## Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.		ii e b r	ui a ét xemp ibliog eprod	é poss laire q raphiq uite, o méth	ible d ui son jue, q u qui	tena ni ber it ben e se b	rocur t-être ivent ent ex	lleur e er. Le uniqu modifi ciger u ilmage	s déta es du ier un ne m	ails de point e imaç edifica	cet de vu je ation	16
Coloured covers/		Γ		Colour	ed pag	ges/						
Couverture de couleur		L	J P	ages (	e cou	leur						
Covers damaged/		٢	I I	ages d	_							
Couverture endommagée		L	P	ages e	ndom	megô	23					
Covers restored and/or laminated/		[	}	-				minate				
Couverture restaurée et/ou palliculée		L	} }	ages r	estaur	' <del>6</del> 65 61	:/ou p	ellicul	ees			
Cover title missing/		ſ,		_				ed or f				
Le titre de couverture manque		L	<u></u>	'ages d	ecolo	rees, 1	tacnet	ées ou	piqu	ices		
Coloured maps/		ſ	i	ages d								
Cartes géographiques en couleur		Ĺ	r	ages d	etacn	662						
Coloured ink (i.e. other than blue or black)/		Γ		howti	-							
Encre de couleur (i.e. autre que bleue ou noire)		Į.	'	ransp	arence	3						
Coloured plates and/or illustrations/		Γ		Quality	-				_			
Planches et/ou illustrations en couleur		<u>i</u>	<u>~</u> (	auante	inega	116 <b>a</b> s	ı ımp	ressior	1			
Bound with other material/ Relié avec d'autres documents		Γ	1/1	Contine Paginat								
Helle avec d autres documents		L	r	zymat	ion c	Jiitiii:	ue					
Tight binding may cause shadows or distortion along interior margin/				aciude Compre								
La reliure serrée peut causer de l'ombre ou de la		_		-								
distorsion le long de la marge intérieure				litle or Le titre				-				
Blank leaves added during restoration may appear				.c (1111	e ue r	cirte	e pio	<b>4</b> 16111.				
within the text. Whenever possible, these have been omitted from filming/				fitle pa Page de	_			ະດກ				
Il se peut que certaines pages blanches ajoutées		L	·	age ut	, and	ue ia	110101	3011				
lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont		Γ		Caption Fitre d			la liv	raicon				
pas été filmées.			ا فسست	ine u	e Geh	ai ( ue	10 111	I alsoli				
				Masthe Sánári	-	árind	inue	) de la	livesi	eon.		
				30116114	que (p	enou	iiques	, ue 1a	ii vi ai	2011		
Additional comments:/ Commentaires supplémentaires:												
This item is filmed at the reduction ratio checked below/ Ce document est filmé au taux de réduction indiqué ci-dess	ous.											
10X 14X 18X		22 X				26X				30×		
							-	/				
127	×××	<u></u>	<u></u>	24 ¥				702				32 ¥



Published under direction of the Board of Agriculture of Nova Scotia.

Omnium rerum, ex quibus aliquid adquiritur, nihil est agricultură melius, nihil uberius, nihil homine libero dignius.—Cicero: de Officiis, lib. I, cap. 42.

VOL. IV.

HALIFAX, N. S., NOVEMBER, 1883.

No. 39.

ANNUAL RETURNS have been received from Agricultural Societies, as follows, 1st January, 1884:—

Annapolis Co.—Annapolis Ag. Soc., Laurie, Nictaux, Eastern Annapolis, Clarence, Bridgetown, Faradise, Clements

Antigonish Co.—North Grant, St.

Cape Breton Co.—Sydney Mines, Boulardarie, Sydney Forks, North Sydney.

Colchester Co.—Waugh's River, Earlown, Stirling, Brookfield, Shubenucadie, Bass River, Lower Stewincke, London-derry.

Cumberland Co.—Malagash, Mapleon, Parrsborough, Minudie, Amherst, Middleboro', District Three.

Digby Co.—Hillsborough, Weymouth, Northern, Central.

Guysborough Co.— Argyle, Guysborough, Milford Haven, New Town, Athol.

Halifax Co.—Halifax County, Lower Musquodoboit, Upper Musquodoboit.

Hants Co-Union, Falmouth, Windsor, Progress, Newport.

Inverness Co.—River Dennis, Strathome, N. E. Margaree, Whycocomagh.

King's Co.—King's County, W. Cornvallis, Tremont, Central, Aylesford, Union, Farmers'.

Lunenburg Co.—Centreville, Bridgerater, Mahone Bay, Lunenburg.

Pictou Co.—Millbrook, Picton, New shall lasgow, River John, Lorne, Pine Tree. tion.

Queen's Co-Liverpool, Mutual Benefit, North Queen's.

Richmond Co.-Isle Madame.

Shelburne Co.—Shelburne, Granite, West Passage.

Victoria Co.—Middle River, Baddeck, St. Ann's.

Yarmouth Co.-Yarmouth County.

As we rarely hear complaint in regard to the milk supply of Halifax, it is to be presumed that the article supplied to citizens is of faultless quality. That it is not so in other places is shown by frequent prosecutions, incarcerations, in jails, and lampooning in the papers. A new milk can has been invented for the purpose of superseding prosecutions and punishment of milkmen in places where such practices are in vogue. There is a vertical slit or window in the can; this is closed with glass, and the glass is marked with a scale, so that a purchaser of mila can see if the proper quantity has been supplied to him. A lactometer is fitted inside so as to be seen from the outside, through the glass. The purchaser sees by the lactometer whether the milk is pure, and, if not, what proportion of water he is paying for.

If any of our readers know of the existence of wild grape vines anywhere in Nova Scotia or Newfoundland, we shall feel much obliged for the information.

MRS. E. M. JONES, Brockville, Can., has shown her Jersey cattle at aix fairs and has taken forty five prizes, two gold medals, three silver medals and one bronze medal.

