheat from the Island, and added 20 bushels of bald wheat to the latter order. In mid-decade there was interest in "Whittington new white wheat", cultivated "with great success" in Britain but, as inquiries revealed, "entirely too late" for North American climates. By 1850 imports were back to early red and white bald wheat from across the Northumberland Strait. A decade later, early Red Fife Wheat was being imported (in three or four times the quantity of earlier seed wheat purchases) from Canada.53

⁵² J.C. Morton, ed., Morton's Cyclopedia of Agriculture, Practical and Scientific (Glasgow, Edinburgh, London, 1855), pp. 996-1004.

⁵³ Details of this paragraph are derived from P.A.S. Minutes, 13 April 1837, 18 September 1837, 5 May 1838, 5 March 1839, 30 October 1841, 4 May 1842, 4 September 1843, 13 May 1844, 18 September 1849, 15 February 1850, 17 March 1859, 18 February 1860, and Society Reports for several years.

Efforts to improve the blood lines of Pictou sheep, cattle, horses, and swine were perhaps the most challenging of all the agricultural societies' endeavours. Both costs and risks were large. By common reckoning the best breeding stock was British, but the difficulties of carrying stud beasts across the Atlantic were daunting. When, in 1844, members of the Pictou Society sought advice from the Central Board about sheep breeds, and the means of importing them, the reply was discouraging. It would cost £15 to £20 a piece to bring sheep from Britain, in the charge of "some careful person". Even then, as the experience of earlier importations revealed, there was no guarantee that the animals would arrive in good condition. In these circumstances, the improvers of Pictou often chose to acquire breeding stock within Nova Scotia or from neighbouring colonies and states. Proximity, and the reputation of the Central Agricultural Society of Charlottetown made Prince Edward Island an obvious source of stud beasts for the county. Several rams, "the progeny of...improved [English] breeds", were brought across Northumberland Strait by the Pictou societies between 1841 and 1858.⁵⁴ So too, apparently, were a few breeding swine. On balance, interest in stock-breeding was far greater in the west of the county than the east. Bulls of the Ayrshire and Durham breeds were purchased from Cumberland County by the Pictou and River John societies in the 1840s. Members of the Pictou Society harboured an unfulfilled desire to acquire an Entire Horse from the United States. Late in the 1840s — and shortly after the Maxwelton Society decided against using its scarce resources to import improved cattle — the Pictou Society acquired three rams from Britain through the good offices of its long-time member and successful sheep-breeder William Robley. Direct costs to the society were only about £20, but two years later, in 1849, the "rather meagre" appearance of the accounts was still being attributed, in part, to the expenditure of "so much money in importing sheep from England".55

The purchase of stud horses for the use of local society members was a particular enthusiasm of Nova Scotia's Central Board of Agriculture. In 1822 members of

⁵⁴ George Patterson to Titus Smith, 21 March 1844, P.A.S. Annual Report 1844 (18 January 1845), both RG8, vol. 14, no. 24, P.A.N.S. P.A.S. Minutes (April 1844). The Pictou Society purchased three rams from the Island in 1841, the first year of the provincial grant, a ram and two ram lambs in 1844, and 2 young rams a decade later. Purchases by the Maxwelton [Merigomish] Society followed the same pattern. Leicestershires and South Downs were acquired from P.E.I. by the River John Society in 1841. Statement of P.A.S. to C.B.A., 8 January [1842], Annual Report of the Maxwelton [Merigomish] Agricultural Society 1858, Report of the River John Society 1843, all in RG8, vol. 14, no. 24, P.A.N.S.

⁵⁵ P.A.S. Minutes, 23 June 1842. P.A.S. Annual Reports, 1847, 1849, RG8, vol. 14, no. 24, P.A.N.S. But note the pattern of secondary diffusion suggested by the Springville Society's purchase of the Ayrshire bull "George 5th" aged 2 1/2 years, from John Taylor Esq. of Pictou. Third Annual Report of Springville Agricultural Society, 1855, RG8, vol. 14, no. 24, P.A.N.S.

the West River Society sought use of the Board's Albany; in 1849 and 1851, Pictou farmers were encouraged to use the services of Bellfounder and Norfolk; and in 1855 Tornado, one of 8 stud horses imported in 1854, was allocated to the use of societies in Pictou and Cumberland counties. On each occasion, however, there were disputes and disappointments that reflected the difficulties of implementing successful breeding programmes. Bellfounder's condition was so poor that he was not "serviceable". When Norfolk was assigned to the society two years later, after some argument, he also arrived in "very low condition" and some £15 was spent before Pictou Society officials considered it "prudent" for him "to commence duty". Despite a moderation of the stud fee and a careful effort to make Norfolk available in all parts of the county, too few mares were covered to meet costs; the venture left the society almost £30 out of pocket. Even the careful stipulation that each of the 1854 studs should serve their allocated counties as covering stallions for four years went for nought when Tornado was "improperly removed" from Pictou and Cumberland in 1857. 57

When societies acquired their own stud animals they confronted the problems of maintaining them, and of setting appropriate fees for their services. The usual strategy was to assign the beasts to society members or to sell them with the provision that they be kept in the "bounds" of the importing society for a specified period (usually two years) and be made available for breeding. Thus William Robley and Thomas Campbell, founding members and leading sheep farmers of the Pictou Society, acquired the ram and one of the ram lambs imported by that organization in 1844. They accepted that each member of the Society was "at liberty to send 4 Ewes to either one or the other", with the proviso that use of the lamb was restricted to 20 ewes and use of the "old one" to 50. Two years later the rams were sold by the Society. In the same way the bull imported by the Pictou Society in 1843 was offered, at auction, to any purchaser who agreed to keep him for a year within the vicinity of Pictou town. Still the property of the Society four years later, the bull was given to Society member John Brown, on condition that it be available for stud purposes through October 1848. Until that time, Society members were to be allowed free use of the bull; others would pay 5s — a levy intended both to defray Brown's costs and to limit

⁵⁶ P.A.S. Minutes, 13 April 1849, 19 April 1851, 27 May 1854, 22 December 1854. Report of P.A.S., 20 December 1851, RG8, vol. 14, no. 24, P.A.N.S. A lesson learnt, in 1854 the Pictou Society contracted with Oliver Changrass for the services of Young Norfolk. For £10 the stud would serve up to 75 mares between 1 June and 15 August. But when Changrass withdrew his horse from the roads before the end of the season the society cut his payment in half. In the same year Norfolk died in Big Baddeck, Cape Breton, reportedly from "Inflammation of the brain and kidneys", RG8, vol. 11, no.8, P.A.N.S.

⁵⁷ RG8, vol. 11, nos. 98, 99, 128-34, P.A.N.S.

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the number of cows put to the bull.⁵⁸ Similar general conditions usually applied to stock imported by the Central Board and sold to private individuals. So, for example, William Matheson of Pictou bound himself in the sum of £50 not to sell the bull and heifer calves he bought in 1854 out of the province for three years.⁵⁹

Seed and stock imports might improve yields and bloodlines, but agricultural improvement was more than this. It embodied a revolution in habits and the introduction of new precepts to the practice of farming. In a passage reminiscent of Adam Smith's discussion of the advantages of specialization in pin manufacturing, and owing something to the 19th century's quest for time discipline, James Ross laid out the new doctrines of system and efficiency for his colonial compatriots. Both the farming year and the farmer's day were divisible into three. There was a time for the putting in of the crop — that ended on the 10 or 12 of June — a time for cultivating it and a, strictly limited, time for harvesting it. But the truly skilful farmer gave "undeviating attention" to the division of each day, "never permit[ting] the labours of one part to interfere with those of another". On Faddan Farm as on every other in the colony, Ross argued

there is a variety of small jobs, which demand daily attentions; these I endeavor to accomplish by eight o'clock. The plough or cart is yoked from nine till one, and from two till six, during which time I require an acre of land to be ploughed, so much manure to be conveyed to the field prepared for it, or so much of some other pieces of work performed. Any extra time, after due attention to my cattle, is spent in those numerous small pieces of labour, of which every careful farmer will find abundance in a well regulated establishment. Unless on very extraordinary occasions I never permit any thing to interrupt the completion of work so arranged. Scarcely procrastination itself is a greater thief of time, than these little jobs.⁶⁰

To win acceptance of such principles, the dissemination of information about new agricultural methods was vital. Societies regularly devoted a proportion of

⁵⁸ P.A.S. Minutes, 25 June 1839, 12 July 1843, 23 October 1844, 16 October 1846, 22 June 1847, 12 July 1847.

⁵⁹ Bond. William Matheson and J.E. Fairbanks, President of C.B.A., 13 October 1854, RG8 vol. 11, no. 41, P.A.N.S.

