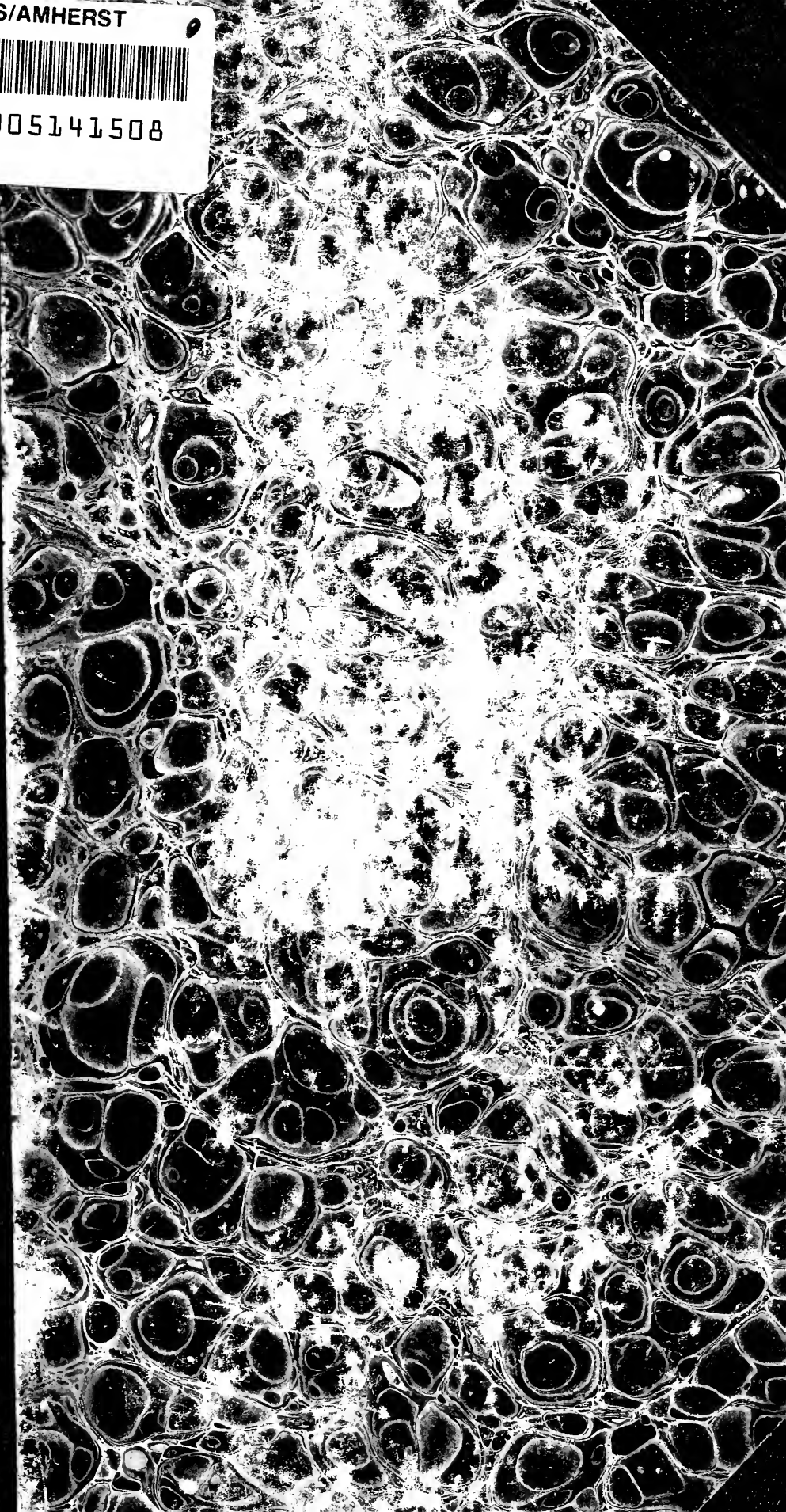


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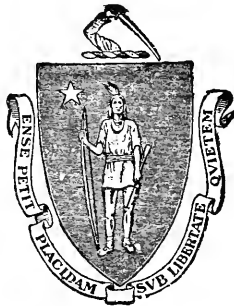


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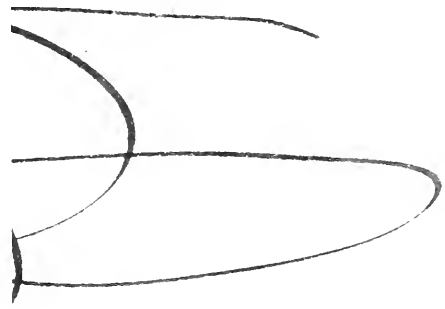
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REPORT

OF THE

AMERICAN POMOLOGICAL CONGRESS.

HELD

IN THE CITY OF CINCINNATI,

ON THE

2d, 3d and 4th of October, 1850

PUBLISHED BY THE
OHIO STATE BOARD OF AGRICULTURE.

COLUMBUS:
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1850-52

REPORT OF THE MEETING
OF THE
AMERICAN POMOLOGICAL CONGRESS,

HELD

AT CINCINNATI, OCTOBER 2, 3 AND 4, 1850.

According to resolutions passed at the last session of the "North American Pomological Convention," and the "Congress of Fruit Growers," this body assembled at the Merchants' Exchange, College Hall, Cincinnati, on the evening of the 2d day of October, 1850. In order to effect a permanent organization, Dr. J. A. Kennicott, of Northfield, Illinois, was requested to take the chair, and P. Barry, of Rochester, N. Y., to act as Secretary pro tem. This having been done, some discussion was had as to what constituted a member, which the Chair decided, that as no dues were required, and no laws were enacted by this body, it was understood to remain optional with all gentlemen feeling interest in the pursuits of pomology, to become members, if they chose, by handing in their names to the Secretary.

A call was next made for the reading of the circular issued by M. P. Wilder, Esq., President of the last Congress, the following part of which, as it describes the objects in part of this association, we insert :

"All Agricultural, Horticultural, Pomological and *kindred societies* in the United States and the Canadas, are hereby respectfully invited to send such number of Delegates as they may deem expedient.

“ In order to facilitate the objects of this Association, to promote pomology and the sciences upon which it depends, to collect and diffuse a knowledge of researches and discoveries in this important department, delegates are requested to bring with them specimens of the fruits of their respective districts, with lists of the same, and also papers descriptive of their art of cultivation, of diseases and insects injurious to vegetation, of remedies for the same, and whatever will add to the interest and utility of the convention.”

Names of gentlemen desirous of participating in the doings of the body, were then recorded by the Secretary, and also of those who attended as delegates from societies, as follows :

John R. Miller, Enon, Clark county, O.
 Joseph Orr, Laporte, Indiana.
 Lewis Saunders, Grass Hills, Ky.; from Louisville Hort. Society.
 John Murdock, jr., Pittsburg, Pa.
 James Blake, Indianapolis, Ia.
 Michael Kelley, Cincinnati, O.
 Henry Shaw, Tremont, Tazewell county, Ill.
 F. Graham, New Albany, Ia.
 A. A. Pierson, do do
 J. Bull, do do
 John M. Edwards, Canfield, Mahoning county, O.
 Benjamin Blake, }
 A. B. Buttles, } Dels. from Columbus Ohio Hort. Society.
 M. B. Bateham, }
 Aug. Brown, }
 Lucian Buttles, }
 S. S. Tipton, Franklin county, O.
 Wm. Tipton, do do
 Reason Shephard, Ripley, Brown county, O.
 Dr. J. G. Jones, Columbus, O.
 Joseph Sullivant, do
 T. M. Gwynne, Urbana, O.
 Jos. A. McLean, Champaign county, O.
 Charles Downing, Newburgh, N. Y.
 Patrick Barry, Rochester, do
 F. R. Elliott, Cleveland, O.
 Edson Harkness, Peoria, Ill.
 Dr. S. A. Barker, McConnellsville, O
 James Neville, Cincinnati, O.
 Danl. Swinehardt, Logansport, Ia.
 John W. Caldwell, College Hill, Cincinnati, O.

Lewis Eaton,
 Lewis F. Allen,
 W. R. Coppock,
 Benj. Hodge,
 A. Bryant,
 H. B. Potter,
 Chas. Tainter
 Jason Sexton,
 John B. Eaton,
 Joseph G. Master,
 A. McArthur,
 Geo. B. Webster,
 S. G. Austin,
 A. Wilgus,
 Joseph Dart,
 N. K. Hopkins,

} Delegates from Buffalo Hort. Society.

Jas. Edgerton, Belmont county, O.
 L. S. Stone, Milan, O.
 C. Springer, Meadow Farm, Muskingum county, O.
 Jas. Darcomb, Lorain county, O.
 N. B. Hale, Norwich, Shenang county, N. Y.
 James Whitelaw, Cleveland, O.
 A. R. Whitney, Franklin Grove, Ill.
 C. K. Overman, do
 Joseph C. Brand, Urbana, O.
 Wm. Heaver, Cincinnati, O.
 S. F. Cary, College Hill, Cincinnati, O.
 Joseph Barker, McConnellsville, O.
 N. B. Shaler, do
 Chas. J. Helen, do
 Wm. D. Miller, Enon, Clark county, O.
 Wm. Whitley, Springfield, Clark county, O.
 W. A. Smith do do
 J. T. Warder do do
 J. V. Peticolas, Clermont county, O.
 Wirley Rozell, Newton, Scott county, Ky.
 John Asa Kennicott, Chicago, Ill.
 Wm. Pitt Putnam, Centre Belpre, O.
 M. C. Williams, Cincinnati, O.
 Chas. Carpenter, Kelley's Island, O.
 Geo. G. Hikes, Louisville, Jefferson county, Ky.
 C. C. Carey, do do
 E. S. Carey, do do
 Arthur Peter, do do
 John Bate, do do
 H. P. Byran, do do
 Wm. Short, do do
 Jas. Orr, do do
 C. Dewes, Carroll county, Ky.