A DESPATOR from Ottawa, Canada, says that according to returns received by the Department of Agriculture, the number of cattle shipped from Canadian ports up to Nov. 1 of this year was 50,655; sheep, 100,113. Space had been engaged on steamers leaving Boston and Portland before January 1 for 5,019 cattle and 13,612 sheep. The exports for the year will be 55,674 cattle and 113,725 sheep, against 35,738 cattle and 75,905 sheep in 1882.

THE following notices are abridged from the Country Gentleman:—

At a Sale of Short-Horns by Messrs. Hall & Dale at Clarksville, Tenn., 45 head were disposed of for \$4,410.26 cows and heifers averaging \$108.8, and 19 bulls \$83.15.

Ir appears that Guano, instead of being used as a fertilizer, may be manufactured directly into Tea and Coffee, and when this is accomplished Agriculture will become, so far, a needness art. It is proposed to manufacture Caffeine, the active principle of Coffee and Tea, from Peruvian Guano. Caffeine is nearly related to uric acid and guanine, these can be converted into xanthine, and this into the control of the principle of Cocca and Chocolate) and into Caffeine.

NOMINATIONS BY OFFICERS OF AGRICULTURAL SOCIE-	
TIES OF REPRESENTATIVES TO THE CENTRAL	Colchester County:
BOARD, 31st DECEMBER, 1883.	Onelow Ag. Soc
Applications of the contract o	Earkewn Ag. SocIarael Longworth.
District	Tatamagouche Ag. Soc
No. I.—Halifax and Lunenburg Counties.	Base River Ag. Soc
Halifax County:	Londonderry Ag. Boc
· · · · · · · · · · · · · · · · · · ·	Brookfield Ag. Soc
Halifax Co. Ag. Soc	Stirling Ag. Soclarael Longworth.
Lower Musquodoboit Ag. Soc Chas. N. Sprott, Mid. Musquo'bt.	Waugh's River Ag. Soc
Upper Musquodoboit Ag. Soc David Archibald.	
	Cumberland County:
Limenburg County:	1
	District 8 Ag. SocIsrael Longworth
Bridgewater Ag. Soc	Middleboro' Ag. Soc Israel Longworth. Blalagash Ag. Soc
Lunenburg Ag. Soc	Minudie Ag. Soc
Centraville Ag. Soc	Amherst Ag. SocJ. Hiram Black.
Committee and Management Transfer Committee and Committee	Mapleton Ag. Soc
T Warrala Ormania com Astronomata	Brahicion 128. Cociation
I.—King's, Queen's and Annapolis.	
King's County:	V.—Piotov, Antigonish, Guysborough.
King's County Ag. Soc	Pictou County:
Aylesford Ag. SocCol. W. E. Starratt-	Lorne Ag. Soc
Central Ag. Soc	New Glasgow Ag. SocJames Kitchin.
Farmers' Ag. SocJonathan Rand.	Hillbrook Ag. Soc
Union Ag. SocJonathan Rand.	Tine Tree Ag. Soc
Tremont Ag. SocCol. W. E. Starratt.	River John Ag. SocJas. Kitchen, River John.
W. Comwallis (Somerset) Ag. Soc Jonathan Rand.	Pictou Ag. Soc
	,
Annapolis County:	Antigonishe County:
Annapolis Ag. Soc	•
Bridgetown Ag. Soc	Bayfield Ag. Soc
Clarence Ag. Soc	St. Andrew's Ag. Soc D. Matheson.
Laurie (Spa Spring) Ag. SocJonathan Rand.	North Grant Ag. Soc D. Matheson.
Paradise Ag. Soc	210140 01404 118, 000 111111111111111111111111111111
Nictaux Ag. SocJonathan Rand.	Guysborough County:
Eastern Annapolis Ag. SocCol. W. E. Starratt.	Guysborough Ag. Soc D. Matheson.
Clementeport Ag. Socc	Argyle Ag. Soc
, A. A. M	Milford Haven Ag. Scc D. Matheson.
Queen's County:	
Liverpool Ag. Soc	W. C Danier Description Languages and Vices
M. B. Fleasant River Ag. Soc Jonat ian Rand, Canning.	VI.—Cape Breton, Richmond, Inverness and Vict
Kempt Agr. SocJonathan Rand.	Cape Breten County:
North Queen's (Caledonia) Ag. SocCol. W. E. Starratt.	
	Sydney Mires Ag. Soc
II.—Digby, Shelburne, Yarmouth.	Boulardarie Ag. SocJohn McKeen, Mabou.
Digby County:	Christmas Irland Ag. SocJohn McKeen.
	Sydney Forks Ag. Soc John McKeen.
Digby Central Ag. Soc	North Sydney Ag. SocJohn McKeen.
Weymouth Ag. Soc	East Bay Ag. Soc.
Hillsburgh Ag. Soc	
Digby Northern Ag. Soc	Inversess County:
Stallanna County .	Mabou and Port Hood Ag. Soc John McKoez.
Shelburne County:	Whycocomegh Ag. Soc
Shelburne Ag. Sos	River Dennis Ag. Soc
Barrington West Passage Ag. SocChar. E. Brown.	N. E. Margaree Ag. FocJohn McKeen.
Upper Ohio Ag. Soc	Le Moine Ag. SocJohn McKeen.
Yarmouth County:	St. of Canso Ag. SocJohn McKeen.
_	Strainlomo Ag Soc John McKeen.
Yarmenth Co. Ag. Soc	
West Pubnico Ag. Soc	Richmond County:
	Lennox Ag. SocJohn McKesn.
IV.—Hants, Colonester, Cumberland.	Isle Madaine Ag. SocJohd McKeen.
Hants County:	Richmond Ag. SocJohn McKeen.
· · · · · · · · · · · · · · · · · · ·	
Union of Maitland Ag. Soc Israel Longworth, Truro.	Victoria County:
Newport Ag. Soc	1
Windsor Ag, SocAllen Haley, M.P.P.	St. Ann's (South Gut) Ag. SocJohn McKeen.
Progress Ag. Soc	Baddeck Ag. Soc.
Shubenacadie Ag. SocIsrael Longworth.	Middle River Ag. SoJacob S. Hart.