Ross, Remarks, pp. 24-5. The 1844 P.A.S. Report bows to the same icons [18 January 1845], RG8, vol. 14, no. 24, P.A.N.S. A. Smith, An Inquiry into the Nature and Causes of the Wealth of Nations (1776) Book 1, Chapter 1, "Of the Division of Labour"; E.P. Thompson, "Time, Work-Discipline and Industrial Capitalism", Past and Present, 38 (1967), pp. 56-97. So, too, similar sentiments were voiced by the president of the New York State Agricultural Society in the 1850s: "Time and labor have become cash articles and he [the farmer] neither lends nor barters them". New York State Agricultural Society. Transactions (1852), p. 29, cited by C.H. Danhof, Change in Agriculture: The Northern United States, 1820-1870 (Cambridge, Mass., 1969), p. 21.

their funds to the acquisition and distribution of agricultural literature. In the late 1830s the Pictou Society subscribed for one or two copies of the New England Farmer, the Maine Farmer, the Boston Cultivator and the Yankee Farmer, and in 1844 it made copies of the British American Cultivator (Toronto) available to members at half cost (i.e. 1s 3d per annum) in hope of diffusing among them "an acquaintance with the principles of their art". Provincial and local publications also served the cause. Agricola's Letters were carried into the county by the Acadian Recorder in the 1820s, and 20 years later Halifax publisher Richard Nugent's The Colonial Farmer offered a collage of advice drawn from various sources. On the River John at least, subscribers soon complained at the irregularity with which they received the paper — whether "from fault in mailing...or from neglect in the Post Office Department" was then a moot point — and John Stiles' Mechanic and Farmer, published in Pictou from 1838, was undoubtedly more widely circulated in the county. A "Periodical to which the Farmer might refer at pleasure for information on the various branches of his important calling", the Mechanic and Farmer was a remarkable product of Stiles' zeal. The Secretary of the Pictou Agricultural Society from 1840 to 1843. Stiles offered prizes for essays on agriculture and his paper carried illustrations and descriptions of new implements, as well as much material drawn from other agricultural publications. Similar extracts were also available after 1845 in the two columns of agricultural information that appeared in the Eastern Chronicle of New Glasgow by arrangement with the Central Board of Agriculture.⁶¹

Many classic contemporary texts on improved agriculture were known to and circulated among enthusiasts for the reform of Pictou farming. In 1842 members of the River John Society set aside money to acquire six copies of "Jackson's work on Husbandry" and "if practicable the Farmers' Series of Works published by the Society for the Diffusion of Useful Knowledge". A year later John Stiles recommended the award of such publications as "Evans work on Agriculture, Jackson's Treatise and Leibigs Agricultural Chemistry" to those members of the Pictou Society who produced the best crops and stock. And the 15 members of the short-lived Springville Scientific Agricultural Society kept a 17 volume library that included J.F.W. Johnston's "Elements and Catechisms" and "Buels,

⁶¹ P.A.S. Minutes, 13 December 1839, 4 April 1842, 17 February 1844; P.A.S. Report, 1847; Accounts of C.B.A. with Eastern Chronicle, RG8, vol. 9, no. 82; Correspondence of R. Nugent and J. Stiles with C.B.A., RG8, nos. 47, 53, 73; L. Dew to T. Smith, 22 December 1842, RG8, vol. 16, no. 24. Quite how useful all this advice was is debatable; it certainly was not consistent. The Boston Cultivator was explicit in its criticisms of the view that book knowledge was superior to experience, and of other positions and initiatives advocated in the New England Farmer.

Stevens, Jacksons, Nortons and other standard works on agriculture".62 Impressive as this was, J.W. Dawson, the colony's superintendent of Education, saw danger in dependence on theoretical treatises produced by authors unfamiliar with Nova Scotia. Those who sought to improve by reading such studies were liable, he felt, "to be misled by experiments made and reported without knowledge of the conditions on which their success depended". To avoid this he offered his own Contributions toward the Improvement of Agriculture in Nova Scotia, with Practical Hints on the Management and Improvement of Live Stock, a book whose insights, the rest of the title revealed, were compiled from Youatt, Johnston, Young, Peters, Stephens &c. Thanks to the support of the Legislature and the Central Board, several thousand copies of this work were distributed to the farmers of Nova Scotia; in Pictou county, societies supplied it to their members, it was widely circulated and "highly esteemed".63

The virtues of manuring and of crop rotation were axiomatic in this literature. Indeed, the "collection and application of manure" was a convenient litmus test of the farmer's "real character". It implied that his stock were housed and fed rather than allowed to range through "uncultivated outlying grounds for pasturage".⁶⁴ It revealed that he had begun to implement the system that enlight-

- 62 P.A.S. Minutes, 10 October 1843; Dew to Smith, 22 December 1842; S. Holmes to J. Irons, Springville, 11 November [1852], RG8, vol. 14, no. 24. The references are to the following: J.F.W. Johnston, Elements of Agricultural Chemistry and Geology (2nd ed., Edinburgh/ London, 1842); ibid., A Catechism of Agricultural Chemistry and Geology (Edinburgh, 1844) and, probably, Jesse Buel, The Farmer's Companion; or, Essays on the principles and practice of American husbandry (Boston, 1839) or Jesse Buel, The farmer's instructor; consisting of essays, practical directions, and hints for the management of the farm and the garden (New York, 1840); George Stephens, The practical irrigator and drainer (Edinburgh, 1834) or Henry Stephens, The book of the farm: detailing the labours of the farmer, farm-steward, ploughman shepherd ... (Edinburgh, 1844); John P. Norton, Elements of Scientific agriculture; or, The connection between science and the art of practical farming (New York, 1850); William Youatt, Cattle; their breeds management and disease (London, 1834); and perhaps Arthur Young, The farmer's calendar; containing the business necessary to be performed in various kinds of farms during every month in the year (20th ed., London 1836) or Rural Economy (Philadelphia, 1775). On 7 January 1862, the Colonial Standard (Pictou) advertised Henry Stephen's and J.P. Norton's The Farmer's Guide to Scientific and Practical Agriculture as "the most complete work on agriculture ever published". There was also a Provincial Agricultural Library in Halifax. The list of its holdings in 1825, as well as the rules and by-laws governing use of the books — "Servants coming to the Library are to wait at the door till they receive an answer" and "books belonging to the Library may not be lent to persons having no right to the use of them" - is revealing. See AK F82, MG8, No.11, P.A.N.S.
- 63 Dawson, Contributions, ch. 1, especially pp. 9-10. See also J.W. Dawson to William Scott, 11 July 1854, RG8, vol. 14, no. 24, P.A.N.S., and Replies to Dr. Forrester's questionnaire, 1859.
- 64 Ross, Remarks, p. 11.

enment demanded. And it marked the integration of crop and stock raising that improvers found desirable. But there were degrees of accomplishment in manuring as in everything else. Once collected, stable manure had to be stored correctly — preferably in a tightly-planked or clay-sealed hollow — kept covered, and sprinkled occasionally with gypsum. Only in this way could its "strength or virtue" be preserved. Then, too, it was important to save the "liquid manure" by means of a cellar beneath the stock barn. By adopting such procedures, contemporary estimates suggested, farmers could realize 300 or 400 cartloads a year from 18 neat cattle and 20 sheep; this they would apply to their fields, in rotation, at a rate of some 50 or 55 cartloads per acre.⁶⁵

That many Pictou county farmers used the manure of their barns on their fields is certain; in the 1820s the West River Society awarded prizes for gathering and making manure, and reported on the "considerable progress" evident in that area of their members' operations. Two or three decades later the practice of manuring was almost taken for granted. But few had adopted the most modern methods. In 1859 it was estimated that fewer than a thousand farmers in all of Nova Scotia stored their manure correctly, and two years later only a handful of the most active members of the Pictou society had barns with cellars. Very few anywhere in the colony applied manure in the quantity advised by the improvement literature. Still, interest in improving the productivity of their soil was intense among agricultural society members. Lime was applied to the clay soils of the East River in the 1820s — when James MacGregor, for example, spread 300 bushels on 2 acres of land — and in 1840 an article on the merits of lime as manure was read to members of the Pictou Society from the Encyclopedia Britannica. A decade later, farmers in Merigomish brought mussels from banks in the Harbour to put on their land and to compost with their stable manure. Those on the River John used another "almost inexhaustible" local resource, "manure [i.e. mud] from the River" on their fields, and by the early 1850s lime kilns were operating in the county. Much of this was in the nature of experiment. After spending heavily on the construction of a kiln, members of the Maxwelton Society found their local limestone inferior for agricultural purposes. But the societies were also vehicles for the spread of more systematic information, and supporters of potentially beneficial initiatives. In 1850 J.W. Dawson lectured on agricultural chemistry before the Pictou Society, and Simon Holmes, Secretary of the Springville Society was an assiduous student of the same topic, who in 1852 imported "an apparatus for the analysis of soils manures &c". Guano was brought into the county at least twice, in the 1840s by the River John Society and, in the 1850s by the Pictou Society, several members of which were among

those who petitioned in support of John McLean's request for assistance in erecting a mill on the West River to produce bone meal.⁶⁶