Judge Brown, Franklin county, Ky.
 W. D. Brinkler, Philadelphia, Pa.
 A. Saul, Newburgh, N. Y.
 L. Young, Louisville, Ky.
 W. H. Scott, Adrian, Mich.
 Jas. Dogall, Amherstburgh, C. W.
 S. H. Webb, Cleveland, O.
 S. Morher, Cincinnati, O.
 A. H. Ernst,
 J. A. Warder,
 Jas. Sigerson, Miss.
 P. B. Cahoon, Wis.
 Edward Tatnell, jr., from Wilmington Hort. Society, Delaware.
 Chas. Duffield, Ky.
 — Hanney, Delaware.
 Joel Wood, Belmont county, O.
 R. Buchanan, Cincinnati, O.
 C. R. Overman, Canton, Fulton county, Ill.
 Z. Hampton, O.

Lists of delegates from various Horticultural Societies east, were presented, but the delegates themselves not being present, we do not deem it advisable to insert them.

It was then moved that a committee be appointed to report lists of officers for the permanent organization of this body; whereupon the following gentlemen were appointed such committee, viz: Messrs. Charles Downing, Lawrence Young, Edson Harkness, John A. Warder and Benjamin Hodge.

A communication was received from the Young Men's Mercantile Library Association of Cincinnati, as follows:

ROOMS OF THE Y. M. M. LIBRARY ASSOCIATION,
 CINCINNATI, October 1, 1850.

Compliments of the Board of Directory; — take great pleasure in tendering the hospitalities of the "Young Men's Mercantile Library Association of Cincinnati," to the members of the "Pomological Congress," during its session in this city.

Reading and News Rooms of the Association, 2d floor of the College Edifice, Walnut, above 4th Street; open from 9 A. M. until 10 o'clock, P. M. Cards of admission at the Library counter.

By order and in behalf of the Board.

JAMES LUPTON, *Vice President.*

A communication was received from the Cincinnati Horticultural Society, through Dr. Warder, tendering to the members of the Congress, tickets of admission to their exhibition.

On motion, the thanks of the Congress were tendered to the Young Men's Mercantile Library Association, and also to the Cincinnati Horticultural Society, for their generous hospitality.

The committee to whom was entrusted the making out a list of officers, for the permanent organization of the Congress, reported as follows :

PRESIDENT,

W. D. BRINCKLE, *Philadelphia, Pennsylvania.*

VICE PRESIDENTS,

| | |
|------------------------------|------------------------|
| J. A. Kennicott..... | <i>Illinois.</i> |
| Lawrence Young..... | <i>Kentucky.</i> |
| James Daugall..... | <i>Canada West.</i> |
| A. H. Ernst..... | <i>Ohio.</i> |
| James Sigerson..... | <i>Missouri.</i> |
| P. B. Cahoon..... | <i>Wisconsin.</i> |
| Lewis F. Allen..... | <i>New York.</i> |
| Joseph Orr..... | <i>Indiana.</i> |
| Edward Tatnall, jr..... | <i>Delaware.</i> |
| Rt. Rev. Bishop Elliott..... | <i>Georgia.</i> |
| J. G. Drayton..... | <i>South Carolina.</i> |

SECRETARIES,

| | |
|--------------------|------------------|
| F. R. Elliott..... | <i>Ohio.</i> |
| F. Barry..... | <i>New York.</i> |
| J. A. Warder..... | <i>Ohio.</i> |

The President, on taking the chair, made a short address, thanking the body for the compliment paid him in being called on to preside, and made some remarks upon the important results to the science of pomology from such meetings, &c., &c.

Dr. Kennicott suggested that the by-laws passed at the last session of the Congress in New York, be brought up and adopted for the guidance of this Congress.

Mr. L. F. Allen made remarks respecting and deprecatory of the practice of conventions heretofore in recommending varieties of fruits for general cultivation that were only suited to particular localities. Mr. A. was in favor of making this a Western Convention. Mr. A. gave a history of pear trees about Detroit, &c.

Mr. Harkness moved the appointment of a committee of three, to examine such seedling fruits as may be presented, and report thereon, before the adjournment of this Congress.

Mr. Saul moved to make the number of the committee five, which was agreed to, and the motion carried; and Messrs. Charles Downing, S. A. Barker and E. Harkness, were appointed that committee.

Mr. Allen desired this committee to be instructed, and report no seedling fruit for the consideration of this Congress which shall not be represented by a written description, &c., &c.. Carried.

Mr. Saul moved the appointment of a business committee. Carried; and Messrs. Saul, Scott and Dascomb were appointed.

Dr. Mosher moved the appointment of a committee to examine the lists of fruits now under cultivation, and report the names of such as they deemed unworthy, and also of such as should be farther recommended. Carried; and Messrs. Hodge, Saul, Mosher, Elliott, Ernst and Wood were appointed.

Mr. Coppock moved the reception of reports from State committees, several of which had been handed in, and that they be referred to the Secretaries to be collated and published. Carried.

—— moved a committee on Synonymes. Carried; and Messrs. Charles Downing, Hodge, Barker and Harkness were appointed.

Dr. Warder moved a committee on reception of fruits. Carried; and Messrs. Warder, Mosher, Duffield, Coppock and Hanny were appointed.

Discussion was then held as to where the Congress should continue its sittings; and, on motion of Mr. McIntosh, it was resolved to adjourn to the grounds of the State Fair, for the next day's meeting.

Adjourned.

SECOND DAY'S SESSION.

The Congress assembled in the tent upon the State Fair show grounds, at 10 o'clock, A. M., the President in the chair. Letters were received from Messrs. C. M. Hovey, of Boston; M. P. Wilder, Boston; J. J. Thomas, Macedon, New York; and W. G. Ver Plank, Geneva, New York, expressive of regret at their being unable to attend the session of the Congress.

A motion was then made by Mr. John W. Caldwell, that a committee of three be appointed to report upon the expediency of establishing American Pomological and Botanical Gardens. Carried; and Messrs. Caldwell, Coppock and F. G. Carey were appointed said committee.

Dr. Kennicott desired to introduce the subject of the culture of the grape and the apple, as connected in the manufacture of wine and cider, with the cause of temperance. The remarks were to effect that he considered the cause of temperance advanced by the introduction of native wines at a cheap rate—that they may take the place of distilled liquors.

Mr. McIntosh regarded both the culture of the vine and the apple, for wine and for cider, as profitable. The Harrison apple desirable for cider.

Mr. Springer could see no advantage in cultivating a valueless table apple, simply for cider; good table apples were sufficiently abundant for cider.

Mr. Coppock favored the establishment of good fruits only, &c.

Mr. Springer said no body of men should say what were only good, for some varieties were valuable in one locality and valueless in others; he referred to the action of eastern Conventions on this point, &c., &c.

The Rhode Island Greening Apple was brought forward for discussion, and Messrs. Springer, Sigerson and Brand spoke unfavorably; while Messrs. Coppock and McIntosh, advocated its qualities.

The Baldwin apple was next introduced, and in the discussion, while some favored it, others did not; the general impression appeared that its keeping qualities would be enhanced by gathering it before fully mature.

The Newton Pippin was then introduced ; Mr. Sgerson valued it ; Mr. Springer preferred Rawl's Jeannette ; Mr. Wood said it was of no value on sandy soils.

The Cooper apple was next introduced ; Mr. Springer spoke in its favor ; Mr. Saul liked it, as he now saw it for the first time ; Mr. Hodge was pleased with it, as he now saw it. An extended discussion was held by those gentlemen most acquainted with it, the amount of which has, however, been all heretofore published in the Ohio Pomological Reports.

The committee, to whom was referred the matter of establishing an American Pomological and Botanical Garden, reported as follows :

That it is expedient to enter upon the enterprise suggested in the resolution, and to carry it out. The spirit of the age favors the project, and this Congress needs only a Northern, a Southern, an Eastern and a Western establishment of the kind, to become one of the most important and most useful bodies of promoters of the pleasure and profit of mankind.

The committee beg leave to be allowed time till the next meeting of the Congress to report further.

Respectfully submitted.

JOHN W. CALDWELL,
W. R. COPPOCK,
F. G. CAREY.

Cincinnati, Oct. 4th, 1850.

A committee, consisting of Messrs. McIntosh, Kennicott and Young, was then, on motion, appointed to prepare a list for State Fruit Committees; and, on motion, the Congress adjourned to meet at 9 o'clock, A. M., on Friday, October 4.

THIRD DAY'S SESSION.

The members assembled at 9 o'clock, A. M., Dr. Brinkle in the chair. The committee on Seedling Fruits presented the following, as embracing all presented to that committee, and within the rule, viz :

Western Spy, a winter apple, January to May. Being unripe, we cannot judge of it correctly, but recommend it as promising well. The following is the statement accompanying it :

The Western Spy was originated on the farm of J. Mansfield, of Wells, Jefferson county, Ohio. Was first grafted by Samuel Wood, of that place. The original tree is of more than 20 years standing; it is a profuse and constant bearer, never being killed by frost. The original tree, and that from which the specimen was taken, is growing in a limestone soil. A description of this apple is given in the report of the "Ohio Convention of Nurserymen and Fruit Growers" for 1837.

JOEL WOOD.

The next is an apple, under name of "Fulton," presented by C. R. Overman, Canton, Illinois, with the following description, viz :

"A new seedling variety—size, medium; form, round oblate, or flattened; color, usually a delicate blond in the shade, with a deep crimson blush on the side exposed to the sun. Calyx, closed in a wide shallow basin; stem, short, in a deep cavity; flesh, fine grained, tender, rather melting, juicy, with a rich and agreeable flavor. Its beauty and excellence render it fine for the dessert. In use the latter part of November, but may be kept until March, with its juices and flavor unimpaired. The original tree stands in the orchard of Elijah Coppes, Esq., Canton, Fulton county, Illinois. It has borne thirteen good crops in succession."