Those of our readers who take an interest in Thoroughbred Short Horn Durham Cattle will recollect the famous Cow Cawood's Rose, purchased by Prof. Lawson, at Mr. Cragg's sale in Lancashire, England, and brought to Nova Scotia in the S. S. Nova Scotian in 1875. Most of the progeny of this cow were exported to Chili, but one was retained in England, having been purchased by the Earl of Bective for the Underley Herd for a hundred guineas. This was a White Heifer, and the Earl got 'rom her a Heifer Calf, the Rose of Underley. Cawood's Rose, the old cow, mother of the whole Cawood Rose family, was exhibited and took first prize at the Provincial Exhibition at Truro in 1876.

Her first calf, after arriving in Nova Scotia, was "White Rose of Lucyfield,"

sired by the English Bull Captain Trogunter, 28136. Subsequently she had a bull calf by Viscount Oxford; this calf came on Christmas day, and was named St. Nicholas. He took first prize at the Provincial Exhibition in Truro in 1878, was sold to the Union Agricultural Society of Cornwallis for \$500, and got excellent prize-taking stock.

The old cow Cawood's Rose caught a cold at the Kentville Exhibition, and never recovered. Her daughter the "White Rose of Lucyfield," gained first prizeat Provincial Exhibition, Truro, 1878, and first prize at the Dominion Exhibition held in Halifax, in 1881. She has had three bull calves, viz: Lord Lorne, sold to the Tatamagouche Agricultural Society, and the second and third St. Nicholas, which took the first and second prizes respectively, in their class as two-

year old Bulls, at the recent Dominion Exhibition at St. John, 1883. She has also had two Heifer Calves, one "Second White Rose," now herself a mother, and the other dropped on the 17th day of the present month of December. This is a beautiful roan Heifer Calf, and has been named "THE DUCHESS CAWOOD," to indicate the great percentage she has of the original Cawood Rose blood, combined with that of Viscount Oxford, who was largely a Duchess Bull through the Baron Oxfords, Grand Dukes, Knightleys and Thorndales. The Duchess Cawood is the result of a careful experiment in in and-in breeding, as will be seen at a glance by the subjoined graphic pedigree. The ancestry is here traced back only to the Cawood Rose source, the full pedigrees of ancestors will be found in the published Herd Register.

Sire: Viscount Oxford; 15. Sire: Lord Lorne Sire: St. Nicholas Sire: Second of Lucyfield, 37. of Lucyfield, 27. St. Nicholas of Lucyfield, 122. Dam: CAWOOD'S ROSE, 2. Dam: White Rose Sire: Capt. Tregunter, 28136 Eng. of Lucyfield, 14. THE DUCHESS Dam: White Rose CAWOOD. of Lucyfield, 14. Dam: CAWOOD'S Rose, 2. Sire: Capt. Tregunter. 28186 Eng. Dam: White Rose of Lucyfield, 14. Dam: CAWOOD'S Ross. 2.

We copy he following article from the Country Gentleman. The perfectly complete way in which Nova Scotia and Nova Scotian breeders are ignored is worthy of attention. We are assured, however, that our St. John friends did not mean to pass off all the Jerseys shown as their own:—

The Jersey breeders of New Brunswick have reason to be well satisfied with the foundation stock they have started with, and they have a right to be proud of the results of their breeding so far. At the cattle show held at St. John last month 150 Jerseys were shown, and they were, with few exceptions, of a very high order of merit. Nor was their breeding inferior to their

appearance. The blood of Rioter 2d, Victor Hugo, Stoke Pogis, Rajah, Sam Weller, Colonel and Countess form the foundation of the New-Brunswick herds. One could hardly ask a breader or better foundation upon which to build. It is particularly fortunate that our Canadian friends are possessed of such excellent and varied strains of blood, for in consequence of absurd laws, promulgated from Lordon, no stock of any description, I am told, can be sent from the United States to Canada. [This is not the case. Healthy cattle may be imported from the States to Canada via Sarnia. Our laws are not "promulgated fre London," but from Ottawa.—Ed. J. A. i

St.John is a picturesque, healthy, wide-awake town, with a magnificent harbor and an extensive trade. As breeders of most excellent herses of various kinds, the farmers of New Brunswick and Prince Edward Island have long been favorably known. They have turned the same skill and energy toward the breeding of Jersey cattle. In the exhibition of this year, the arrangements for judging cattle were admirable; had this not been the case, the labor of the judges would have been very great, so numerous and excellent were the animals in many classes.

It will interest our Victor Hugo friends to know that the first prize yearling bull was a double Lord Lisgar;

his sire, also first in his class, united the blood of Victor Hugo, Pilot, Rajah, Sam Weller and Motley. While the older animals were, as a rule, very good, the young stock reached a very high average. The young were better than the old. It is not everywhere that such praise can be given.

Among the leading breeders of this region are A. C. Fairweather of St. John; D. Magee, Quispamsis; Magee Bros., St John; Messra King, H. D. Troop and Wm. Shaw, all of St. John. What about Colonel Starratt, of Paradise! C. E. Brown and others of Yarmouth; H. Townsend, of New Glasgow; J. Blanchard and I. Longworth, of Truro, J. Kitchin, River John?—En. J. A.]

The gentlemen of New Brunswick and Prince Edward Island show a hearty enjoyment of out-door life and an enthusiastic interest in the rearing of live stock, which is delightfully English in its thoroughness, and might well be imitated by Americans One meets also with a broad, generous Anglo-Saxon welcome in St. John, which has not a little to do with the pleasure of visiting and pleasure of remembering.

The present centennial exhibition, under a very able and energetic management, was a credit to the Dominica. A visit to this exhibition and cattle show, at the invitation of the managers, and under the guidance of our very hospitable consul, Gen. Warner, was an occasion to be long and pleasantly remembered by those of us from "the States" who were so fortunate as to be there, From St. John to San Bernardino is "a far cry," as the Scotch say; nevertheless one of my American companions thought several of the New Brunswick Jerseys worth purchasing, and at good figures, to send all the way to California. R. G, JR. Berkshire County, Mass.