Improvers found no agreement upon the most suitable rotation of crops for Nova Scotian farmers, beyond recognizing that the rotation should be a relatively long one. In the 1850s various models were advanced. Alexander Forrester favoured a six-course system in which each field would be devoted successively to a green or root crop (i), and then to wheat or barley under sown with rve-grass. timothy or clover (ii), which would yield the hav crop in the third year (iii), and then be pastured for two years (iv and v), before being ploughed for oats or pease (vi). James Ross advocated a seven-field rotation to farmers breaking new land or converting to the improved system. They would plant their fields, in sequence, to green crops, oats, pasture, and wheat and then take hay from them for three years. Once this pattern was established, two new fields could be added to the sequence by extending the period under pasture from one to three years. Notably absent from each of these schemes was the maintenance of summer fallow land, favoured by Agricola and for which the East and West River societies regularly awarded prizes during the 1820s. All however were predicated on the importance of livestock in the farm economy and carried with them the assumption that land was best used intensively; that no more ought to be cultivated than could be adequately manured. Reformers commonly contended that Nova Scotian farmers cleared too much land: Forrester argued that proper management of a half to two thirds of the cultivated area on most farms would produce "double that vielded by the old breadth of land".67

Be all this as it might, reformers still faced the formidable task that led those involved in the Central Board to conclude, in 1845, that it was "more difficult to rouse an active spirit of investigation and inquiry among the Farming classes of

Oraft of P.A.S. Handbill, E. McLeod to J. Young, 22 December 1823, RG8, vol. 6, no. 152, 153, P.A.N.S.; Dr. Forrester, Report on Agriculture 1859; P.A.S. Minutes 1861; J. MacGregor to J. Young, 15 January 1822, RG8, vol. 6, no. 136, P.A.N.S.; P.A.S. Minutes, 28 June 1840, 31 December 1850; Report of Maxwelton [Merigomish] Agricultural Society, 19 February 1840, 2 January 1855, Report of River John Agricultural Society, 21 December 1847, Crop Return, River John 1845, all RG8, vol. 14, no. 24, P.A.N.S., Holmes to Irons 11 November [1852]; Report of P.A.S., 26 December 1851, RG8, vol. 14, no. 24, P.A.N.S., Petition of John McLean, RG5, Series P, vol. 54, no. 56, P.A.N.S. C.H. Danhof, "The Farm Enterprise: The Northern United States, 1820-1860s", Research in Economic History, 4(1979), pp. 127-191 notes instances of soil rehabilitation on a few New England farms in this period. The four examples he discusses in detail reveal large investments on buildings, under draining, fencing and the like, as well as in fertilizers. Output rose appreciably, but returns on investment were sometimes low (6 per cent in one case) and market values of the properties sometimes fell short of the sums invested in them.

⁶⁷ Dr. Forrester, Report on Agriculture, 1859; Ross, Remarks, pp. 8-9.

any country, than among a body of artizans congregated in one place and excited by competition".68 To encourage rivalry among their members and to foster interest in improved farming through the community at large, the Pictou county agricultural societies organized exhibitions, fairs and ploughing matches. There scattered farmers could be brought together. The fruits of enlightment — be they larger yields, bigger mangel wurzels, or fatter sows — could be displayed. Skills — in ploughing or making cheese — could be demonstrated. Success — according to criteria defined by the improvers — could be celebrated and rewarded. And a healthy spirit of competition could be infused, not only by offering premiums for outstanding performance, but also by arousing individual pride. There was no better means of advancing the agricultural interest, concluded members of the Pictou Agricultural Society, than by inviting farmers "to engage in honorable competition more for the distinction of gaining the prizes than for the intrinsic value of the same" (Figure 3).69

Ploughing matches were the most simple and least costly of these competitions. They were also the first. The West River Society held annual matches from 1817, and by 1820 the youths of Pictou were competing successfully with ploughmen born in Britain. On the East River, at about the same time, six contenders matched skills for prizes of three, two and one bushel of rye-grass seed. So too the ploughing matches of the Pictou Society, conducted in a field provided by a local farmer for a handful of modest premiums, attracted relatively small numbers of competitors. Held on at least ten occasions in the 20 years after 1838, they demonstrated both the abilities of the competitors and the virtues of different types of ploughs; indeed there were sometimes separate competitions for wooden and iron ploughs, and for "Scotch" and American models. Judges almost invariably found the work "well executed".

Agricultural exhibitions, at which stock and crops could be compared, were vital to the cause of improvement, but more difficult to organize. Space had to be set aside for the gathering, several judges had to be appointed and, most significantly, substantial sums had to be raised for premiums. Not surprisingly, therefore, exhibitions were heavily dependent on support from the Central Board. It was money from the Legislative grant that allowed the West and East River societies to offer prizes of 40 shillings and upward for the best acres of wheat and oats after 1819, for example. And it was only with the assistance of the

⁶⁸ Cited in Martell, "From Central Board", p. 6.

^{69 20}th Report of P.A.S., 8 January 1858, P.A.S. Minutes.

⁷⁰ Report of West River Pictou Agricultural Society, 18 January 1821, RG8, vol. 6, no. 120, P.A.N.S., J. MacGregor to J. Young, 20 June 1822, RG8, vol. 6, no. 142, P.A.N.S.

⁷¹ e.g. P.A.S. Minutes, 6 November 1839, 9 November 1840; Report of P.A.S. 1842, RG8, vol. 14, no. 24, P.A.N.S.

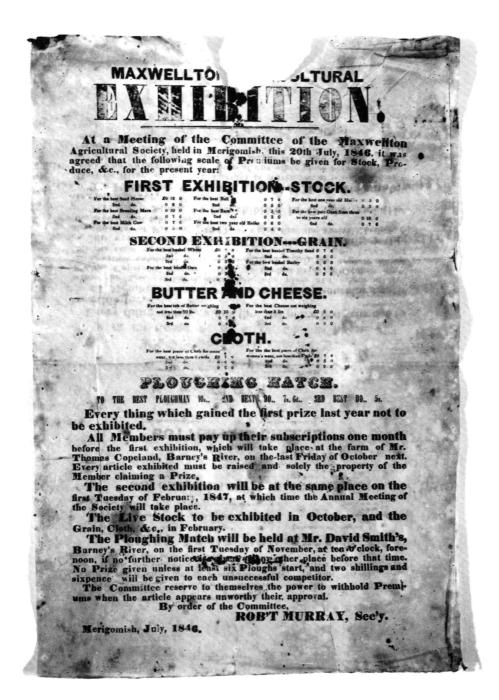


Figure 3: Maxwelton Agricultural Exhibition Handbill, 1846, RG8, vol. 18, no. 145.

Provincial grant that the Pictou Society mounted its first exhibition in the fall of 1842, half a decade after its inauguration. But each October for five years thereafter, the fall exhibition of the Pictou Society brought together members and other residents of the township. 12 Intended for the display and sale of stock, these shows were complemented, between 1843 and 1848, by exhibitions of crops, implements, and domestic manufactures held on the day of the Society's Annual meeting in January. Both, reported the Society in 1844, were "highly gratifying"; the quality of produce was unsurpassed even in "older counties" and (as in most years between 1842 and 1846) some £25 to £30 was distributed in premiums. 13 Similar, if slightly less generous, allocations of prize money were also made by other county societies in these years.

But with the reduction in legislative grants for agriculture after 1845 the Pictou societies were unable to sustain the momentum of the early 1840s into the new decade. There were fewer premiums than before at the Pictou Society's October 1847 exhibition, and no stock shows in 1848 and 1849. The New Glasgow Society reduced the number of its premiums by about 25 per cent over a decade and Maxwelton Society members agreed to "give up the usual mode of giving prizes for articles raised on the farm" in the late 1840s (Figure 3).74 Although the fall exhibition of the Pictou Society was revived in 1850 and continued in 1851, the Society offered only a handful of small premiums in December 1852 to mark the opening of the new Pictou market. Two Pictou Society exhibitions were mounted in 1853 but only with the help of donations for the December premiums. Both 1854 and 1855 saw single Pictou exhibitions, in December, and the same pattern prevailed in 1858, although October exhibitions were held in 1857, 1859 and 1860. During these years the generosity of the premiums varied considerably: less than £20 was awarded in 1853 and 1855, almost £46 in 1857. Subcommittees were struck to "solicit subscriptions toward premiums" and due recognition was afforded the "liberality" of the "Merchants and other inhabitants principally resident in the Town of Pictou" who provided most of the money distributed as prizes.75 Still, members maintained, the numbers attending and the interest shown at these exhibitions demonstrated their "utmost importance" in "sustaining and forwarding the views of the Society".76

⁷² RG8, vol. 6, P.A.N.S., various items pertaining to East and West River Societies.

⁷³ P.A.S. Minutes, January and October, 1842-47.

⁷⁴ P.A.S. Minutes 1847-49; Report of New Glasgow Agricultural Society, 1844, 1853, Report of Maxwelton Agricultural Society 1849, all RG8, vol. 14, no. 24, P.A.N.S.

⁷⁵ P.A.S. Minutes, October 1850, October 1851, 3 December 1852, 28 October 1853, 7 November 1853, 23 December 1853, 30 December 1853, 6 July 1854, 14 December 1855, October 1857, 10 September 1858, December 1858, October 1859, October 1860.