The committee on fruits for rejection, for further trial and worthy culture, reported the following lists, which were adopted :

List of Pears unworthy culture:

Spanish Bon Crieten, True Gold of Summer, Hessel, Summe Rose, Pettit Muscat, Roussellet of Rheins, Princess of Orange, Ah! Mon Dieu, Bleecker's Meadow, Huguenot, Michaux, Beurre Knox, Franc Real d' Hiver, Clinton.

The "Belle of Brussels" was proposed to be placed on the rejected list, but several gentlemen seeming inclined to give it further trial, it was not entered then.

The committee next reported the following as a

List of Pears that promise well :

Paradise d' Antoine, Stevens Genessee, Onondago or Swan's Orange, Doymen Gobault, Nouveau Poiteau.

List of Apples to be rejected :

Egg Top, Cheeseboro Russett.

List of Apples that promise well :

Northern Spy, Melon, Mother, Hawley.

The Stevens Genessee Pear was regarded by many of the Congress as worthy general cultivation, but there being one or two objections made, it was put on the list as promising well.

Mr. Saul, as one of the business committee, spoke of the Beurre Sanglier, Beurre Cootee, and Beurre Quentin, as valuable varieties that should be more generally known.

Mr. Saul then introduced the Belmont or Gate Apple for remarks; Mr. Wood spoke in favor of it; so, also, Mr. McIntosh.

Mr. Hodge offered the following resolution :

Resolved, That the various fruit committees be requested, hereafter, to designate, in their reports, a list of fruits that they can recommend for general cultivation—a list that promise well, and also a list they deem unworthy of cultivation.

Adopted.

Mr. Saul spoke of the following apples as promising well, and worthy of culture, viz : Eustis or Ben Apple, Monmouth Pippin, Peach Pond Sweet, and Sturmer Pippin.

Mr. Saul then introduced the Rome Beauty, as an apple that had impressed him favorably. Dr. Barker, Mr. Young, Mr. Wood and Mr. Putnam all spoke well of it.

Mr. Saul next called up Kaighn's Spitzenberg. This, Mr. Springer defined as the same known in this section as "Long John." Messrs. Ernst, Hodge, Miller, McIntosh, Mosher and Barker remarked upon it, but generally against it.

Mr. Saul then called up Pryor's Red. Messrs. Young, Sigerson, Barker, Mosher, and others spoke highly in favor of it.

Mr. Allen moved that the list of fruits reported upon, by the two or more past Conventions, be entered in these reports—carried.

The Committee on State Fruit Committees, reported the following list, and requesting that the Chairman of each State Committee be authorized to fill up the number of his committee to five members—accepted.

List of State Fruit Committees.

| STATE. | NAME. | TOWN. |
|----------------|--------------------|------------------|
| Massachusetts | Robert Manning | Salem. |
| Vermont | C. Goodrich | Burlington. |
| Maine | Henry Little | Bangor. |
| Rhode Island | | |
| New Hampshire | Isaac Hill | Concord. |
| Connecticut | V. M. Dow | New Haven. |
| New York | B. Hodge | Buffalo. |
| “ | A. Saul | Newburgh. |
| New Jersey | Thomas Hancock | Burlington. |
| Pennsylvania | Thomas P. James | Philadelphia. |
| Ohio | A. McIntosh | Cleveland. |
| “ | J. P. Kirtland | do |
| “ | J. A. Warder | Cincinnati. |
| “ | S. A. Barker | McConnellsville. |
| “ | C. Springer | Meadow Farm. |
| Kentucky | Lawrence Young | Louisville. |
| “ | H. P. Byram | do |
| “ | Mason Brown | Frankfort. |
| “ | H. F. Duncan | Lexington. |
| “ | P. Blanchard | Maysville. |
| Virginia | Yardley Taylor | Loudon. |
| Delaware | Edward Tatnall, jr | |
| South Carolina | J. G. Drayton | Charleston. |
| “ | Wm. Summer | do |
| North Carolina | | |
| Georgia | Dr. Camak | Athens. |
| “ | Dr. Ward | do |
| “ | Jonson J. Harris | Milledgeville. |
| “ | D. Green | Macon. |
| “ | Richard Peters | Atalanta. |
| Louisiana | James Evans | New Orleans |
| Tennessee | L. P. Yandell | |
| Mississippi | M. W. Phillips | Edwards. |
| Missouri | Thomas Allen | St. Louis. |
| “ | James Sigerson | |
| “ | E. Abbott | |

| | | |
|----------------------|-------------------|---------------|
| District of Columbia | Joshua Pierce | ----- |
| Indiana | James Blake | Indianapolis. |
| " | J. Bell | New Albany. |
| " | ----- Scott | Madison. |
| Illinois | John A. Kennicott | Northfield. |
| " | J. B. Turner | ----- |
| " | S. Francis | ----- |
| " | Edron Harkness | ----- |
| " | C. R. Overman | ----- |
| Michigan | J. C. Holmes | Detroit. |
| " | W. H. Scott | Adrian. |
| " | A. T. Prouty | Kalamazoo. |
| Wisconsin | F. R. Phoenix | Delevan. |
| Iowa | Henry Avery | Burlington. |
| Canada West | James Dougal | Amherstburgh. |

And for general Chairman over all, A. J. Downing, Newburgh, New York.

Mr. Hodge moved the following :

Resolved, That when this Congress adjourn, we do so to meet in the city of Philadelphia, on such a day in the month of September, 1852, as shall be hereafter designated by the President of this Congress. Adopted.

Mr. Coppock offered the following :

Resolved, That the thanks of this body is due to the State Board of Agriculture, for the liberality and general kindness extended to them, during the present session. Adopted.

Mr. Eaton offered the following :

Resolved, That the thanks of the members of this Society, be tendered to the Cincinnati Horticultural Society. Adopted.

Dr. Kennicott offered the following :

Resolved, That all the reports of State committees be referred to the Secretaries to collate, and publish. Adopted.

The committee to whom was appointed the duty of receiving and enumerating the fruits exhibited, presented the following as the list of exhibitors, with the number of varieties exhibited :

| | | | |
|---------------------------|----|------------|--------------|
| W. G. Verplanck..... | 3 | varieties | pears. |
| W. C. Pinkham..... | | seedling | peach cling. |
| Dr. Shaler..... | 2 | varieties, | pears. |
| John R. Miller..... | 36 | do | apples. |
| Z. Hampton..... | 54 | do | do |
| C. Springer..... | 40 | do | do |
| L. Young..... | 25 | do | do |
| L. Young..... | 2 | do | peaches. |
| L. Young..... | 5 | do | pears. |
| Lewis Eaton..... | 3 | do | do |
| D. Brinckle..... | 8 | do | do |
| D. Brinckle..... | 3 | do | apples. |
| Edward Tatnell, jr..... | 2 | do | pears. |
| Edward Tatnell, jr..... | 1 | do | apples. |
| E. S. Stow & Co..... | 41 | do | do |
| B. P. Cahoon..... | 5 | do | do |
| B. P. Cahoon..... | 2 | do | pears. |
| Hovey & Co..... | 43 | do | do |
| J. Middleswart..... | 6 | do | apples. |
| T. Gardner..... | 4 | do | do |
| James Dougall..... | 37 | do | do |
| James Dougall..... | 37 | do | pears. |
| James Dougall..... | 12 | do | peaches. |
| James Dougall..... | 1 | do | plum. |
| James Dougall..... | 3 | do | grapes. |
| B. Hodge..... | 26 | do | apples. |
| B. Hodge..... | 37 | do | pears. |
| W. R. Coppock..... | 5 | do | apples. |
| W. R. Coppock..... | 2 | do | pears. |
| M. P. Wilder..... | 63 | do | do |
| J. T. Warden..... | 4 | do | apples. |
| Ellwanger & Barry..... | 5 | do | do |
| Ellwanger & Barry..... | 4 | do | pears. |
| Ellwanger & Barry..... | 1 | do | plums. |
| H. W. Sargent..... | 26 | do | pears. |
| H. W. Sargent..... | 10 | do | apples. |
| S. A. Barker..... | 31 | do | do |
| J. Adams & S. Dunbar each | 1 | do | do |
| Joel Wood..... | 26 | do | do |
| Joel Wood..... | 5 | do | pears. |
| Joel Wood..... | 1 | do | plums. |
| A. Saul & Co..... | 50 | do | pears. |
| A. Saul & Co..... | 18 | do | apples. |

Dr. Kennicott having taken the chair, the following was offered by Mr. McIntosh :

Resolved, That the thanks of this Congress be tendered Dr. W. D. Brinckle, for the able and impartial manner in which he has presided over their deliberations. Adopted unanimously.

The President having again resumed the chair, the Congress adjourned as per resolution.

OBSERVATIONS

On the Fruits of Morgan County, Ohio, lying on the East and West banks of the Muskingum River, between the 39th and 40th degrees of North latitude. By S. A. BARKER.

The surface of the county is generally very hilly, and is divided into river and creek bottoms, hills and valleys, with a small portion of level up lands.

The soil is diversified ; and may be divided into Freestone and Limestone; then into gravelly and sandy loams, clay and alluvial. The clay soils are red, blue, yellow and black, and vary from those which are almost pure *allumina* to such as are fully saturated with lime. The loams all contain lime in large proportions. Such is the diversity, that in many fields, containing from five to ten acres, five or more well marked soils are found.