Were not some of these Nova Scotian Jerseys ?

We ought to add that whilst the judging of other thoroughbred cattle at St. John was all that could be desired, there were grumblings about Jerseys. It was said, and by some believed, that the very best Jersey bull on the grounds at St. John, and the very best Jersey cow, did not receive a ticket. Both were from widely apart localities in Nova Scotia.—ED. J. A.]

SARAH BERNHARDT, who acts in one threatre and manages another, has still time to run a creamery upon her farm, and to send its produce to Paris. Upon the bills of fare, at certain restaurants, will be found "Bernhardt pats and cheeselets,"

#### THE NEW ORLEANS INDUS-TRIAL EXHIBITION.

We have just received one of the most complete and ably prepared announcements of an Exhibition that we have ever seen. It is that of the World's Industrial and Cotton Centennial Exposition to be held at New Orleans in 1884-5. The following particulars will interest our readers:—"It was inaugurated by a resolution of the National Cotton Planters' Association of America at its annual convention October 1882. It was originally the intention to designate it simply the World's Cotton Centennial; the year 1884 being the centennial anniversary of the first exportation of cotton from America, but subsequently this intention was abandoned, and the scope of the enterprise was enlarged by making it a World's Industrial Exposition, thus imparting a national and international character, which is still more emphatically confirmed by the act of Congress creating the Exposition.

The immediate cause of the determination to hold such an Exposition was the expression of a general desire among the more progressive agriculturists and industrialists of the Cotton States to provide a means whereby the people of all nations could obtain a knowledge of the resources, capacity and products of the Southern States of America, and at the same time to enable the people of these States to align themselves with the universal spirit of progress which marks the present era.

To inaugumte an Exposition commensurate with such requirements, the Congress of the United States passed an act, which was approved February 10,

In accordance with the provisions of this act, the location of the Exposition, was, on April 24th, 1883, fixed at the city of New Orleans, and ample funds have been provided for the purpose, while the city government has given the use of its magnificent park, and a liberal donation in aid of the work.

The location is peculiarly fitting, inarmuch as New Orleans is the great metropolis of the country primarily intended to be benefitted, and the gateway to and from Mexico, Central America and the West Indies, the immense resources of which, are now being so rapidly developed, while their commercial interests are being so greatly expanded under the vigorous influence of American enterprise; the building of railways, the estublishment of steamship lines, and the colonizing of commercial and industrial enterprises.

An important factor in this grand development has been the Eads South Pass Jetties, giving a permanent channel of the civilized world, but yielded

to the sea of sufficient depth for the largest class of vessels, which, with her fifteen miles of deep water front, places New Orleans second to no other city in the world in point of shipping facilities.

The President of the United States, under date of September 10th, 1883, issued a proclamation, inviting representation and participation by all foreign nations.

Assurances have already been received that the invitation will be very generally accepted, and there can be no doubt that all civilized nations of the world will contribute collective government exhibits. This justifies the hope that the attractions will be such as to draw a larger attendance than has been obtained by any Exposition ever held on the continent of America.

The Southern States of the Union will contribute complete exhibits of their natural resources and agricultural and industrial products, and it is a cheerful indication of the prevailing spirit to record the fact that in every hamlet, village, town and city in the South, on every form and plantation and in every workshop, there is already manifested a patriotic feeling of pride in the success of the Exposition. In the language of Governor Lowry, of Mississippi, "it is looked forward to by the Southern people as a beacon of hope."

At the same time it may be confidently relied upon that the other States of the Union, will vie with the South in displaying their magnificent and splendidly developed resources to the multitudes of visitors from every quarter of the globe.

A leading feature of the Exposition will be a National Exposition of Women's work, under the auspices and management of a commission composed of two leading representative women in each State and Territory of the United States. It is believed that this will prove one of the most interesting and important exhibitions over made, as it will serve to practically develop and illustrate the field of women's work, and enlarge the sphere of usefulness of the sex in the domestic economy and industry of the world.

Prominent features of the Exposition will be, also, special exhibits of Cotton, Sugar and Rice, also Jute and other fibres, in all their conditions of culture, manufacture and preparation for the market, thus offering to visitors a practical exhibition of the peculiar resources of the Southern States, and serving to nttract immigration and capital to this

The 7,000,000 bales of cotton produced in the South last year, not only clothed the greater portion of the people 2.500,000 tons of cotton seed above what was required for this year's plant-

This seed was capable of producing under proper manipulation 105,000,000 gallons of cotton seed oil, a purely vegetable oil, 1,500,000 tons of oil cake or meal, and 1,700,000 tons of hulls, which should yield 800,000 tons of paper.

The South has successfully overcome all disasters and reverses. Still increasing her immense agricultural interests, she has developed manufacturing enterprises, adding to her material and natural resources the wealth creating power of corporate industry, the result of continued and increasing prosperity.

The Exposition is the natural sequence of such a condition of affairs, the expression of the aims and purposes of a growing people seeking to display to all the world their own natural and industrial resources and at the same time to learn by comparative observation, all thet can be taught by the exhibition of improved methods, inventions and products from other States and countries, to learn, also, the importance of the greater advantages and transportation facilities enjoyed by other communities, in the commercial development of raw products.

The Exposition will quicken the industries of the South by bringing together the inventor, the manufacturer, the capitalist and the producer of raw material. It will enable the South to show to the world the products of her soil, her forests, and her mines, inviting new methods and improved apparatus, thus leading to a multplication of her industries and producing powers, and attracting immigration from every quarter.

The grounds and buildings will be located convenient to all the railway lines and to the steamboats plying on the inland waters of the vast valleys of the Mississippi, Ohio and Missouri, thus affording the cheapest water communication with three-fourths of the United States, while the proximity to the docks and wharves will afford equal facilities to the Atlantic Coast and to all foreign countries.