^{76 21}st Annual Report of P.A.S., 1858, RG8, vol. 14, no. 24, P.A.N.S.

Similar sentiments were elicited by the two regional fairs held during these years. In 1852, with contributions of £30 from the Pictou Society, £10 from Hopewell and £60 from the Central Board a large regional fair was held at Durham Village on West River. Premiums worth almost £89 were awarded in well over 50 categories of competition in the four sections of the show — Horses and Cattle; Sheep and Pigs; Agricultural and Horticultural Produce; and Domestic Manufactures and Agricultural implements — and a "vast concourse" of people assembled to examine the produce. Four years later New Glasgow was the site of another such combined agricultural and industrial exhibition to which the four county societies contributed £50 and the Central Board a like amount for premiums. Despite inclement mid-October weather, including a snowstorm and heavy rain, thousands of persons attended both days of the show, the produce and stock on display were considered to be of excellent quality and the winners were pronounced well-deserving of the 182 prizes awarded.⁷⁷

Energetic, enthusiastic and active, the pre-Confederation agricultural societies of Pictou County claimed a large role for themselves in the improvement of local agriculture through these years. Especially in communications with the Central Board, and in petitions to the Assembly, Society members looked back "with pleasure and gratitude" at their accomplishments. Typically they stressed the "good deal of spirit" evident in the conduct of agricultural affairs, the regular attendance at society meetings and their organizations' large contributions to "the improvement of the Agriculture of [the] district". 78 But there was a contrapuntal refrain in the frustration that surfaced periodically in society minutes and members' correspondence. In the 1820s, James MacGregor reported from East River that the benefits of the society were "little understood by the great body of people" there. 79 Two years after its foundation, attendance at the Pictou Society's Annual Meeting was thin; amendments to the rules in 1840 and 1842 enlarged the Committee of Management in hope of securing a quorum more regularly and bound the Society to hold an Agricultural Dinner on the evening of the annual meeting, at which members might sit down together and — judging by the number of volunteer toasts — enjoy themselves. 80 The leaders of the Maxwelton Society had a "sore struggle" to keep it in existence through the early 1840s, and

P.A.S. Minutes, 23 April 1852, 22 July 1852, 14 September 1852, 5 October 1852, 4 March 1856.
P.A.S. Reports, 1852, 1856, RG8, vol. 14, no. 24, P.A.N.S.

⁷⁸ See for example P.A.S. Reports of 1842 and 1843, RG8, vol. 14, no. 24, P.A.N.S. but such sentiments are common in the annual reports of all the Pictou County Agricultural Societies.

⁷⁹ J. MacGregor to J. Young, 6 January 1820, RG8, vol. 6, no. 129, P.A.N.S.

⁸⁰ P.A.S. Minutes, 14 July 1839, 20 December 1839, 24 January 1840, 23 November 1841, 19 January 1842, 18 January 1843.

the River John Society was discontinued in 1852, despite the member's claim that while "in Operation it done much for the benefit of the Settlement". In Pictou, Society secretary Stiles lamented the "paltry appearance" of the 1843 Exhibition, although some thought the stock "highly creditable". Several societies had financial difficulties, especially in the late 1840s, and before the regional cattle show of 1852 William H. Harris of the Pictou Society warned even members of the Central Board "not to expect too much for fear of disappointment as there seems to be backwardness among our farmers ... which cannot be easily accounted for". Society ears later there were efforts to impart "new life and vigor" to an organization that had fallen into a "Stand Still position, and in 1860 the Committee of the Pictou Society conceded that they were being less successful than they wished in accomplishing their aims, lamented the "feeble efforts" put forth, and refused to "close their eyes to the symptoms of weakness and decay" evident in the Society's operations. In January 1861, there was a very poor turn out for the annual meeting. Society appearance of the Settlement".

Simple figures tell much of this contrapuntal story. Membership in each of the societies was small. The greatest figure claimed by the Pictou Society in the quarter century after 1837 was 80 persons. On average, membership seems to have fluctuated between 40 and 60 per annum — and this in a county whose population exceeded 4,000 families, and a Township in which there were almost 2,000 households in 1851. Similar patterns were evident elsewhere. When the Maxwelton Society was petitioning for a share of the provincial grant in 1842, it defined its district as including "about 600 Ratable [sic] Land proprietors"; a decade later it reported, with some pride, the increase of membership to 40. In the mid-1840s the New Glasgow society claimed a membership of 45 "extending over a rural district 18 miles in length"; a few years later numbers peaked at 60, but they were down to 35 before the end of the decade and to 22 in 1855. So too the River John and Springville societies never mustered many more than 50 members in their districts. Moreover, many members played small roles in society affairs. Two membership lists for the Pictou Society, compiled between 1838 and 1842 but with a few names added later in the 1840s and including members "discharged" during this period, contain 79 names. Of this total, almost a half (36) were never mentioned elsewhere in Society records for the

⁸¹ Robert Murray to T. Smith, 28 October 1845; K. MacLean to J. Irons and William Scott, 13 January 1853, both RG8, vol. 14, no. 24, P.A.N.S.

⁸² P.A.S. Minutes 16 October 1843; W.H. Harris to William Scott, 14 September 1852, RG8, vol. 14, no. 24, P.A.N.S.

⁸³ Annual Report of P.A.S., 1855, 1860, RG8, vol. 14, no. 24, P.A.N.S.; P.A.S. Minutes, 18 January 1861.

period 1837-46, and another nine names appeared only once beyond the membership lists. Among the remaining 34, seven listed themselves as Esquires, and several were prominent merchants and citizens of the town of Pictou.⁸⁴

Patterns of office holding provide another measure of the narrow base on which the agricultural societies were built. Through the first decade of its existence the Pictou Society had a single President, John W. Harris Esq., County Sheriff and owner of a small farm (21 acres cultivated in 1851) on Haliburton Stream, within sight of Pictou town. His four Vice Presidents during this period were also Esquires, and shared, with the two men who served as Treasurer and the three who acted as Secretary, essentially urban rather than rural backgrounds. Although the committee was drawn from a wider constituency, it included its share of town gentry, including J.D.B. Fraser the Pictou pharmacist, and A.D. Gordon Esquire. There was also striking stability among the office holders of the Society. Over ten years the four important positions of President, Vice-President, Treasurer and Secretary were filled by ten men. During the same period, the 55 positions open on the committee were held by 24 members, a fraction of whom also held higher office in the society before or after their service on the committee. 85

Much the same tendency can be discerned in the annual competitions organized by the societies. Between 1820 and 1825, the West River Society is known to have awarded 80 prizes; fully two-thirds of these (54) were won by seven individuals. Five people took over half the awards and one — William Matheson — received ten. On the East River the pattern was even more exaggerated: four persons took almost two-thirds of the 51 prizes on offer between 1820 and 1824, and a single individual among the 13 who received premiums in these four years — James MacGregor the Secretary of the society — won 15 (almost 30 per cent) of the prizes. So too, in ploughing matches and fall and mid-winter exhibitions. Between 1837 and 1846 the Pictou Agricultural Society offered a total of 232 premiums. These were taken by 57 individuals. Almost a half — 26 — of those individuals won only a single premium; another eight collected two prizes during the decade. Thus 23 persons carried away over 80 per cent of all the premiums

⁸⁴ P.A.S. Minutes, 20 December 1839, 14 June 1841, 3 July 1845; P.A.S. Reports, 1842, 1852, 1855. John Mitchell to T. Smith, Merigomish, 19 March 1842, Annual Report of Merigomish Agricultural Society, 10 January 1853, Report of Hopewell [New Glasgow] Agricultural Society, 14 July 1845, 23 December 1847, 27 December 1849, 19 January 1856, all RG8, vol. 14, no. 24, P.A.N.S.

⁸⁵ Society office holders are recorded in P.A.S. Minutes; elections were usually held in January at the annual meeting in conjunction with the winter exhibition.

⁸⁶ These details are extracted from close analysis of East and West River Society records in RG8, vol. 6, P.A.N.S.

offered. And several of these were also officers and committee members of the society, fully two-thirds of whom received prizes during the period.87

Oft-times the benefits to individuals were large. MacGregor's handsome harvest included several prizes of \$5.00 or \$6.00 and at least one of £2. William Robley, a member of the Pictou Society from its inception, a judge of its 1838 ploughing match and a member of its committee in 1842, 1843 and 1845, took home a dozen of the Society's prizes between 1842 and 1846. Many of these were for sheep, but there were also awards for butter and women's homespun. In sum the several premiums were worth at least £6 10s 10d. Thomas Campbell, also a charter member of the Pictou Society, and a committee member in 1838, 1839. 1842 and 1843, took 15 prizes before 1847, all but one of them after 1842. Their value exceeded £5 5s. John Murray, neighbour of Pictou Society President John W. Harris on Haliburton Stream, committee member in 1839, 1840 and 1846. and one of the county's leading improved farmers in the 1840s, was also a frequent prize winner. Among his eleven awards were: two premiums of 15s each (in 1843) for "second best turnips" and "best Breeding sow"; two of 10s each for "first heifer" and "first sow" in 1845; and three, totalling 15s, for "third ram", "third butter" and "first sow" in 1846. Gentlemen farmer William Matheson Esquire, who never served the society in any capacity during this period did even better, carrying off almost a score of prizes worth the not inconsiderable sum of £8 10s in the four years after 1842.