Situated in the same latitude as the lower part of New Jersey and the upper parts of Delaware and Maryland, with a milder climate, all the fruits which grow there, in such perfection, may be grown in the same perfection here, except pears. It is possible, in time, with proper care and cultivation, these too, may rival those of the sections above mentioned, but the subject must be better understood than at present. The cultivator here must learn that pear trees are not to be planted in a rich soil, or near a pig-pen, a stable or a barn-yard, or stimulated into a luxurious growth, by any other means. Stimulating *pear trees* may do in New York, or at Cleveland, but not in this vicinity.

The Currant is an annual bearer with us. So is the Gooseberry, with but little mildew.

Raspberries produce fine fruit, when the stools are not winter-killed. The Falstaff bids fair to prove our best market variety.

STRAWBERRIES.—These do well with those who understand their cultivation. Hovey's seedling is frequently hove out and destroyed during our open winters.

CHERRIES.—These succeed well in dry light soils, but the trees are frequently killed in wet stiff soils, by late vernal frosts, after coming out in leaf. Young trees, too, are subject to a splitting and decay of the bark, on the south-west side, which frequently destroys the trees. Thorough draining, I believe, will prevent these evils.

PLUMS.—Many choice varieties of this fruit are being introduced. Few, however, ever ripen. In light, loose soils, the Curculio generally destroys all. If any are spared by this insect, they are generally destroyed by a fungus which is called "the rot." In strong, wet clay soils, they sometimes come to perfection, and several varieties have been presented at our fruit meetings, measuring six inches in circumference.

GRAPES.—The native varieties do well when properly cultivated. Many have been destroyed the present season by insects, said to be the Grape Curculio.

PEACHES.—Our climate suits the Peach. On our rich bottoms and in protected situations, many of the budded varieties are annual bearers and produce most delicious fruit. If the trees are too much exposed, however, to the sun, in autumn, the blossom buds frequently become so much swollen, that during the winter they freeze, die, and fall off. A full crop, on our uplands, is never expected two years in succession. The trees require a virgin soil. Our green or white skinned seedling peaches are very liable to be attacked on one side by a fungus like mildew, which causes that side to contract while the other expands; the peaches consequently crack and soon rot. The Blood clings, even when budded, are very liable to be thus attacked.

BUT APPLES are the great staple fruit of this county and State. On our river and creek bottoms, and on our limestone lands, they are grown in great perfection. When it is recollected, that in 1820, this county contained only about 5,000 inhabitants, and that with a pre-

sent population of over 30,000, the reader is informed that more than one-half of our lands are yet in a state of nature, he will perceive that most of our orchards are yet young. When he is informed, too, that about the date above mentioned, the nurseries about Marietta, and the only one about Zanesville, were permitted to run down, and were not succeeded until recently by other good ones, so that for more than twenty years there were no nurseries of any note, within a reasonable distance, or accessible to the citizens of this county; and even now, they are under the necessity of procuring trees from the nurseries of Marietta, Coshocton, Columbus, Cincinnati and Cleveland, he will understand the reason why most of these orchards contain natural fruit only. Some of our earliest settlers planted orchards of grafted apple trees, and these trees were of choice varieties, because, at that time, no other trees could be procured, had their inclinations led them to a different selection. Those varieties have been propagated, and hence our standard apples are, *Summer, Bracken, Early, Chandler, Summer Sweets, Pound Royal of Marietta, (Dyer,) and Red Streaks, Autumn Rambo, Holland Pippin, Winter Russets, Yellow Bellflower, Spitzenburghs of Marietta, Vanderveres, (Red, Green and Yellow,) Red or Long Pearmain, Red Winter Pennock, Black Gilleflower, New Town Pippin, Westfield Seeknofurther, Rhode Island Greening, and Romagnights*. To these, many others have been added, but are not so much cultivated. Of the above, I shall remark in the order enumerated, and then of others.

THE BRACKEN.—Found as a seedling in 1812, on Bracken creek, Bracken county, Kentucky, by Mr. William Pitt Putnam, of Belpre, Washington Co., Ohio, and introduced into his nursery, and extensively disseminated thence by him, and from other nurseries by others. It is our earliest apple, ripening in June and July—has been confounded with Prince's Early Harvest and the White Juneating. The leaf, wood, tree and fruit, in all their peculiarities, are the same as those of the Prince's Early Harvest, brought from Prince's Nurseries, New York. It is strictly a desert fruit, and not very good for the kitchen. Where each limb leaves its supporting stem, there is a navicular projection, which is claimed as peculiar to both these varieties.

EARLY CHANDLER.—Brought from Pomfret, Connecticut, in 1796. Good for culinary purposes, 4th July, and continues to ripen six weeks. Said to be too acid. Those who make the remark, have probably never seen this variety in perfection, when grown on a moist rich soil.

SUMMER SWEET.—(*High Topped Sweeting.*)—The earliest of sweet apples cannot be dispensed with—Pound Royal of Marietta and Kenrick, Dyer of Connecticut and Rhode Island, Pomme Royal of Downing. Has no superior of its season, August and September, when grown on rich, moist land, and partially shaded. Grown on uplands with a full exposure, it is more acid, and not so tender.

RED STREAKS.—One variety of these is probably the Early Queen of Philadelphia. A very early, tart, desert fruit.

AUTUMN RAMBO.—Too well known to need description. Ours is the Rambo of Mr. Downing. The trees overbear every second year, and generally break with their burthens.

HOLLAND PIPPIN.—Usually called Fall or Golden Pippin. Superior for cooking and drying, and admired by many for eating, in early winter. Those who have them will not consent to dispense with them. All the above described are annual bearers.

WINTER RUSSET.—*Putnam, Boston or Roxbury Russet.*—Origin, Litchfield, County, Connecticut. For 50 years these apples, when grown on the bottom lands of the Muskingum and Ohio rivers, have had no successful rival. When grown on stiff clay lands, they are frequently found too acid, and deficient in flavor.

YELLOW BELLFLOWERS. These, too, require a rich, moist soil, and a rather warmer climate than ours, to give them that beautiful orange color, and mild acid flavor, which renders them such favorites about Cincinnati. With us, they are generally too acid.

SPITZENBURGHIS OF MARIETTA.—Of little value.

RED AND LONG PEARMAIN.—This much abused variety is with us, much admired by many. It is a superior cooking apple, an annual bearer, but bears more abundantly every other year, and in that year, too, when other trees bear but sparingly, or not at all. In the language of a German friend, “these trees bear when there is no apples.” In a stiff, wet soil, they are rather poor articles, but the trees pay well for manure placed about the roots.

RED WINTER PENNOCK.—Admired by about one-half and condemned by the other half of this community. Subject to the old “Bitter Rot,” it is seldom attacked by the new disease bearing that name. Its cooking qualities are not surpassed by those of any other apple of its season.

The *Black Gelliflower*, *New Town Pippin*, *Westfield Seeknofurther*, and *Romanights*, are too well known to require any remarks.

RHODE ISLAND GREENING.—Twenty years since, this was one of our principal winter apples. At this time, it is seldom seen in market. On stiff limestone lands, the trees do not produce good fruit. On our richest bottom lands, they run too much to wood, and consequently bear sparingly. They require a freestone soil, without manure.

OTHER VARIETIES.—I have grown and tested the Alexander, Am. Sum. Pearmain, Am. Golden Russet, Am. Pippin, Baldwin, Cathead, Esopus, Spitzenburgh, Early Strawberry, Gloria Mundi, Gravenstein, Harrison, Kilham Hill, Large Yellow Bow, Maiden’s Blush, Michael Henry Pippin, Nonesuch, Pumpkin Russet or Kingsbury Russet of Ohio, Red Astrachan, Stroat, Summer Rose, Swaar & Talman’s Sweeting of Mr. Downing, and find they correspond with his descriptions. Also the Gate, by him called the Waxen of Cox or Belmont.

Also, the Pumpkin Sweet, Blue Pearmain, White Italian, White Apple, Norfolk Beanfire, Roman Stem, Wells, Canada Reinette, Red Streak, (Winter) Cooper, Genneting, (Summer) Sweet Harry, Rambouillette, Black Pippin of Indiana, Orange sweeting, Summer of Columbus, Rome Beauty, and others of various writers. I have also about 200 other varieties in the course of being tested.

REMARKS ON THE ABOVE.

The *Pumpkin Russet* is the Kingsbury Russet of Ohio. Subject to large transverse cracks, with black rotten edges.

The *American Golden Russet*, of Indianapolis, is identical with Rev. C. Springer’s Little Blue Pearmain, but I think is not the Sheepnose of Cox.

The *Roman Beauty* is a seedling from the old nursery of Israel Putnam, of Union, Washington county, and not of Rome, Lawrence

county. It is a beautiful reddish apple, thick skinned, and not affected by "rot," or pock, even on trees where this disease prevails, as I have proved for three years in succession. An annual and abundant bearer.

Gloria Mundi or *Monstrous Pippin* is not worth the room it occupies anywhere, except as a curiosity, on account of its immense size. Trees poor bearers, and fruit worthless.

Harrison.—This variety, so celebrated formerly for cider, is now scarcely worth cultivating, except for its long keeping, annual bearing, and fine baking qualities, in March, April and May. In exposed situations, the fruit remains untouched, while all others are stolen.

Cooper.—This is an eastern variety, sent to Ohio in 1796, and so much altered by our soil and climate, as not to be recognised by our eastern friends. It ripens in September, October and November, and in a stiff clay soil, is a splendid apple for size and beauty. Grown in such soils, it is not recognised by those who grew it on rich bottom lands.

Gennetting, or *Summer Gennetting*.—This is an early summer apple, acutely ribbed, rather tart, and forbidding in appearance, when not fully ripe; greatly improved by lying a few days after being pulled, when it becomes tender, and of a beautiful straw color. Good for cooking, July and August.