The act of Congress admits free of duty all articles intended for exhibition, and, to give still further facilities to exhibitors from abroad, the buildings are to be constituted a bonded warehouse, thus avoiding the delays and inconveniences incident to the usual toutine of Custom House entries.

In udvance of the completion of the buildings the Board of Management has established free warehouses for the accommodation of exhibitors, both domestic and foreign, who may desire to Provinces, for which indeed, the

in progress, or who may find it necessary or desirable to forward their exhibits at any time.

The Director-General will, from time to time, issue such special regulations as may be necessary for the more precise information of exhibitors in the various groups, and will announce programmes for special features in the groups of Agriculture and Horticulture, embracing displays of Fruits, Flowers and Plants. Field trials of Farming and Plantation machinery and exhibitions of Live Stock and Speeding.

Mr. F. C. Morehead, the Commissioner-General, will visit the various States and Territories and foreign countries, as far as practicible, to assist in the organization of collective exhibits.

Blank forms of application for space, special regulations, and all detailed information can be obtained from the Director-General, at New Orleans, to whom all communications must be addressed.

> Approved: E RICHARDSON, President. E. F. BURKE. Director-General.

WE desire to call the special attention of our readers to the following correspondence in reference to the next Dominion Exhibition, which we re-print from the Daily Examiner of Charlottetown, P. E. I. We think, however, that Dr. Jenkins has misunderstood the sentiments of Nova Scotians, when he said that we were adverse to an Agricultural Union of the Maritime Provinces. The fact is that the matter has not been considered, and no scheme has ever been submitted. All we know is that there are serious difficulties to be overcome, and the joint action of the several Legislatures will be required That union, or at least concerted mutual action in regard to Exhibitions, is desirable, no body doubts. Our farmers are not afraid to compete with New Brunswic's and Island farmers, but they are not anxious to compete with Government Stock Farm a. ....ls stuffed for prizes "regardless of expense" at the government cribs. It will not be practicable to mature such a plan of permanent Agricultural union of the Maritime Provinces, as appears to be desirable, and have it legislated upon in the several Provinces, in time to do much work under it in the year 1884 But we see no reason why the Island Government should not undertake the Dominion Exhibition of 1884, if the Dominion Government is willing to give it. Our Island friends may depend upon the hearty co-operation of the other Maritime transfer exhibits from other Expositions | Island has established a claim, by enter | expense as the same distance by rail.

ing so cordially into the Dominion competitions at Halifax and St. John :-

SIR,-A letter in The Examiner of the 11th inst, signed "Common Sense," in which the write thinks we shall make an exhibition of ourselves by calling a public meeting to discuss the propriety of making an effort to obtain the Dominion Exhibition at Charlottotown in the autumn of 1884, deserves more than a passing notice. It may seem a great undertaking for a place so small as Charlottetown, the capital of a Province so small as P. E. Island, to aspire to an exhibition so great as the name implies. But, when we consider that the distance between the Maritime Provinces and Quebec and Ontario is entirely too great for the former to compete at Dominion Exhibitions held in these places, and that by the exhibitors there refusing to send anything of importance to the late exhibitions held in Halifax and St. John, it shows very clearly that the same objection holds good with them, and that our presumption may be excused, the two last exhibitions being really Maritime ones, and Dominion only in name.

It was surprising to find at the Dominion Exhibition held in Montreal in September 1880, how little was to be seen from the Province of Ontario, the reason being that their Provincial and Local shows are of such magnitude and so easily made self-sustaining, in a great measure, by the grants from the City Corporations and large subscriptions of mercantile men, that it is much more convenient and profitable to exhibit in their own localities. This must clearly show that the Dominion Exhibitions, so called, are to a large extent dependent for their competitive support on that part of the country not far distant from where they are held. As all the old Confederated Provinces have had these Exhibitions, which are largely provided for by an appropriation from the Dominion Government, it must be clear to the minds of all unprejudiced that we have good grounds for our demand.

Your correspondent says that, "For the last three years we know, by bitter experience, what it has been to send our small exhibit across the water to get to Halitax, St. John and Montreal Exhibitions." Persons who are accustomed to exhibit live stock, etc., all know that, under the most favorable conditions, there is great trouble, risk and expense in attending Exhibitions. But it can be clearly shown by those who have had most to do in managing the exhibits from here to Montreal, Halifax and St. John, that crossing the Straits had been the easiest and least disagreeable to the stock and their care-takers of any part of the passage, and not attended with as much

Your correspondent can rest assured that the experience in these crossings has been anything but a bitter one, excepting, perhaps, by a poor fellow who has been seasick. Our success at these Exhibitions is too well known, both in the neighboring Provinces and at home, to go into particulars, any more than to say that out of the number of upwards of 250 animals we exhibited in Halifax and St. John, there was not more than ten per cent, unsuccessful as prize-takers, first and second prizes being chiefly awarded. Our success was much beyond the expectations of the most sanguine. These facts ought to convince anyone that it cannot be called "temerity" on our part to ask for the next Dominion Exhibition to be held in Charlottetown, and, that there is no great difficulty in crossing the Straits with live stock, or anything else, usually sent to such places. It would certainly be very unfair had we the means to compel the thirty-nine fortieths of the people, so-called "Common Sonse" speaks of, to attend the Exhibition if held here. We would simply invite them as has been done on all occasions of a similar kind. If they all came we would not have quite enough hotel accommodation, but it is reasonable to suppose that we could do as they did in Halifax and St. John—get comfortable quarters for those the hotels could not acrommodate, by having a committee to make arrangements with the private families who would have no objection to accommodate visitors for a few days at a reasonable charge. In the matter of suitable buildings, if we got the Dominion and Provincial grants, as they have had in other places, our mechanics can build them.

> Yours truly, C. C. GARDNER.