None of this is entirely surprising. Those most interested in agricultural improvement were likely to be involved in agricultural society affairs. Indulging their interests, purchasing improved seed (as Murray did in taking a bushel of each of the wheat strains imported by the society in 1839) and adding quality breeding animals to their flocks (as Robley and Campbell are known to have done in the 1840s and as Matheson did in the 1850s), they were almost bound to be stern competitors at society exhibitions. But such domination of Pictou premium lists by a few also raises important questions about the degree and extent of agricultural improvement in the county.

Perhaps the most obvious measure of the impact of reform ideas, in the minds of society members, lay in the quality and productivity of their own farms. Indeed it was precisely to encourage and instruct members, to measure the progress of their teachings, and to polish models of improved farming that the hitherto unconverted farmers of the district might look upon everyday, that the committee of the Pictou Society mounted a regular inspection of members' farms. Conducted with some formality, this ritual, instituted in 1842, provided a ready and usually satisfying yardstick of the advance of progress. The first inspection revealed that the most extensively cultivated of the members' properties had approximately 50 acres in grains, hay, potatoes, peas and turnips. A handful grew six or seven acres of wheat, several had ten acres or more in oats and almost a half had 12 acres or more in hay. The next year the review showed a "marked improvement" in the appearance of most of the farms, and in 1844 there were more signs that members were "beginning to adopt new and improved principles of cultivation and better methods of securing manure, making composts and a greater use of lime and new and improved implements of husbandry". Sixteen years later, the committee of the Society devoted two days to their inspection. The time, they concluded, had been "most agreeably and profitably spent in noticing the progress made since the last visitation" (apparently in 1855) in "comparing notes on farming adding suggestions conversing with the farmers fair wives and daughters and [in]...enjoying their hospitality which was most cheerfully and bountifully bestowed". Now few of the farms visited had fewer than 50 acres in cultivation; one had 120 and together they averaged 66 improved acres. All continued to grow wheat but, at most, gave only six acres to it. Oats invariably occupied more ground than wheat and half the farmers had 15 acres or more in this crop. Hay fields almost always accounted for a least a third of the cultivated area, and on some farms they covered half the land. There were neat and "economical" fences, and even signs of "considerable taste in the ornamenting" of the commodious, well-adapted buildings on members' farms.88

The numbers involved were small: 19 in 1842 and 14 in 1861, but on each occasion Society Minutes recorded patterns of land use, and in 1861 included information about the numbers of cattle and cows, on each of the inspected farms. Nothing in these data suggest even the barest approximation to patterns of crop rotation advocated in the improvement literature. Peas and turnips were grown, but in minimal quantities by a minority of these farmers. In 1842 William Robley was the leading producer of peas; they occupied one of his 20 cultivated acres; George Grant gave them half an acre in 36; J.W. Harris the same area in 26½ acres. Turnips figured even less prominently on these farms; only five of 19 grew them, and none had more than half an acre in the root, although improvers urged that at least five of every 25 acres under the plough be given to them. Combining production of oats and pease, wheat and barley, and green and root crops farm by farm does suggest that a rotation approximating Forrester's recommended six field succession of crops may have been followed by one or two of these farmers. But in general there was an enormous gap between doctrine and practice in the management of these Pictou farms. Nor was the situation any different in 1861, although a few farmers had added carrots to their range of root crops. Nowhere were these essential elements of the improved farming system found in anything like the quantities reformers required to set agriculture on its "high and glorious career of extension". Fields were undoubtedly given to different crops in turn, but rotations were idiosyncratic and far from the norms of the improvement literature. In the district as a whole, there was clearly "little or no attention paid to the rotation of crops".89

Nor, despite the societies' considerable efforts to encourage the introduction of improved farm implements, did mechanization gain much hold in the Nova Scotian countryside before Confederation. Although the rates of adoption and patterns of diffusion of farm implements in Nova Scotia are exceedingly difficult to establish, the census of 1871 does provide a broad measure of the situation at the end of our period. Of ploughs, harrows and cultivators (combined not very usefully for our purposes into a single category by the census-takers) there were approximately as many in Nova Scotia as there were farms larger than 10 acres. In Pictou County enumerators counted some 4000 of these implements, and only 3585 occupiers of 10 acres or more; in Kings, the province's leading agricultural county, the ratio approached 2 to 1. But these data tell us nothing about the type and quality of the implements, or about their relative proportions; at best we can guess that ploughs (of one sort or another) were near ubiquitous on Nova Scotian farms, and that larger, more productive properties likely had two or more ploughs and, perhaps less commonly, a harrow and/or a cultivator. More revealing are the enumerations of more specialized, and more costly equipment for the harvest. Here the census recognized two categories: horse rakes (which were the least expensive of these implements), and reapers and mowers. Pictou farmers led those of all other counties in the number of horses rakes owned, with 742 or 20 per cent of the provincial total; in reapers and mowers they ranked fifth, with 158 or 12 per cent of the total. On average, then, approximately one in five Pictou farmers with more than 10 acres owned a horse rake; fewer than one in 20 had a reaper or a mower. These figures compare with ratios of between 1 in 3 and 1 in 6 (approximately) for the proportions of farmers with horse rakes in Kings, Hants, Cumberland and Colchester counties, and with ratios of between 1 in 10 and 1 in 12 for the incidence of reapers and mowers in the same counties. They far exceeded those elsewhere in the province; in all of Cape Breton there were only 138 horse rakes and 41 reapers and mowers, and the 1871 census enumerators found a mere 86 horse rakes and 42 reapers and mowers in the southwest of the province (in the counties of Digby, Yarmouth, Shelburne, Queens and Lunenburg). Clearly and not surprisingly, these implements were heavily concentrated in the counties of Nova Scotia's farming zone; it is likely

(though systematic evidence is wanting) that they were also largely confined to the province's more productive farms, on which their labour-saving capacity (6 to 1 for horse rakes over hand rakes and perhaps 10 to 1 for mowing machines over scythes) would most dramatically ease harvest-time constraints on total production. But in areas where most farms were small, and in places where a pool of rural labour allowed the harvest of relatively few large farms to be brought in without resort to machinery, reapers, mowers and horse rakes were strikingly scarce, although agricultural societies in all parts of the province advocated their adoption. Again only the most tentative inference is possible from the data, but it would appear that farm size and labour shortage were major factors shaping the broad pattern of farm mechanization in mid-19th century Nova Scotia. This is not to deny the role of agricultural societies in disseminating information about the new machines; it is, though, to suggest that most Nova Scotian farmers responded to economic stimuli — their particular needs and circumstances — rather than simply following the urgings of agricultural improvers in choosing to add relatively expensive machinery to their farms.90

90 Certainly such a conclusion is broadly congruent with that of one of the few systematic studies of farm mechanization in the early nineteenth century, J.R. Walton, "Mechanization in Agriculture: a study of the adoption process", in Fox and Butlin, eds., Change in the Countryside, pp. 23-42, in which it is concluded that farm size was "the most important determinant of both composite levels and the long-term chronology of adoption, although some fluctuations in that chronology appear to relate more closely to non-economic variables". Walton suggests that in Oxfordshire, England, adoption of the horse rake may have been influenced to some degree by membership in an agricultural society. The differences in the costs of land, labour and equipment on the two sides of the Atlantic go some way to explaining differences in the speed and patterns of adoption between Nova Scotia and Britain; note that Walton's adoption curves show a rapid rise in adoptions of horse rakes after 1850 and of reaping and mowing machines after 1860; by 1870 his data suggest better than 1 in 4 of the Oxfordshire farms considered had horse rakes, reapers and mowers. Bittermann, "Middle River", pp. 149-154 has a relatively short, but perceptive, discussion of the introduction of horse rakes and mowing machines into this community, in which he argues much as I have here, and points out that the first mowing machine in Middle River was purchased by the agricultural society in 1869. Bittermann also makes the important point that mechanization of the harvest not only liberated men from much hard work but also largely removed women and girls from the fields (thus the observation in the late-19th century Gaelic poem from Cape Breton collected by Charles W. Dunn, Highland Settler: A Portrait of the Scottish Gael in Nova Scotia (Toronto, 1953), p. 117: "There's no work to be done on the hay now such as there used to be at one time. No longer do you see a man with a sharp scythe cutting it down by the exertion of his arms, but a device equipped with wheels and iron cogs, with bridled horses and a man steering them; No longer will you see a group of young girls going out with rakes in their hands, busily and diligently tidying off the field. Now you see a young boy climbing up on a horse drawn machine which gathers up the hay in piles as quickly as a wave races up the shore".) The labour-saving capacity of these and other implements is assessed in R.D. Hurt, American Farm Tools: From Hand Power to Steam Power (Manhattan, Kansas, 1985), pp. 85, 90. In a recent article, W.B. Rothenberg, "The Emergence of Farm Labor