Sweet Harvey.—There are several varieties of apples cultivated under this name. One, and probably the true one, resembles in external appearance, the Rhode Island Greening; ripens in September. Another, by some called the Sugar Sweet, has numerous indentations in the skin, beneath which there are brown spots in the flesh, which have the same appearance as the "bitter rot," in the Red W. Pennock, but these spots are not very bitter. Such of these varieties as remain on the trees at picking time, will keep till May.

White Apple.—A very agreeable, juicy, subacid variety, ripening in September and October; a second rate fruit.

The Rambouillette, of Judge Wood, same as our Rambo.

Orange, or *Golden Sweet of Columbus*.—Ripening in July and August. Does not correspond with descriptions of authors in size or appearance. Has a strong aromatic flavor. I have found it the pre-

sent year in some of our oldest orchards, taken from the Marietta nurseries. A very superior fruit.

Stone's Sweet.—An apple grown in this place; has been disseminated, and is now offered for sale by some nurserymen, under the above name. During the present season I have traced it back to Hill's nursery, on the Little Muskingum river, Washington county. It is large, flat, green, until fully ripe, then yellow—ripening last of July and first of August. Fine for baking. The leaves of these trees distinguish them at first sight, being from four to six inches in width, and from six to eight in length. What is it? Probably an old eastern variety.

Sigler's Red.—At the Ohio Fruit Grower's Convention, in 1848, I presented an apple which was much admired. Knowing no name, it has been circulated as Sigler's Red. I now believe it is the Autumn Pearmain, of Mr. Downing.

White Italian.—This variety I obtained from Cleveland. Specimens are herewith presented. I think it is not the same as the White Italian of Mr. Kenrick.

In addition to the foregoing, there are numerous other varieties of apples cultivated in this county. A large number of sweet varieties are being introduced for man and stock.

The new "Bitter Rot," or Pock, is now rapidly extending in our orchards, and in some, literally sweeping all the late fruit. Turning hogs in, to eat the affected apples, is generally resorted to, but they cannot eat them as fast as they fall, and if much affected, they will not touch them; consequently they are left to rot on the ground. The disease is thus increased and extended. Lime, ashes and stable manure appear to be the only remedies for mitigating this disease.

I find by experience, that Hornets, Wasps, Bees, Yellow Jackets, Locust-borers, Ants, Tumble Bugs, Grasshoppers, and other insects, wound many of our best apples, when they change color, or commence ripening, and thus cause them to rot and fall prematurely.

S. A. BARKER.

McCONNELSVILLE, 25th September, 1850.

REPORT OF MAINE.

BY HENRY LITTLE.

Maine has shared with other portions of the country, in the impulse recently given to the cultivation of fruit: in some districts to a gratifying extent. For several years it has been generally admitted among the well informed, that this State is well adapted to the culture of the apple, in all but a few varieties, and even these, such as Newtown Pippin and Esopus Spitzenburg, may be found to do better when grown in the more fertile soils, lying further from the sea coast, where they have not yet been tried.

The less productive and easily exhausted lands lying along the coast, in width from 20 to 30 miles, do not afford fair evidence of the agricultural capacity of the State in relation to any crop. Yet this has been the field upon which an imperfect culture has been sufficient to prove that the apple may be profitably and abundantly grown, and to give good hope of the pear and plum when tried under good culture. At this time, new plantations are being made as well in the older lands under a redeeming management, as in the newer and more fertile soils, to yield a few years hence, rich and ample harvests. The application of scientific discoveries in the practice of horticulture, has been but little attempted, as the knowledge of them and the resulting benefits is diffused, and the capacity of soil better developed by deep tillage and draining, we look for confirmation of the most sanguine expectations of a few earnest cultivators who have learned that long cold winters have a compensating though brief warmth of summer, and that the long rest affords a corresponding energy of vital powers in vegetable life, manifested in rich stores of juices, and rapidity of growth.

Numerous gardens and orchards have been planted with choice varieties of the pear and plum, in the last 4 or 5 years, of which the plums already make a very gratifying return. The recent annual exhibition of the Bangor Horticultural Society, displayed handsome specimens of nearly all the good known varieties of this fruit. The whole family of the *Gages*, led off by the *Reine Claude*, and nobly supported by the *McLaughlin*, (a Bangor seedling of this family,) of the true *Reine Claude* or *Green Gage* flavor, and of much larger

size; the Jefferson, Washington, Lombard, Orange Columbia, Mag. Bonum, Imp. Ottoman, and Purple Favorite, all indeed that are recommended as worthy of extensive cultivation, had been grown upon trees recently planted, (1846-7-8,) and the trees have been healthy, rapid growers, uninjured by cold or heat, or other alternations, while the fruit attained a high excellence of appearance and flavor. This season has been unusually wet and backward, yet the Autumn Gage, Cois Golden Deep, and Reine Claude de Bavay promise to attain perfect maturity, if mild weather continue to first or fifth of October.

By trenching, or otherwise affording depth of soil, kept in good condition; by such drainage as shall keep it free of excessive humidity, and yet porous; by so pruning, or rather so refraining from the cruel treatment called pruning, that the trees shall have the shelter of the foliage against the scorching sun, alternating with the cold nights and dews of summer, and such other methods as experience shall suggest, it is believed the pear may be grown in this State with success, remunerative at least, if not highly profitable, like the apple and plum. This fruit, worked upon the Angers Quince, has been lately introduced to the extent of 1000 or 2000 trees, and arrangements are making for a more extended planting of them. So far they have done well, come early into bearing and are found to be quite hardy.

The apple is beginning to be cultivated to a considerable extent as far north as Woodstock, New Brunswick. Of this fruit, William's Favorite Sops of Wine, (known with us as Bell's Early,) Gravenstein, Porter, Ribston's Pippin, and Rhode Island Greening, are popular with us; to these, we may add the Duchess of Oldenburg, Sweet Bough, and Danver's Winter Sweet and many others.

Of pears, Vicar of Wakefield, Louise Bonne de Jersey and Flemish Beauty, are among the many now cultivated with good success.

Nearly every variety of the plum recommended by Mr. Downing, thrives well in our State.

On the Penobscot river, and wherever it is known in Maine, the McLaughlin plum is the most popular of any other. The Jefferson is also extensively cultivated, particularly in Penobscot and York counties, and is very productive and a first rate fruit. These two varieties

should be found in every garden in our State, where they unite so many very desirable qualities.

All of which is respectfully submitted.

BANGOR, September, 1850.

REPORT OF VERMONT.

BY C. GOODRICH.

As there has been no State organization for a Horticultural Society, if we except a Pomological Convention in October last, when but a small portion of our small territory was represented, and an attempt then made to form a Horticultural Society, and as but little attention has been given to Fruit by the County Agricultural Societies, whose reports seldom give any information more than that A. had the best apples, B. the best pears, and C. the best plums, a State report must be necessarily very vague and indefinite.

Orchards were numerously planted in the southern part of the State, on both sides of the mountain, prior to the American Revolution, while the valley of Lake Champlain and the whole northern part of the State was not settled until after 1783. Among the early acts of the State Legislature, was one exempting, from taxation all land on which forty apple trees to the acre were planted; this gave a great impetus to planting apple trees, every farm had its orchards, large quantities of apple or cider brandy were made for exportation, and cider was very plenty.

During the temperance excitement, fifteen or twenty years since, many of the best old orchards in the State were cut down, and but little attention given to planting new ones.

For a few years past there has been an entire change—nurseries from one to six years old are very common, and thousands of trees are now yearly planted; in many places on the same ground where a few years since a good orchard was cut down.

The condition of old orchards depends very much on the geological character of the soil. In portions of the State, where plenty of lime

exists in the soil, the orchards are generally healthy ; in other portions, where there is little or no lime, the orchards, to use a farmer's phrase, have "run out;" but in all such places, with proper culture, and lime or ashes freely applied, they grow with renewed vigor.

There are many favorite seedling apples cultivated, known only by local names. Some very superior ; also many Foreign varieties introduced from Canada by early settlers, many of which are known by names given them by the growers. The oldest trees on Lake Champlain are at Chimney Point, opposite the old fort of Crown Point. These were planted by the French, more than a century since, and in the only place on the east or Vermont side of the Lake, occupied by the French while Canada was a province of France.

Scions from these trees have been extensively scattered under the name of the "chimney apples," and prove identical with the Faneuse, Pomme de Aeijs, or Snow Apple.

It seems hardly probable, that an apple *originating* in Montreal, should have acquired such a reputation one hundred years since as to be propagated abroad. Among apples generally cultivated in Vermont, are many seedlings of merit ; also Foreign varieties with the true name unknown. Of apples well known, and which have been sufficiently tested to speak with confidence, the following may be called first rate in our climate :

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|------------------------|----------------------------|
| Early Harvest, | Red Astrachan, |
| Bough, | Duchess of Oldenburgh, |
| St. Lawrence, | (for cooking,) |
| Shropshirevine, | Famense, |
| Gravensteine, | Porter, |
| Hubbardston Nonsuch, | Baldwin, |
| Roxbury Russet, | Jonathan, |
| Rhode Island Greening, | Westfield Seek-no-further, |
| Yellow Belle Flour, | Pomme Gris, |
| Danvers Winter Sweet, | Red Gilliflower. |

Among our favorite apples are the Esopus Spitzenburgh and Newtown Pippin ; the first is one of the most common, but is apt to be spotted. The climate in most of Vermont seems not adapted to them. In favorable locations and good seasons both are first rate. No apple grows better than the Northern Spy, or appears more hardy ; it is

not yet fruited. The varieties lately introduced are very numerous, a large portion of which have not fruited, or not sufficiently and long enough to fully try them.