Sir,-When in August last I had the honor—as a delegate from the Advisory Board of this Province—of conferring with the Dominion Exhibition Board at St. John, one of the many arguments I made use of to point out the desirability of so amending the prize list as to induce our people to take part in the exhibition, was the benefits that would accrue from the bringing together the people of the different provinces, both in a social and agricultural point of view-the interchange of ideas and of information and experience in matters relating to farming, and more especially the probability that the prospects of an Agricultural Union of the Maritime Provinces would be advanced thereby This question of Agricultural Union is one in which I have long Liken a deep interest. Several years ago I broached the subject in both the adjoining Provinces. The New Bruaswickers seemed disposed to look favorably on it, but the Nova Scotians were decidly i

adverse. They seemed to be under the impression that they could not compete successfully with the Island. I endeavored to point out that if they wished to achieve excellence, it was a great advantage to compete with those who excelled, supposing they were correct in the opinion that we did so; but I could make no impression. Now, I have reason to think it would be different, and that in Nova Scotia the project would be looked upon with favor as well as in New Brunswick.

I am strongly of opinion that the best, if not the only, way to obtain a grant for a Dominion Exhibition will be by uniting with the adjoining Provinces.

The Upper Provinces are so far off as to be practically inaccessible to the people of the lower provinces, for the purpose of live stock exhibitions. Therefore I consider we are entitled to a grant from the general government for an exhibition to be held in each of the three Maritime Provinces alternately, open of course to the whole Dominion, if any choose to avail themselves of the privilege.

avail themselves of the privilege.
Union is strength. This trite saying will I think prove specially true in this I suggest as the first step towards getting a Dominion grant, that we go to work with energy to bring about an agricultural union of the Maritime Provinces. In the first place we must have what we have long wanted, a permanent Board of Agriculture appointed by the Local Goverament, who would at all times be on h nd to take up this or any other question in the interests of agriculture. Let them use every means to bring about the contemplated union, and with our strength joined with that of New Brunswick and Nova Scotia, and with the aid of their Ministers, I am satisfied there will be no difficulty in obtaining a grant for a Dominion Exhibition in Charlottetown in the autumn of 1884.

New Brunswick and Nova Scotia are interested quite as much as, if not more than, ourselves in this matter. While we have, at great risk and considerable cost, taken part, to some extent, in an Upper Province Exhibition, they, as I believe, have taken part in rone; therefore they will be at least as ready as ourselves to claim a separate grant for the Lower Provinces.

The difficulties suggested by "Common Sense," though formidable, are, by no means, prohibitory—they are simply obstacles to be overcome. That they will be overcome, if we go the right way to work, and that we shall have a Dominion Exhibition in 1884,—one that will redound to the credit of our Island farmers and be a source of much pleasure and profit to all,—is the fervent wish and firm belief of

Yours, etc., J. T. Jenkins.

A correspondent of the Country Gentleman is publishing some interesting details of the working of Experimental Stations in Germany. In introducing his papers he well observes that the Prussian and Saxon governments support the most perfect system of agricultural education to be found in the world. The first agricultural academy was founded by Thaor at Moeglin in 1806, and since that time the schools, stations, associations and public farms have so increased that a gigantic system has been established. There are now in Germany 2,000 associations, and to the great credit of the father of German scientific agriculture, Thaer, stands the fact that his books are still read amid the flood of valuable works yearly appearing.

The net of associations now existing in Prussia and Saxony publish half popular and half scientific papers in cheap form; establish agricultural libraries, winter schools, model farms, stations, credit in stitutions (for the exclusive use of farmers,) collections and fairs. These asso ciations invite university specialists in agriculture to lecture beform them at stated times during the winter, and thus their discoveries are brought before the rather conservative and practical farmers. Travelling lecturers are also employed to go from one association to another, and inculcate the new teachings. Their audiences consist of the tenants, independent owners of land and Bauern-peasants who may own or rent land, or may be mere farm laborers. In Saxony all the associations are under a general secretary, who may bring the needs of the farmer to the attention of the government. We see why such an exact system is necessary when we consider that every farmer, as a matter of course, uses artificial fertilizers, and this is necessary in a land not originally very fertile (excepting parts of Saxony and South Germany), and which has been closely cultivated for centuries. Yet as you ride down from Hanover, by way of Magdeburg and Halle to Leipsic, you see year after year, with slight variations due to drouth or excess of rain, the same rich fields of wheat, rye, potatoes and sugar beets.

During a reant visit to Saxony, I took occasion to study some of the methods of farming in that province, and to visit the oldest experiment station in Germany—the institution located at Mocckern, a village near the ancient and busy city of Leipsic. There are three thoroughly equipped stations in this small kingdom of ha tony, at Tharand, Pommeritz and Mocckern. The great University of Leipsic, with its 3,000 students, also has an agricultural department, and each year books based on actual experiment and practice are published. In 1878, Prussia had for agriculture alone nine higher in-

stitutions, 17 middle schools, 26 elementary schools, and 14 winter schools. This shows what the government does for the benefit of its farmers. The higher instruction is three-fold: (1) Universal and economical, (2) special scientific teaching as to the most advantageous production of useful plants and animals, (3) building on the sum of experience, and combining the other two into an organic whole, the organization and direction of the farm. At all the schools, theory and practice are united.

The station at Moeckern, like others, is in charge of a regularly educated man, who has passed his examination, and he is called the director of the station. He is appointed by the government, and is expected to conduct experiments at his discretion, to employ necessary assistants, and to publish, from time to time, in pamphlet form, the results obtained, this publication being called Die Versuchsstation, the experiment station.