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In pursuing the stock-breeding ideals of 18th century English improvers. Pictou farmers sought to develop heavy-bodied, short-legged, straight-backed cattle, sheep, and pigs. The emphasis on size, symmetry, and line was established early. These were the criteria by which Pictou bulls were judged deficient and rams rather more acceptable at the Middle River Show of 1820; fully in accord with them, the best boars at the same exhibition were pronounced "excellent in kind". Those, reported the West River Society Secretary, who "have any taste for swinish beauty might be highly gratified. I the one which gained the first prize was of the large eared kind and had a real hoggish appearance. The is now about twenty one months old and weighs alive 435 lbs. The second best is of a different kind & younger but in appearance not a great deal inferior, he weighs 408 lbs".91 These were impressive animals by any measure; dressed their carcasses would have weighed 300 lbs, or more. But we have no record of their like in Pictou County through the next forty years. Prize lists never again indicated the weights of those animals that won premiums; typically the offspring of imported boars (or bulls or rams) were said to be of "fine quality" or "excellent appearance", and no more. Still farm and merchant accounts do give us some measure of the size of Pictou animals at the market. Most revealing is the careful record kept by John Murray of New Rhynie farm in the 1850s. An active member of the Pictou Agricultural Society for many years and a winner of premiums for breeding sows, heifers, and rams in the 1840s, and for beef, oats, and butter in the 1850s, Murray "put up...two old pigs in the pen to fatten" on 11 September 1853. Two months later they were killed and sold in the Pictou market: "Three hundred fifty six lbs Pork at 3d Pr lb", wrote Murray in his accounts on November 16th. Other sales confirm the pattern. Twice in December, Murray's diary recorded the killing of a pig. Sold on the days following, their carcasses weighed 94 lbs. and 98

Markets and the Transformation of the Rural Economy: Massachusetts, 1750-1855", Journal of Economic History, XLVIII(1988), p. 560 (note 38) remarks on the slow rate of technological innovation in southern New England agriculture before 1850. Close examination of nearly 900 probate inventories for eastern Massachusetts revealed evidence of only 1 cast-iron plough. New York and northern New England produced more agricultural inventions than southern New England through the early 19th century; adoption rates might have been higher in these areas; further comparative investigations that place Nova Scotia in the wider context of the northeastern United States, and assess — as Rothenberg has done for southern New England — the influence of market expansion alongside other factors (such as organizational improvement and capital investment) would be welcome. See also W.B. Rothenberg, "The Emergence of Capital Markets in Rural Massachusetts, 1730-1838", Journal of Economic History, XLV (1985), pp. 781-808. A.E. Skeoch, "Developments in Plowing Technology in Nineteenth-Century Canada", Canadian Papers in Rural History, III (1982), pp. 156-77 provides an overview of technological changes in plow design.

91 West River Pictou Agricultural Society Report, 1820 (E. McLeod), RG8, vol. 6, no. 120, P.A.N.S.

lbs. Nor were the dressed weights of the other animals Murray took to market in 1853 notably high. The "big heifer" killed late in October yielded only sightly more than 300 lbs. of beef; a month later the carcass of a second cow weighed 394 lbs. Lambs sold in August may have weighed between 20 and 30 lbs; ewes killed for mutton perhaps twice as much. These figures from one of Pictou county's best managed farms are consistently below those taken as standard slaughter weights for stock in mid-19th century Lower Canada, and approximate those estimated for all farms in Middle River, Cape Breton, 20 years later. 92

Doubts about the real effectiveness of the societies' improved breeding programmes are only heightened by more impressionistic evidence. On West River in the 1820s there was "a general complaint" that the cows served by the Central Board stud "took bull again and there are but very few...in calf by him". Critics denounced the quality of the stock — often old, worn-out cows or ewes — that was put to the studs, and indicted Nova Scotian farmers for the poor quality of their pasture on which no stock could thrive. ⁹³ In their minds, it flew in the face of good Scottish common sense to bring cattle (and other animals) from the clover of warm barns and rich feed on British high farms to the heather of Nova Scotia's drafty hovels and rough fields. ⁹⁴ And there was something to this, for although members of the New Glasgow Society largely eschewed the importation of foreign breeds in favour of encouraging extra feeding, they noted with some satisfaction that they "took upwards of two thirds of the money awarded in prises...at the [1852] West River Cattle Show, though they laboured under the disadvantage of going entirely off their own grounds". ⁹⁵

"High encomiums" were often elicited by the grains and other crops entered for premiums at the various Pictou county exhibitions, but there is no evidence that their quality improved over time. Naturally, yields per acre and, to a lesser extent, the weight per bushel of prize-winning crops — the most commonly used measure of quality — varied with the summer weather. Overall though, weights of 64 lbs./bushel for wheat in 1820 compared well with the 62 to 63 lbs. recorded for that crop in the 1840s, and the best specimens of Pictou oats averaged 41-44 lbs. per bushel in both the 1820s and the 1840s. Yields were far more variable. First prize winners at West River exhibitions in the early 1820s reported wheat

⁹² J. Murray, Journal of New Rhynie Farm, MG100, vol. 194, no. 16, P.A.N.S.; F. Lewis and M. McInnis, "Agricultural Output and Efficiency in Lower Canada, 1851", Research in Economic History, 9 (1984), pp. 45-87; Bittermann, "Middle, River", Appendix IV.

⁹³ D. Ross to J. Young, 24 December 1822, RG8, vol. 6, no. 109, P.A.N.S. Ross, *Remarks*, pp. 25-6.

^{94 &}quot;Never bring a cow from the clover to the heather if you wish her to retain her good qualities": an old Scottish saying.

⁹⁵ New Glasgow Agricultural Society, Report 1852, RG8, vol. 14, no. 24, P.A.N.S.

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crops of 35, 52 and 36 bushels per acre; for oats the figures were 51, 72 1/2 and 55; for barley 54 1/2, 54 and 50 1/2.96 Taken at face value, these were outstanding yields. They might be compared, for example, with estimates that the 5,340 acres under crop in Maxwelton Township in 1849 produced wheat at 15 bushels an acre, barley at 20 and oats at 12, with similar figures for the River John, which placed wheat and barley yields even lower at 12 and 16 bushels per acre, and oat production at 15 bushels an acre, or with the 16 to 18 bushels per acre that Upper Canadian farmers characteristically took from their wheat lands.⁹⁷ But Pictou farmers knew that these celebrated yields were misleading standards against which to judge even the total production of those who won the premiums. Awards were for the "best acre" of a particular crop, but the produce of those acres was estimated by extrapolation from an "average rod" (or for potatoes two rods) "reaped, threshed, measured & weighed" in the judges' presence. "The results are flattering in a high degree", wrote the President of the West River Society, "yet may lead to very erroneous conclusions[.] these are the very best acres in the place and highly cultivated".98 And for all the careful efforts of the judges, most believed that the yields announced were "far too high". We have no way of estimating the precise margin of error, but it is revealing that yields on those Pictou Society members' farms inspected in 1861 were probably in the order of 15-18 bushels an acre for wheat and 20 bushels an acre for oats, slightly better, in the case of wheat, than the 13 or so bushels per acre averaged by all farmers in the Roger's Hill and West River census districts, and appreciably above the 11.5 bushels per acre recorded for all of Pictou County in 1871, but little different from the 16 bushels per acre calculated for the entire northeastern United States in the 1840s. 99 Although the comparison is very gross indeed, these

⁹⁶ These figures are taken from the prize lists of the East and West river societies in the early 1820s and of the Pictou and Maxwelton Societies for the 1840s. Variations are numerous if not quite endless. There are no data on prize-winning yields per acre for the 1840s.

⁹⁷ Reply to C.B.A. circular from Township of Maxwelton 8 January 1850. Return of Produce and stock &c. For the District of River John, 31 December 1849, RG8, vol. 14, no. 24, P.A.N.S. M. McInnis, "A Reconsideration of the Role of Wheat in Early Ontario Agriculture", paper presented at C.H.A. Annual Meeting, Guelph, 1984.

⁹⁸ A square rod or perch is approximately 30 square yards or 1/160th (0.625 per cent) of an acre. J. MacGregor to J. Young, 15 January 1822, 8 May 1824 and D. Ross to J. Young, 22 February 1822, RG8, vol. 6, nos. 136, 137, 149, P.A.N.S.

⁹⁹ P.A.S. Minutes, 1861. Figures for members' yields are only the broadest of estimates, inferred from production data for 1860 derived from the 1861 census, and the acreages in each crop reported in the 1861 survey, for the small handful of members located in the 1861 census returns. The 1871 yields are from the 1871 Census of Canada. U.S. estimates for the 1840s are in W.N. Parker and J.L.V. Klein, "Productivity in Grain Production in the United States 1840-60 and 1900-10", in National Bureau of Economic Research, Output, Employment and Productivity in the United States After 1800, Studies in Income and Wealth, 30 (New York, 1966), pp. 548-52.