OF PEARS, the White Doyenne stands at the head in all parts of the State, where pears are grown. In this town the Spanish Bon Chrestian is one of the most common; introducing among the first from Montreal. Until a few years it has been very productive and fair, but it has become small, spotted, and cracked, so as to be worthless in most gardens, in the same manner as the White Doyenne in other parts of the country. No "special manures" seem to remedy it. I have six trees of this variety which I have partially grafted with other varieties, and while the Bon Chrestian is spotted and cracked, worthless and not one-fourth as large as ten years since, the Bloodsword, Bartlet, White Doyenne, Belle Lucretia Glout, Morcian, Frederick of Wirtenburgh and Flemish Beauty, on the same trees, are large and fair, Beurre Gris, poor. These are all the varieties which I have tried on them which have fruited.

There are numerous seedling pears which are favorites in their several localities, in most cases from want of knowledge of better ones. Some of these are decidedly first rate. But few pears have been cultivated here long enough to fully test them. Among those that promise well—some of which have fruited many years—the

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|-------------------------|--------------------|
| Bartlet | Dearborn Seedling, |
| Bloodgood, | Winter Nellis, |
| Beurre Bose, | Vicar Wakefield, |
| Golden Beurre, | Lewis, |
| Beurre d' Armburgh, | Glout Morcian, |
| Andrews, | Heathcot, |
| Louise Bonne d' Jersey, | Seckel, |
| Rostiezer, | Fulton, |

are among the best. I have fine specimens of the Dix Pear growing on grafts but *four* years old.

OF PLUMS.—The Burlington Gage, a seedling of Burlington, a medium size blue plum. The Lombard and the Blue Imperatrice are the three best for general culture, as we generally have good crops of them when most others fail. The Canada, or wild plum, grows spontaneously in many parts of the State, and proves a valuable stock for grafting. The climate is favorable for the plum tree, and of more

than forty varieties here found, but one (the Peach Plum) which could not grow successfully; for this our climate seems too cold. Our trees are free from disease, and the curculio our principal enemy.

PEACHES AND QUINCES are hardly worth cultivating, though fair crops of both in the most favorable locations are not uncommon.

CERRIES generally grow well. The Black Tartarian is our best variety.

OF GRAPES.—The native varieties of New England, with numerous local names, are mostly grown, and are now much sought after. The Isabella, White Crossillas or Sweet Water, Miller's Burgundy, and others, ripen their fruit in good locations, but need protection in the winter. The Catawba is more hardy, but our seasons are too short for it to ripen well.

GOOSEBERRIES are easily grown, and produce with proper attention, great crops, uniformly. The Green Walnut, for an early, and the Cronn Bof, for a late, are the two best sorts. When refuse hay or straw, dipped in a strong brine, has been spread in the spring, about two inches thick under the bushes, I have never seen any mildew.

OF RASPBERRIES.—The Franconia is our best, hardy and great bearer. The Antwerp (yellow and red) grow well, and the canes do not winter kill, but the cold weather seems to injure their fruit bearing qualities.

STRAWBERRIES are so common in fields that they are as yet but little grown in gardens; but produce abundantly with ordinary culture.

The past season has been rather cold and showery until about the 1st of August, since that time to the 1st of September, dry. Apples are less abundant, and generally not as good quality as last year. Of Pears there is a full average crop. Some varieties of Plum are abundant, while of others there are none. There is some mildew among grapes, but not generally. As a whole, the amount of fruit in the State is below an average in quality and quantity.

C. GOODRICH,

Ch'n of Fruit Com. of Vermont Pom'l Con.

Burlington, Sept. 2, 1850.

the uncertainty common to a fickle western climate—that is, a fruit year and a failure, or perhaps two years of productiveness and three of disappointment in every five. Within five miles of his farm, however, is located a hill six hundred feet high, and which is thereby made visible at his farm. Upon this hill the peach crop has not failed since he first knew it.

In far the greater number of cases, the cultivator has to choose between places varying in height only a few feet; under which circumstances, it appears that elevation secures a greater amount of heat, by keeping the surface within range of the moving strata of air, and from other causes, than is experienced in the bottoms or depressions.

That they may be the better understood, the committee quote freely from a topographical survey of his orchard grounds, executed by one of their correspondents. This gentleman's site occupies the midst of a plain 250 feet above the level of the Ohio Valley; its figure is a parallelogram, the long sides running north-east or south-west 100 rods; the short at right angles thereto, in length 75 poles. A valley heads at the eastern short boundary about the middle, and runs through the midst of the orchard, crossing the lower or western boundary at a depression of 52 feet below the summit.

The sides of this valley include a large portion of his bearing trees. The map of this survey is marked by horizontal lines at every ten feet depression, counting downward from the summit, so that one sees at a glance how much each tree on the slopes of the valley falls below the summit of the plain. The author of this survey remarks, that trees situated near the horizontal line of 30 feet, counting from the summit downward, lost many of their fruit buds on the lower branches during the winter of 1849-'50, while other trees of the same varieties, at higher elevations, preserved their fruit buds unhurt. Again, that, after blooming in the spring, the same trees were more or less affected by frost, as they were above or below said horizontal line of 30 feet—whilst, moreover, as the depression deepened towards the lowest point in the valley, the injury from cold increased, until not only the fruit buds were killed in 1849-'50, but also the small branches or spurs themselves on which the buds were growing.

REPORT OF THE STATE FRUIT COMMITTEE OF KENTUCKY.

The committee, to whom was assigned the duty of digesting and reporting the information received from correspondents, in relation to fruit culture, beg leave to offer the result of their labors to the Kentucky Horticultural Society, and, through that institution, to the Pomological Congress.

The committee remark that a set of inquiries, similar in character to those propounded by the chairman of the general fruit committee of the Pomological Congress, was distributed by circular throughout the State, and the persons addressed were solicited to respond to said inquiries; and they state that although fewer responses have been received than the importance of the subject ought to have drawn out, yet they are of opinion many facts will, in this way have been gathered highly useful to the cultivator.

Location and aspect of Orchards.—Perhaps nothing would be more serviceable to the inexperienced cultivator, than the power of knowing in advance, the capabilities of any grounds he might design to appropriate to orchard culture. Inclining strongly to this opinion, the committee have gone somewhat into detail upon facts tending to shed light upon this subject. They are clearly of opinion that, if heretofore there was any doubt upon the subject, the facts now before them warrant the assertion that, other things being equal, the highest grounds are best fitted for success in orchard culture. Those of great elevation being subjected to such increased cold as keeps vegetation back in the spring till the danger from frost passes by; whilst smaller undulations upon the surface and the higher strata of the hill sides are supposed to part with less of their surface heat by radiation than the more moist low lands. The committee are in possession of a well authenticated instance of the effect of absolute height, furnished by a gentleman of high standing, and of the most competent ability to form an opinion on such a subject. This gentleman has owned, and had cultivated for many years, a farm, lying within the peach district; his own orchards occupying parts of the slopes of hills of no great height, inclining gently toward a river, distant only a few hundred yards. His success has been marked with

Again, the surplus waters falling upon the plain had in time furrowed out a channel, which crossed the southern side of the parallelogram, running down one slope of the valley into the stream gliding through the centre. Trees located in or near this channel, even when above the horizontal level aforesaid of 30 feet, were not secure from injury like others on the same horizontal parallel, only a few rods distant. To give an example of general results, he states that the heath tree on high ground bears this year abundantly; below the line of 30 there is not a fruit, and between the horizontal lines 45 and 50, he has some dozen thrifty trees that have not borne in eight years, although in that time there have been three full crops and two partial ones.

The committee have received no account, written or verbal, differing from this, except in accuracy of detail. One gentleman states that his peach orchard inclines gently from either of two opposite sides inwardly, but that the depression at the lowest point does not, he thinks, exceed five feet; yet near this lowest point the fruit buds were killed last winter, and even some trees destroyed by cold. Another correspondent, residing upon the flats of Bear Grass, a plain which is unbroken for miles in extent, and which would be one great morass, but that its lands are so fertile and friable, as to filtrate the waters which descend upon its surface, assures the committee that only high lands are suited to orchard culture, and, as proof of this theory, points to barren trees along the margin of his streams, moving sluggishly along, almost without banks and without current, whilst his other trees, a little way off, not ten feet higher, bear well. Still other correspondents, whose orchards lie upon hill sides, assert that they can tell in spring where the line of safety ends and that of injury begins, and that they can perceive the gradations of injury grow greater, as the hill sides are descended.

The cause of this injury will doubtless be found to consist either in the greater intensity of cold prevailing in bottoms, or the greater susceptibility on the part of trees located amid the greater moisture always present there. This is an interesting question, and its solution will require many interesting experiments, similar in character to those published during the present year, by that fast friend of science, Lieutenant Maury, of the Navy. The committee have thought the following experiment, though not conducted with a view to that

end, calculated to shed light on this subject. On the 14th and 15th of April, 1850, at night, the mercury, in open air, sunk to 26° above zero, and every unprotected fruit blossom was killed; but at the same time, a fruit tree in full bloom, surrounded by artificial heat, with a self-registering night thermometer in its branches, which never sunk lower than 29 deg., saved all its fruit alive; thus showing the difference between safety and destruction not to exceed 30 degrees. Again, the same observer, the author of the topographical survey, on the 2d of April, 1849, had one thermometer on the high portion of his orchard grounds, and another in the bottom, 35 feet lower. At 1 A. M., he found the thermometer in the bottom at 28 degrees, and, being surprised to see that on the hills 33 degrees, changed their position, but was soon convinced that there was a difference in temperature between the two points of five degrees, which, on the 14th and 15th of April last, would have been more than a killing difference. An acknowledged ignorance, both of the intrinsic value and time of ripening, in respect to many peaches, pears and plums now in cultivation, forbids any attempt on the part of the committee, to offer a list for general cultivation, or to propose a rejected list; and they would further remark, that, although the statements herein set forth are more particularly applicable to stone fruits, it is only because their comparatively tender habits render them more frequently a prey to ever existing causes than the hardier apple and pear. The latter fruits are by no means harm proof.