I BELIEVE that the first instance in which the consumption of ice was shown to have been followed by an outbreak of disease is that recorded in the "Seventh Annual Report of the State Board of Health of Massachusetts." The occurrence took place in one of the large hotels at Rye Beach, New Hampshire. At the beginning of the season of 1875 about a thousand visitors were assembled at Ryo Beach, and a considerable number were attacked with a series of symptoms which led to the suspicion that they had consumed some noxious article. The incidence of the disease was entirely confined to 300 persons occupying one of the large hotels. The sanitary state of this hotel is said to have been exceptionally good, and, although suspicion seemed at first viattach to the water supply, yet the disease was found to have affected many who, "having apprehended trouble from the use of the water," which was strongly impregnated with salts of lime and magnesia, "had carefull; limited themselves since their arrival to other beverages." Indeed, as the result of a careful process of elimination, suspicion came at last to be directed to the ice furnished to the house. The water obtained by melting the ica was discolored and charged with suspended matter and gave off a decidedly disagreeable odor, the atmosphere of the icehouse was ofensive, and some persons who had used the ice away from the hotel were found to have suffered in the same way from violent illness. The ice in question had been derived from a local pond, the water of which was found to have become foul by long continued stagnation; one portion of the pond, measuring about five hundred feet in length and one hundred and fifty feet in width, was occupied by "a homogeneous mass of small proprietors in Franc. among whom has witness putrescent matter." A piece of ice, care-exists a wide-spread intelligence and a Cultivator.

fully cleansed from all surface impurities, was then melted, and the water thus obtained was submitted to chemical analysis, the result being the detection in it of a quantity of "decaying organic matter.' The use of the ice had also in the meantime been discontinued, and coincident with its disuse "there was observed an abrupt amelioration in the symptoms of nearly all who had hitherto been ill." So, also, no fresh attacks occurred during the remainder of the season. Even among the more educated classes there prevails an impression that even if water is contaminated it is purified by freezing, Many experiments, however, have shown the fallacy of this view. In some of those recently made by Mr. C. P. Pengra, the American chemist, various organic matters (urea, albumen, &c.) were mixed with water, and the specimens were gradually frozen. A certain amount of purification did take place-the ice contained thirty and even forty per cent les, organic liquid. But a large amount of the added pollution remained, and the investigator, though expressing surprise that the purification had been as great as it was, says the experiments afforded abundant proof that we ought not to tolerate the indiscriminate collection of ice. - Popular Science Monthly for November.

A MR. WHITEHEAD has been startling the English farmers in a manner to arouse them to competition with Nova Scotians and all outside. The English crop of Fruit is estimated at 9 million bushels, the imports exceed 4 millions, for which an expenditure of 9 millions of dollars goes out of England annually. Mr. W shows how the French fruit is collected by agents, and so carefully packed that certain brands are bought and paid for on " note of advice," and passed from agent to peleaman, and saleaman to customer, without inspection. It is asked, cannot English folk use English capital, English intelligence, and English honesty to do as much for English fruit? Here is a lesson to more people than the English. It is not capital and skill and intelligence that are so much wanted in the industrial and commercial world as Honesty. We do not mean the houesty that comes after repentance and restitution, but the sterling, straight forward, selfish, Pritish honesty, that arises out of the well founded commercial belief, that honesty is the best policy. The question now is not one of Morals but of Marketing. A man buys apples that not only look well, and tiste well, and sell well, but apples that are sound to the core. French "producers of fruit are most careful and deligent in their cultivation, and Pruning is attended to with great pains and skill by

keen sense of what is profitable and useful for the land." Mr. Whitehead points out that Sugar is cheaper in England than any other European country, so that English Jams can be made to rival in any market of Europe the home-made conserves. Mr. Whitehead's elaborate suggestions which we have only briefly referred to, are addressed to English farmers. We hope this faint echo of them will suggest to some of our Nova Scotians landowners, the immense possibilities of our country in the way of Fruit Culture and Fruit Manufactures. The idea that fruit cannot be grown anywhere in Nova Scotia, except in the Annapolis valley, has been long ago exploded, but even in Kings and Annapolis, farmers are only beginning to realise what may be done. As for Cape Breton, it seems to be the most productive plum country in the world.

A successful farmer finds it for his interest that his neighbors should also be successful. A single instance of well ordered and productive fields does not make the reputation of an entire locality for profitable agricultural enterprise. It becomes noted for fertility, and acquires comparative importance as a centre of production, when the number of good farmers is in the majority; when its yields of grain or hay or other crops attract general notice; when buyers learn that such or such a county town will supply the largest quantity and finest quality of butter or cheese, or wool, or apples, or other specialty; when those who travel observe the general excellence of roads, the beauty of the shade that overlangs them, the neatness of the lawns by which they are hordered, the orchards and gardens that adjoin them, the evident prosperity of the community at large. To what extent the money value of one's land who lives in such a community, is enhanced thereby,-not to mention the pleasure and profit of associating with those having similar aims for improvement and gradually securing similar means for attaining it-would be difficult to deter-

The perception of the reality and importance of there lacts, though not always expressed, is generally entertained, and, where felt most strongly, accomplishes unmistakable results. It leads to organizations for mutual intercourse and consultation, such as farmers' clubs, dairymens', stock breeders', and fruit growers' associations; and, in short, it has developed into one of the great to tors in setting on foot and pushing forward such progress as our agriculture manifests now as compared with tifty years ago-a change perhaps even more remarkable than the past half-century has witnessed in any other direction.-

THE London Gardener's Chronicle, the leading Horticultural and Pomological journal of the world, says, in reference to the London Show at Chiswick, (20th October):—

"The Exhibition has been enriched by a remarkably fine and interesting collection of Apples sent by Mr. G. R. H. Starr, of Port Williams, Nova Scotna, whose London agents, Messrs. Nothard & Lowe, have admirably set up and further increased the value of the collection by indicating those sorts which are generally sont from Nova Scotia to the English Market. These are the Baldwin, Rhode Island Greening, Cooper's Russet, Blue Pearmain, Talman's Sweet, Gravenstein, Flushing Spitzenberg, King of the Pippins, Willoughby, Golden Russet, King of Tompkins County, Sweet Russet, Pomme Gris, Golden Pippin, Ribston Pippin, and Mammoth Russet. Most of these are of medium size, and soveral of them highly coloured, but all, by comparison with komegrown samples, are of low specific gravity. As regards handsome appearance, these Nova Scotian Apples compare most favourably with the best of our own, bat contain much less water and sngar. Such varieties as the Emperor Alexander, Fall Pippin, Chebucto Beauty, Dutch Codlin and Cat's Head are finely ropresented."