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figures might be placed alongside careful estimates of wheat yields from England in the late 18th and early 19th centuries, which are firmly in the 20-25 bushels per acre range. Similarly, data from the Rothamsted experimental station in England — where unmanured land produced 12.6 bushels of wheat per acre, barely a third of the yield from otherwise-similar manured land — suggest that wheat cultivation remained relatively extensive on even the best farms of mid-century Pictou County.¹⁰⁰ For all their rhetoric of improvement, agricultural society members accepted that prizes might be awarded because they existed, rather than for outstanding performance alone. Thus the best turnips produced by a West River Society member in 1820 had suffered from an infestation of caterpillars; another entrant's were "in every point of view except the labour bestowed upon...[them] unworthy of a prize but as there was no other competitor and the bad crop was not owing to any defect in management", a second prize was awarded. Similarly Anthony Smith's ten acre field — in a "very rough state" with about 100 stumps and 20 heaps of large stones in it — was a second prize winner for Summer Fallow in 1820 because of the "great exertion" that had gone into it and because it had the requisite number of ploughings and harrowings. Both first and third prizes in this competition went to competitors whose work was well performed and whose fields were in good order. Yet Smith, with twice as much "cleared" fallow as his competitors, complained of the injustice done him, in an open letter to the Secretary of the Central Board. 101

Such dissent was not uncommon in the years that followed. All Pictou County agricultural societies faced it, and some were riven by it. Exhibition judges were naturally chosen from "the most active intelligent members of the society"; but, observed rueful officials of the Springville organization, "this very activity and intelligence enables them to draw the greater number of prizes which brings on

¹⁰⁰ R.C. Allen and C.O. Gráda, "On the Road again with Arthur Young: English, Irish and French Agriculture during the Industrial Revolution", Journal of Economic History, XLVII (1988), pp. 98-116; M. Turner, "Agricultural Productivity in England in the Eighteenth Century: Evidence from Crop Yields", Economic History Review 35 (1982), pp. 489-510; J. Caird, English Agriculture in 1850-51, G.E. Mingay, ed. (London, 1968). Caird estimated 26.7 bushels per acre; the lowest estimate is the "average" for the 1790s at 19.1 bushels per acre, which is now considered the least reliable estimate. The Rothamsted data are cited by G. Clark, "Productivity Growth without Technical Change in European Agriculture before 1850", Journal of Economic History, XLVII (1987), pp. 422-3 from A.D. Hall, The Book of the Rothamsted Experiments (London, 1919), pp. 35, 55, 63, 72, 84, 93; Clark's conclusions are questioned by J. Komlos, "Agricultural Productivity in America and Eastern Europe: A Comment", Journal of Economic History, XLVIII (1988), pp. 655-69.

¹⁰¹ E. McLeod to J. Young, 18 January 1821; Return of Competitors for prizes, 7 April 1820, J. Bonyman and J. Oliver to J. Young, 6 December 1820, RG8, vol. 6, nos. 116, 120, 124, P.A.N.S. Acadian Recorder (Halifax), 25 November 1820.

the charge of partiality with all the ill-will and distrust following in its train". 102 The situation was only compounded by the subjectivity of judging in many categories of competition, by poor specification of the terms under which prizes would be contested, and by the disputatious character of some of those involved. Events on the East River during the 1820s are illustrative. For all his success in local exhibitions, James MacGregor was both a poor loser and an acerbic critic of other winning entries in these competitions. In 1820 he and John Fraser argued over the comparable value of turnip bulbs and tops, and over whether weight or volume should be used as a measure of production. A year later MacGregor wrote: "our contenders for lime did not act a manly part. I put on the land six times more lime than he who got the premium". Again in 1823, after taking third prize for oats, he was compelled to claim that his "were in fact better than the second prize oats but they were later and got much rain whereby they lost nearly 20 per cent". Elsewhere, competitors argued that slightly inferior crops from demonstrably poorer land should be awarded premiums ahead of the better produce of good rich soil. Losers alleged that those who defeated them had distorted the purposes of the competition by lavishing attention, and manure, on small areas of their farms to ensure uncommonly high yields. Almost always it seemed that premiums for livestock went to the progeny of animals purchased by the societies. 103

There were efforts to deflect criticism and resentment. In 1840, the Pictou Society excluded winners of the first and second prizes in its ploughing match from the next competition, and in 1842 it restricted entry in its ploughing match to "natives". Similarly, first prize winners were banned from the following exhibition of the Maxwelton Society in the late 1840s (Figure 3). Judges were praised as "men of accuracy". And occasionally there were sermons against the pursuit of prizes by the practice of "bad economy". So, for example, the Central Board reminded organizers of a Cattle Show in Pictou that profit was "the Chief Object of all who rear and fatten animals", and that no premiums should be awarded to animals "fattened at the expense of economy". But there is no evidence to suggest that the detailed accounts of stock raising costs that the Board called upon competitors to produce were ever provided. 104

¹⁰² Third Annual Report of Springville Agricultural Society, 1855.

¹⁰³ J. MacGregor to J. Young, 26 January 1821, 27 February 1821, 19 April 1822, 26 January 1824. Report of West River Pictou Agricultural Society, 18 January 1821, E. McLeod to J. Young, 22 December 1823, RG8, vol. 6, nos. 120, 131, 133, 144, 148, 153, P.A.N.S.

¹⁰⁴ P.A.S. Minutes, 24 January 1840, Report of P.A.S. 1842, RG8, vol. 14, no. 24, P.A.N.S. Handbill for Maxwelton Agricultural Exhibitions, 1846-7, RG8, vol. 14, no. 24, P.A.N.S. D. Ross to J. Young, 22 February 1822, RG8, vol. 6, no. 137, P.A.N.S. Handwritten draft of notice for competitors at Pictou exhibition (n.d.), RG8, vol. 12, no. 3, P.A.N.S.

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The consequences were often divisive. In 1854 the Merigomish [Maxwelton] Society was wracked by "an unhappy difference", that saw the executive (who favoured the Merigomish name applied to the society between 1850 and 1854) twice voted out of office by a group who eventually re-instated the Maxwelton Agricultural Society title of the 1840s. Less contested was the significant reshaping of the Pictou Society executive in 1856, undertaken to shift the long-time balance of influence on the committee from the Town of Pictou and its immediate vicinity to the West River district. Given the close connection between power and premiums in the county societies, the geographical implications of this shift were surely not irrelevant, especially as the Merigomish-Maxwelton conflict apparently entailed a shift in the locus of that society's affairs from French River to the Barney River district. 105

At issue was access to a considerable pork-barrel. In the good years of the 1820s and 1840s government grants were double or more the amount that local agricultural societies raised in subscriptions. Even in the 1850s they were worth having. It was no co-incidence that deposed Merigomish Secretary, William Smith, refused to make up the society's accounts for the previous year, for without them the new Maxwelton executive would be unable to draw the Provincial grant. Through the years, agricultural society members systematically reserved to themselves first and cheapest access to the seeds and breeding stock, the implements and information that the societies brought into their districts with government aid. Then they generally served their interests by requiring society membership of exhibition competitors. 106 At its most restrictive, this requirement excluded all but those who belonged to the society a month before the competition. No fortunate "Plodhole" was going to steal away a grant-funded premium from a deserving society member simply by virtue of having made some uncommonly good butter or by having reaped well from some exceptionally productive new-cleared land. For all the rhetoric of rivalry, competition, stimulus and emulation among those who were hearty in the cause of agricultural reform, the agricultural societies to which they belonged quickly became conduits for the distribution of government largesse to small and relatively prosperous coteries of provincial farmers.

Nor in the cold light of a later day should we expect them to have been much else. They and the ideas they promoted were essentially irrelevant to the majority

¹⁰⁵ J. McKay and G. Murray to President of C.B.A., 20 February 1854, 10 April 1854, Report of Meeting at Barney's River, 15 February 1854, P.A.S. Report 1855, all RG8, vol. 14, no. 24, PANS

¹⁰⁶ When this condition did not apply, competitors who were not society members were generally required to pay an entry fee equal to 20 per cent or 25 per cent of the 1st prize in each of the classes of competition that they entered.

of farmers in pre-Confederation Nova Scotia. Strategies for the maintenance of soil fertility — even at the cost of immediate profit — were at the very core of the improvers' land management schemes. In densely-settled Britain, where so many farmers were tenants, and landlords were concerned to secure and enhance the long-term returns from their well-developed properties, they made some sense. But horizons were closer on the margins of empire. Where most families owned more land than they could cultivate effectively, where people were concerned first to survive and then to prosper, and the settlers' task was to make a farm from the forest, few would — indeed could — sacrifice hard-won returns to future promise. Conservation (or soil-maintenance), as the American historian Roderick Nash has written in another context, is a full-stomach phenomenon. 107

Beyond this, there remain many questions about the applicability of specific "reform" strategies to Nova Scotian circumstances. The improvers' enthusiasm for naked summer fallows and smothering crops provides a revealing case in point. Although no longer favoured by British improvers of the early 19th century because it was "wasteful" of land, (triennial) summer fallowing was an old European technique of weed control, for which both Pictou county agricultural societies offered premiums in the 1820s. But settlers the length of North America had long-since discovered that land cropped for several years continued to yield adequate returns, and that left uncultivated it was soon recolonized by forest plants. Besides, repeated ploughings and harrowings were time-consuming tasks that fell in the farmers' busiest months. Despite all encouragements, there were few competitors for summer fallow premiums, and the East River Society ceased offering them in 1822. By the 1840s Pictou improvers followed their British leaders in advocating the use of smothering crops — especially peas and clover - to keep down weeds and to replenish the soil. But again neither was an effective counter to the recolonization of recent clearings by forest. Thus the improvement-minded colonial farmer faced frustrations unimagined by those who preached the virtues of rotation in England. At times, it seemed that everyone who began "new plans and improvements" had to "submit to discouraging expense and loss and even to disappointment in the success of many useful experiments". 108

¹⁰⁷ R. Nash, "The Exporting and Importing of Nature", *Perspectives in American History*, XII (1979), pp. 517-60. See also the discussion with reference to the rehabilitation of run-down New England farms in Danhof, "The Farm Enterprise" (note 66 above).