In regard to preventives against the assault of the curculio upon smooth fruits, the committee feel called on to state a few facts and experiments. Several cultivators have this year tried dusted lime upon Mr. Young's plan; others trying with whitewash. Whitewashing fails to cover the young fruits, and seems to be inefficient, and, for this season, dusted lime has not given the same satisfaction as for the two previous years. At present, the committee are inclined to think the failure (which was only in part) attributable to erroneous impressions as to the stay of the curculio, rather than to any want of virtue in powdered lime. Several experimenters testify to the soundness and beauty of their fruits so long as the limings were kept up, but that the curculio, instead of disappearing at the

end of a month, as usual, prolonged its stay, and afterward wholly destroyed some crops, and greatly injured most others treated with lime.

All of which is respectfully submitted.

L. YOUNG,
Chairman State Fruit Committee for Kentucky.

REPORT OF LENAWEE COUNTY, MICHIGAN.

BY. W. H. SCOTT, 1850.

Chairman of the General Fruit Committee :

The fruit committee of the Lenawee County Society have but a meagre report to make. Until recently there has not been such an organization as the most effectually to exhibit the character of the fruit cultivation of this part of the State. Those who have been the most devoted to the improvement of fruits have generally found the result of their labors quite satisfactory, and have met with but few obstacles in the perfect maturing of most varieties.

The grape is, perhaps, the only fruit that has not abundant time to come to full maturity. The Isabella and most of the more hardy varieties ripen before the severe frosts ; but the Catawba often does not have sufficient time.

The variety of soils in Southern Michigan is such that there is abundant opportunity to test the comparative advantages of each for orchards. So far as I have observed, no trees present a more thrifty appearance, and yield better, than those on soils rather inclining to clay, with a mixture of gravel. Insects are much less troublesome than on the sand ; and young trees, and especially the cherry, do not make a growth so disproportionably rank as on light soil.

Taking all the fruits into consideration, the season has been full an average one in southern Michigan. The autumnal frosts came on so gradually last fall that fruit buds were well matured. In December the thermometer fell once to 3° below zero ; in February once to zero.

This was the coldest of the winter here. The uniformity of the cold through the winter was most favorable for fruit buds. But March, April, and May were noted for severe frosts. There were eleven in May. Fortunately it was very dry and the same injury was not done to the blossom as if the month had been ordinarily wet. The peach orchards on rather low ground were seriously affected by these late spring frosts, and apples also in many instances. The apple crop will not be more than an average one.

APPLES.—Good progress has been made. I have not learned that any of the leading varieties, either in fruit or tree, have failed to do well where proper attention has been bestowed by the cultivator. The Quakers, who are among the oldest residents of Lenawee county, and constitute quite a large proportion of the thorough fruit growers in this region, have some of the finest apple orchards. These orchards have been planted on almost every variety of soil and locality capable of producing farm crops. I have seen none looking and producing better than those planted on clay soil, where those soils contain a mixture of gravel and are sufficiently rolling to carry off quickly all surface water. The best mode of cultivation seems to be thorough plowing and no under crops. Insects have been unusually troublesome the past year.

The summer apples most cultivated are the Yellow Harvest, Sweet Bough, Summer Queen, and Spice Sweeting. Good specimens of the Early Strawberry, and Summer Rose have been exhibited at the meetings of the society, but are not yet very generally cultivated. Among these none are gaining in popularity more rapidly or more deservedly than the Sweet Bough. Here the tree is always healthy and bears generally a moderate crop of large and fair fruit.

Among fall apples, the Fall Pippin, Autumn Pearmain, Rambo, Holland Pippins, and Autumn Swaar do well. Among the more common winter apples, so far as I have learned, none fail. The Newton Pippin on clay soil does well. I have been told that there are trees on sandy land doing equally well but have not seen them. Rhode Island Greenings invariably fine on either sand or clay. The Rox. Russett, Tallman's Sweeting, Yellow Bellflower, Spitzenburg, English Russett, Swaar, Herfordshire Pearmain, Wine, Jonathan, Red Gilliflower, and Bl. Gilliflower, are in most common cultivation. A choice

of five of these would probably embrace Rhode Island Greening, Spitzenburg, Rox. Russett, Bellflower and Swaar.

Less commonly cultivated, but excellent, are the Westfield Seekno-further and Belmont. I have not met with a cultivator of the Belmont who does not consider it either the best or among the best in a small list of winter apples. Next to this, all things considered, I place the Yellow Bellflower. The Northern Spy has not been sufficiently tested to speak of its merits.

PEARS.—The finer varieties have been so little cultivated until recently, that little can be said. Young trees of the better sort are fast coming on, and in three or four years nearly all now noted in other places may be tested here. So far the pear has been very healthy and I have scarcely met with a case of blight.

PEACHES.—More attention has been paid to this fruit. Nearly all of the best varieties have been tested and succeed admirably, both as to size and flavor, but good crops cannot be depended on as often as in many other parts of the country. Quite a number of seedlings have been exhibited. As more reliance can be placed on these, as regular bearers and for hardiness, than on the budded sorts, there is a very general disposition to encourage their cultivation. Orchards on high grounds have been quite overloaded. In some of the more elevated positions the crop has not failed since the trees commenced bearing; while in neighboring orchards on grounds twenty, thirty, or forty feet lower, the trees have not borne oftener than one year in three. I have seen an excellent example the past season of the relative advantages of slight elevation and a proximity to water. From the river Raisin, a small stream, there is a gradual ascent on one side of twenty-five or thirty feet in three quarters of a mile. At that distance the ascent is more abrupt to an elevation fifteen or twenty feet higher. On this highest ground the peach trees were loaded with fruit; just at its foot the trees have not borne; but as the river is approached the trees were more and more full, until quite near it they bore abundantly. I have heard of no cases of the Yellows. No worse enemy has appeared than the peach worm.

CHERRIES.—Considerable attention has been paid to this fruit. Among the leading varieties, the Black Tartarian has been as popular as any; though our fruit committee have thus far given the pre-

ference to the Black Eagle for flavor. Fine specimens of the Napoleon Bigarreau, Elton, Mayduke, American, Amber, Manning's Late Black Heart, Madison Bigarreau, Black Heart, Yellow Spanish, and White Bigarreau, have been exhibited; and several seedlings that may prove worthy of cultivation. Trees are sometimes attacked by sap blight, but not so frequently as in many portions of the country. This disease has been most troublesome to trees having a very rapid growth when young; and on sandy land.

PLUMS.—Many of our leading fruit cultivators have exhibited a commendable perseverance in their efforts to grow plums. They have cultivated a large variety of the best; still, very few growers could spare the time to keep off the curculio, and as a consequence comparatively few have succeeded in saving their plums. On the whole, the attention devoted to plum culture here, except by amateurs, is rather time wasted; and must be so until some more effectual remedy shall be found against the curculio.

GRAPES—The season (at the time of making this report) has not arrived for a proper test. The Isabella is the only one of the good varieties very commonly cultivated. It generally has time to ripen well. A later grape is often touched by severe frosts before full sweetness is attained. The Catawba is subject to this drawback, and the south side of white-washed walls will be a necessary position for it. Fine clusters of the White Sweetwater have been exhibited. It requires protection through the winter. The taste for grapes have not become sufficiently refined to prevent the very general cultivation of the showy, but coarse and acid Fox grapes.

RANDOM THOUGHTS AND OBSERVATIONS

ON POMOLOGY,

AND KINDRED SUBJECTS, IN ILLINOIS AND THE WEST.

BY JOHN A. KENNICOTT.

Of the Grove, Northfield, Cook county, Illinois, 1850.

To the President and Members of the American Pomological Congress:

GENTLEMEN:—As little better than a self-constituted “committee of one,” I have neither the leisure, subjects before me, or critical knowledge of fruits, sufficient to enable me to produce a creditable, or even another popular report, on the Pomology of Illinois.

But, gentlemen, there are subjects intimately connected with our particular branch of rural art and rural science, which I have long and deeply pondered, and that I deem worthy of our consideration, and which may not prove entirely uninteresting, or altogether inappropriate in this connection.

I am bound by promise, and by gratitude for the favor shown a previous paper, to attempt something towards filling the pages of the first volume of our “transactions.” Yet, were it not for the example, the self-educated son of a poor farmer, might be pardoned for refusing to obtrude his chance thoughts upon men of talent and education. But I am proud of my class, and deem it the duty of every son of the plow, and the budding knife, who can write, to do his best to arouse and enlighten his brethren, whose destiny and whose blessing is, that in the sweat of their brow, they shall eat bread, and to whom the earth shall yield her fruits, as the rewards of care and toil alone, and health, and strength, and length of days, home comforts and pleasure, and cheap luxuries shall come with industry and economy,

but which will come sooner, and last longer, if a little specific knowledge be added thereto.

I would fain aid better men, in spreading this knowlege, broadcast over the land. But, in truth, though willing enough, I have taken few notes, have few works for reference, and have never a solitary hour for abstracted thought; and though I write much, errors are unavoidable, and "good letters" or literary merit, cannot be expected, and unless you indulge me in a little reasonable latitude, in the choice of subjects, I fear this paper will prove anything but instructive or interesting.

I promise you, however, that I will not travel far "out of the record," or in the least over-step the bounds of that broad field, in which we are all laborers; and from which the farmer draws the rough food and clothing of the million; while we but gratify the refined taste of the few, though we hope to aid in spreading a healthful and delicious "desert" for all, and if we cannot cause the peasant to "dine like a prince," we will help him to dine as well; while we try to seat every farmer, (and every mechanic with a rood of ground) "under the shade of his own vine" and apple tree, and pile his plate, and fill his cup more healthfully, and as abundantly, and with such fruits, and their "pure juice" as few princes can command.