In the succeeding number of the tiar lener's Chr.micle, (27th October) we have the following —

" We omitted last week, in mentioning the collection of Apples received at Chiswick from Nova Scotia, to refer to the simple and admirable system of packing adopted by the importors, and which constitutes one of the secrets of the great success which attends toreign Apple importation. Many thousands of barrels come over from Nova Scotia yearly, thus making an important article of com-merce, and when we note the singularly bright and unbruised condition of the samples put up at Chiswick, and assume that these are but samples further of the ordinary condition in which imported Apples come to the market, it is not possible to wonder why these foreign fruits meet with such a ready sale. Apart from their fine size, and in many cases rich colouring, there is the fact that even in the result of handling and packing alone they seem to excel our market samples, although the former have come thousands of miles. Why is it so? The obvious reason is that more care is shown in packing and picking, and, not least, in sizing, so that the sample throughout is an even and a sound one. The lot at Chiswick (as do all other imported kinds from our North American colony) came packed in a neat barrel resembling an ordinary flour barrel. This was lined with soft paps . and into it were placed the fruits as evenly as possible, having regard to the fact that in this case, the fruits being of many sorts, were of various sizes. A piece of thin paper divided each kind, and when the barrel was filled a little packing before the head was put in served to keep all tight. When quantities of fruits of one kind are sent the samples in the tubs are even throughout, and hence the very best packing material proves to be the Apples themselves. haps the Nova Scotia fruit may be of firmer flesh than ours, but it is obvious that the rough-and-tumble treatment our market Apples get is not bestowed upon these beautiful imported fruits."

Several experiments have lately been male in England, with unexpected success, on the Jensenian method of Potato Culture, a plan by which the potatoes are perserved from disease by earthing up to a great height with fine earth so that the spores of the fungus may not reach the potatoes. Some people doubt Mr. Jensen's theory, but no one doubts the fact that earthing up lessons the number of diseased tubers. Moreover, Mr. Plowright, oncof the most reliable of English Mycologats says, in Gurdeners' Chronicle of Decomber, that actual observation during the 1-2st year has convinced him that potatoes become diseased, not by the fungus (Peronospora) travelling down the stalk of the potato vine to the tubers, but that the spores pierce the skin of the tubers, and thus directly infect them. This view is certainly strengthened by the fact so well known in Nova Scotia, that thick skiuned potatoes are less hable to disease than others. It is very desirable that our farmers should try the high earthing up plan, known as the Jensonian Culture. The district about Shubenacadie, the soil being very fine and freable, is admirably adapted for the experiment, and so also many farms in the Potato Paradisc of King's County.

Ar a meeting of the English Jersey Cattle Society on 12th December, the Earl of Rosslyn presiding, attention was called to the extraordinary yields of butter recorded from Jersey cows in America, and, it having been stated that there yields were weighted by troy, or old apathecaries' weight, instead of avoirdupois, the Secretary was requested to ask for a set of pound and ounce weights by which such yields were tested and recorded.

This season's crop of Indian Corn in the United States is estimated at 1600 millions of bushels, only about 17 millions less than last year. Wheat, however, is about 100 millions bushels less; oats, barley and roots, more abundant; hay nearly the same, autumn grass considerably in excess. Three fourths of the meat now consumed in Eastern cities comes from the west in refrigerator cara. A. B. Allen, Agricultural Gazette.

Why do Animals need Salt?—Prof. James E. Johnson, of Scotland, says:—
"Upwards of half the saline matter of blood (fifty-seven per cent.) consists of common salt, and this is partly discharged every day through the skin and kidneys. The necessity of continued supplies of it to the healthy body becomes sufficiently obvious. The bile also contains soda (one of the ingredients of salt) as a special

and indispensable constituent, and so do all the cartilages of the body. Stint the supply of salt, therefore, and neither will the bile be able properly to assist digestion, nor the cartilage to build up again as fast as it naturally wastes. It is better to place salt where stock can have free access to it than to give it occasionally in large quantities. They will help themselves to what they need if allowed to do at pleasure; otherwise, when they become 'salt hungry,' they may take more than is whole ome."— Empire State Agriculturist.

A PHILADELPHIA paper, after congratulating its readers upon the Republican successes, says:

One incident of this handsome victory has some local interest here, where the subject of it is well known as formerly one of Philadelphia's highly-esteemed citizens. The town of Litchfield is one of the strongholds of the Democracy. Last year, a place was conceded on the ticket to F. Ratchford Starr, Esq., who filled his place in the Legislature with so much acceptance that this year, although a full Democratic ticket was run against him he has been handsomely re elected. The tribute to a gentleman of straight-out Republicanism in a bitturly strong Democratic district was paid not only to good legislative work, but to the great service done by Mr. Starr, to his neighborhood in the prosecution of his large operations in connection with his famous Echo Farm.

## Advertisements.

Resolution of Provincial board of Agriculture, 3rd March, 1882.

"No advertisements, except official notices from recognized Agricultural Societies, shall be inserted in the JOURNAL OF AGRICULTURE in future, unless PREPAID at rate of 60 cents each insertion for advertisements not exceeding ten lines, and five cents for each additional line."

### SHORT HORM BULLS FOR SALE.

THE Subscribers offer for sale Two
Splendid Thoroughbred Short Horn Bulls,
pedigress regulered N S. Herd Book, Prince of
the Realm, No. 176; Colchester King, 2nd, No.
177. For further particulars apply to
JAMES GASS & SONS.
Shubenacadie, Dec. 28th, 1883. It pd.

# The JOURNAL OF AGRICULTURE —is published monthly by--

A. & W. MACKINLAY,
No. 10, GRANVILLE STREET,
HALIFAX, NOVA SCOTIA.

TERMS OF SUBSCRIPTION:

Fifty cents per annum-payable in advance. Single copy sive cents.

Printed at the Office of the Nova Scotus Printing Company, corner of Sackville and Granville Streets, Halifar, N. S.