¹⁰⁸ J. MacGregor to J. Young, 19 April 1822, RG8, vol. 6, no. 144, P.A.N.S.; K. Kelly, "The Transfer ... on Agriculture", and "Notes on a type of mixed farming practised in Ontario during the early nineteenth century", The Canadian Geographer, 17 (1973), pp. 205-19 addresses some of these questions in the Ontario context. See also D.B. Thorp, "Transplanting a Land Use System: Moravian Efforts to Transfer Agricultural Technology from Germany to North Carolina", Journal of Forest History, 31 (1987), p. 25.

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Cost was also an obstacle to the spread of improvement. Turnips were recognized as an expensive crop in Britain. Encouraged in Nova Scotia as an alternative to summer fallow, as a crop that would provide valuable fodder and allow farmers to keep down weeds, they were essentially impractical. Their proper cultivation meant planting in rows, to allow for hoeing as the crop grew, and entailed use of a drill for sowing. But only a small fraction of the 3,500 farms in Pictou county in the 1850s had drills, and where labour was scarce and expensive, the real costs of repeated hoeing were prohibitive. So, to a lesser degree, were the costs of stabling stock, collecting and keeping manure according to the book, and carting it to the fields. When it is remembered that data from English experimental farms of the mid-19th century suggest that the ratio of wheat grain to straw (by weight) was higher on low-yielding, unmanured land than on intensively-cultivated plots, and that higher yields came from a greater number of plants per acre rather than any increase in the size of grains, it is clear that the burden of manuring provided little if any saving of (expensive) labour in the harvesting and threshing of the crop. In this respect, at least, the benefits of more intensive cultivation in areas with a relative abundance of land are moot. 109 Rarely though they kept the detailed records and accounts that improvers considered essential, practical farmers in Pictou and the wider province had an acute intuitive appreciation of these things. So they kept their stock in the fields, "turn[ed] up the sluggish soil, sow[ed] and reap[ed] in due season" and tended, as best they could under the circumstances, to the scores of tasks that confronted them. Regular membership in an agricultural society was hardly a sensible investment for those who lacked the leisure to attend meetings, who worked farms that were neither large nor productive enough to permit experimentation with new — and often costly improved agricultural techniques, and who had little to buffer them against the vicissitudes of weather and chance to which all who till the soil are vulnerable. Understandably most Pictou farmers were reluctant to spend 5s a year — for which they might have bought 1 lb. of tea, 1 lb. of sugar, half a bushel of salt and 20 lb. of codfish — on agricultural society dues. 110

This is not to deny that many took a sporadic interest in agricultural society affairs. Ordinary farmers joined the crowds at agricultural fairs and exhibitions held in the county. They might readily find the 3d or so entry fee demanded at many of these events to see the grains and the stock, the butter, cheese, and homespun that their fellow Pictonians had brought to display; to share news (and perhaps experience) with friends; and to break the isolation and routine of the agricultural year. Although questions might be raised about the educational

¹⁰⁹ Clark, "Productivity Growth", p. 423.

¹¹⁰ Report of New Glasgow Agricultural Society, 1843, RG8, vol. 14, no. 24, P.A.N.S. Murray, Journal of New Rhynie Farm.

value of stock and crop competitions — "here was spectacle without instruction", in the judgement of Harold Fox, writing about English shows — these gatherings were probably more effective than the printed word in informing the rank and file of farmers of the potential for change. By their attendance settlers surely learned something of the implements of, and approaches to, husbandry that fascinated local improvers; some were, no doubt, brought to experiment in a small way with new strains of seed wheat or oats. But these were tiny gains, that had little effect upon the countryside of Pictou County in the years before 1870, although they might have prepared the ground for more thoroughgoing change in the latter part of the century had the circumstances of Nova Scotia development been different.¹¹¹

For all their claims of success, the agricultural societies of Pictou County never realized their ambitions to overcome the "dogged obstinacy" of county settlers, to stimulate general activity of "mind and body in promoting agricultural pursuits" and to sweep back the barriers of ignorance and prejudice among the populace at large. 112 They did provide scattered fora, in which small groups of enthusiasts could preach to equal numbers of converts. But beyond the narrow confines of their membership — never much if any more than five per cent of farmers in the county — their impact was severely limited. Far from exciting a widespread spirit of emulation by "the display of verdure on the ground, of bushels in the barn and...of money...[in] the pocket", the county's leading

¹¹¹ Fox, "Local Farmers' Associations", p. 49. For all the quality and relative richness of work on the post-Confederation Maritimes, we still have only the most general treatments of the rural economy after 1867. Among them, for example, are general overviews, such as M.J. Troughton, "From Nodes to Nodes: The Rise and Fall of Agricultural Activity in the Maritime Provinces", in Day, ed., Geographical Perspectives, pp. 25-46; broad essays in political economy, such as A. Winson, "The Uneven Development of Canadian agriculture: farming in the Maritimes and Ontario", Canadian Journal of Sociology, 10 (1985), pp. 411-38 and P. Sinclair, "From peasants to corporations: the development of capitalist agriculture in Canada's Maritime Provinces", in J. A. Fry, ed., Contradictions in Canadian Society (Toronto, 1983), and sorely dated studies such as A.B. Balcom, "Agriculture in Nova Scotia since 1870", Dalhousie Review, 8 (1928), pp. 29-43. P. Wood has endeavored, recently, to start some hares by emphasizing the importance of links between the rural economy and industrialization in the region in the years after 1870 (P. Wood, "Barriers' to Capitalist Development in Maritime Canada, 1870-1930: A Comparative Perspective", unpublished paper presented at the Second Canadian Business History Conference, Victoria, B.C., March 1988). L.D. McCann has been exploring related issues from a very different perspective and his "Living a double life': Town and Country in the Industrialization of the Maritimes", in Day, ed., Geographical Perspectives, pp. 93-113 is thought-provoking. Fundamental groundwork, upon which further understanding must rest, is being done by R. MacKinnon, "The Agricultural Geography of Nova Scotia 1850-1950", Ph.D. Thesis, University of British Columbia, in progress.

¹¹² Report of New Glasgow Agricultural Society, 1843; Response of East River Pictou Agricultural

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agricultural improvers helped to make clear the inappropriateness of much reform doctrine to Nova Scotian circumstances by failing to make their own farms profitable models of reform practice. Meanwhile, and despite the contempt in which they were generally held by the improvers, most Pictonians and their fellow Nova Scotians devoted enormous hard work and great practical wisdom to shaping lives, farms, communities and countrysides in conditions radically different from those envisaged by the agricultural reformers, and not always of their own choosing. Whatever the judgements of their articulate contemporaries, the story of how they "made their country be" is an important tale that has yet to be told. 114

Society to J. Young's questionnaire [1825], RG8, vol. 5, no. 65, P.A.N.S. But then even that beacon of agricultural improvement in 18th century England, Thomas Coke of Norfolk, remarked that no tenant copied his growing of wheat for nine years, or his use of the drill for 16, and that his improvements spread at a rate of less than a mile a year. Against this, the local influence of George Culley of Northumberland, who introduced turnip drilling and Dishley sheep to produce "the most Money from a given Quantity of Food" was considerable, although his neighbours conspicuously failed to follow his other less-profitable innovations and introductions of improved agricultural technique. See Macdonald, "The individual and agricultural change", pp. 12-18.

- 113 Report of New Glasgow Agricultural Society, 1843.
- 114 When it comes to be written, this tale will have to engage, in a way that this essay cannot, an important question in the historiography of rural North America: the extent to which rural dwellers resisted transformation in defence of "an economy, a polity and a way of life at odds with the emergence of ... [a] capitalist America" [see S. Hahn and J. Prude, eds., The Countryside in the Age of Capitalist Transformation: Essays in the Social History of Rural America (Chapel Hill, North Carolina, 1985) p. 28]. For a spirited critique of many of the implicit assumptions of the "moral economy" arguments advanced in the case studies of this book, see W. B. Rothenberg, "The Bound Prometheus", Reviews in American History, 15 (1987), pp. 628-37; for arguments for rational (rather than moral) economic behaviour among early American farmers see works by Rothenberg cited above.