I will, therefore, with your permission, offer in the first place, a few words on grape culture in Illinois, and the effects of wine growing on our national habits of intemperence.

And if we *can*, in reality, unite pleasure with profit, and measurably gratify appetite, while at the same time, we work a great improvement in the general health, and bring certain aid to the cause of NATIONAL TEMPERANCE REFORM, by substituting *wine for whiskey* as a beverage, we shall accomplish a great thing, though I freely admit that it were better still, *could* we abolish both, instead of substituting the lesser for the greater evil.

"Sweet is the vintage, when the show'ring grapes
In Bacchanal profusion, reel to earth,
Purple and gushing"—

and choice fruits, and pure wines are food and medicines, and permitted luxuries that few will be apt to question or decline.

I have lately made a rapid though extensive reconnoissance of the valley of the Upper Illinois, its sources and tributaries, and I was really astonished at the great and evident capabilities of this extensive region for the profitable cultivation of the grape, and the probable success in wine growing, which will follow the general introduction of the vine.

Take Kaskaskia, and the line of our canal from about Joliet, and you will find many "bluffs" or steep river banks, where the lime rock underlies the whole country, and shows itself along the streams. The soil is here deep, fertile, dry and friable, the seamy rock immediately below the surface, acting as a most perfect drain, and the southern and southeastern aspect afforded by the right bank, are the most glorious exposures for the vine I ever saw.

And, then our climate is, on the whole, very propitious when you get beyond the influence of "our cold lake winds" of spring and early summer. The grape cannot abide either "wet feet" or too much rain, and fortunately our summers are generally dry, and our autumns almost always so, and quite hot and protracted withal. In fact, the autumn is ever our most delightful season, and at the north, at least, our enjoyment of it, is little marred by sickness, or a great pressure of farm work; we shall, therefore, have plenty of time, and a good season for our vintage, and if we make a good wine, we shall find a good home market, and good prices, for all the State can produce.

But for a few facts. At Lockport, I have seen the grape doing well with a bad exposure. At Ottawa, I saw it doing admirably on a southern slope; Mr. H. L. Brush, of Ottawa, has quite a vineyard of (2 acres) Catawba and Isabella grapes, mostly three years old. His vines were in July, literally loaded with rich clusters of the most perfect fruits. His vines are simply trained to low stakes, and moderately cultivated, with no "summer pruning" so far as I observed.

I may here remark, that Mr. Brush is also paying great attention to the strawberry, and the sweet potato, the alluvion at the base of these bluffs, being admirable for both crops. In this latter business, Mr. Brush has one worthy competitor near by, Mr. Jacob Smith, of Lockport, who has, for some time supplied Chicago with good sweet potatoes, and divided the strawberry market with one Dr. Egan.

South of Ottawa, though the vine appears to grow a little better, and if anything, to bear more profusely, I am inclined to think the grapes are more subject to the great enemy, mildew, and certainly are, to the endemic pest, the rose-bug.

Were it not for the rot and the rose-bug, wine growing in central and southern Illinois, would not be in the least problematical; and the bug may be shaken from the vines, and destroyed; and proper cultivation, and cultivation *at the proper time*, may prevent the rot, which I think is very much like gout, dyspepsia, &c.—a disease of repletion, and improper (medical?) horticultural interference.

For example: I saw in and about Springfield, and in other places, much rot, where the vine had received high culture, and *more*, where the leaves had been stripped off to let in the sun, to the unripe fruit, while those in the poorest soils, and most neglected, appeared most free from disease, and certainly sufficiently productive.

That extensive cultivation of our native grapes for making wine, will mark an era in our health and habits, I cannot doubt. That we are not a healthy people at the present time, all must admit; and that intemperance is almost a national vice—and certainly a national evil—no one will deny.

Reliable statistics, and incidental history show, that there is less intemperance, and less employment for physicians in wine growing countries, than in those where distilled spirits are freely used.

Here the poor man drinks whiskey because it is cheap, and readily obtained, and is often thrust upon him, in places remote from markets, in exchange for corn—and upon the whole, it must be conceded, that whiskey is not as rapid and obviously pernicious in its effects, as rum and brandy; few persons really liking it well enough to imbibe it in sufficient quantities to cause disease and death, in a manner so plain, as to alarm the whiskey drinkers; though a large amount of misery, and a startling per centage of the annual deaths, the physician traces, directly or indirectly to *whiskey*. And yet men will have something to *stimulate*, and will often take enough to intoxicate, and the first *cost* of the article used, is always considered, before any other circumstance attending its use; but as the people become better educated, they will judge more correctly, and see the evils of intemperance in other phases, besides the immediate drain on the pocket, and the temporary insanity of drunkenness.

I hold that *Physiology* should be taught in our common schools, as well as sufficient *chemistry*, to show our children the constituents and nature of animals and plants, as well as the food that nourishes them — mankind will then see that alcohol contains no necessary nutriment, and that its action on the human system is always pernicious and often fatal.

If pure native wines were made as plentiful and cheap as in the wine districts of France, I have little doubt that the use of rum and whiskey would soon become unfashionable; and I feel assured that the consequent use of wine as a substitute, would immediately, in many instances, add $\frac{2^0}{100}$ per cent. to the average longevity of our laboring population; and a larger figure in those lamentable cases, where men who know better — the educated and the talented — fall before the temptation.

I venture this statement after much thought and painful investigation. Most of my conclusions are drawn from personal observations and experience, and my views are warranted by history and sciences. It is well known, that *pure wines do not intoxicate*, unless taken in enormous quantities, compared with spirits, and even then, their effects are much less pernicious, than would be half the corresponding proportion of brandy.

Claret, for example, contains about seven per cent. of alcohol, so that in a pint of it, there is really but little more than the fourth of a gill of spirit, and that so modified by its chemical combinations with the juices of the grape, that it has not the “heady” or intoxicating properties of alcohol, but merely exhilarates, and temporarily braces and invigorates the whole system, much after the manner, though more permanently, than the “laughing gas.”

But do not misunderstand me. I much doubt if this, or any other stimulants *ever* adds aught to the sum total, of either physical or mental energy, or usefulness, though it may add much to both, under certain circumstances of depression, for a short given period; and the moderate use of pure wines, similar to claret, may not be attended with any serious consequences.

I do not claim that wine is *necessary*, or even very often useful, except as a *substitute* for more pernicious beverages, and questionable medicines in general use. We should most unquestionably, as a general rule, be healthier, happier, longer-lived and more intellectual, were we to abandon the habitual use of all stimulants and narcotics — tea, coffee, wine, beer, tobacco, alcohol and opium; and even spices, perhaps.

So it were better for all to be temperate in eating—comfortable, instead of fashionable in dress—constant in exercise, and cleanliness of person—natural in habits, and cheerful in disposition, as well as virtuous, charitable, learned and wise. But as practical men, we must take the world as it is; take a common sense view of things—and in our efforts for improvement and reform, attempt that only, which is clearly practicable, and not waste our labor, and expend our feelings of benevolence and abstractions of theories, however beautiful or *possible*, whose ends we cannot reasonably hope to attain in practice. And this great illusion of the nineteenth century, is, I much fear, beyond the power of our “*ex parte*” reasoning and benevolent persuasion.

I therefore, recommend arguments as palpable as the evil we combat; and as bitter pills are coated with sugar, I advise delicious and acceptable persuasion, instead of sweeping denunciation, which seldom makes true converts to a good cause.

I advocate TEMPERANCE AND THE VINE, and do not condemn tea and coffee, or even tobacco in all cases; but tolerate these lesser evils which we cannot prohibit, for the sake of the greater good, which we are sure to attain, by permitting these, and a return to a primitive beverage—“the pure juice of the grape”—though I acknowledge that the good would be perfect, *could we return to pure water instead.*

THE CLIMATE OF ILLINOIS, &C. — That our climate is, as I have before stated, one of the most variable and uncertain of any in the world, we have had abundant evidence the past and present season. There is but one good feature upon which we can count with any kind of certainty in summer, and another in autumn. There is almost always a breeze in the prairies in summer, and frost is long delayed, and our “Indian summer” lingers with us in the fall, as if to compensate for the roughness of spring and the extremes of winter.

The winter of 1849–50 was as cold as any previous one within my knowledge. In the city of Chicago, a self-registering instrument—not a current of air—marked 17 deg below zero, at Christmas. From a little north and west of this point, I have 3 deg. lower, and also 98 deg. above in the shade. And as in 1848–49, I have rather questionable authority for the extremes of 30 deg. below zero, and 102 deg. above in the shade.

This great difference in temperature is, of course, due to the ever-open water of Lake Michigan, which intervenes — though air, *when confined*, is a non-conductor of heat, when its particles are in motion,

and passing over water perhaps 60 deg. warmer than its stream—this remarkable increase of temperature can readily take place, though but an approximation to the equilibrium which would have been established between good conductors; of course, the extent of the difference will depend mainly upon the rapidity of the passage of the lighter and cooler medium over the warmer and denser one—the actual relative difference having less to do in the proportionate result than the *time* and the quantity of particles in contact. Had the air of our Chicago Christmas passed over the lake, as rapidly as at some times, 'tis more than probable that Mr. Hoyt would have had a lower figure to register.

Our coldest weather, in this county, was from about a week before, to near a week after the 1st of January. Some give Christmas as the coldest day, others different days up to the 4th of January. The air has its currents and its eddies, its "ebbs and floods" like the ocean, and the slightest causes, and a brief distance may make a great difference in the markings of the thermometer.

What the termination of the autumn of 1850 is to be, no man can tell; but the commencement of it has been disagreeable and disastrous in the extreme—the very counterpart of our spring and early summer, which were the dryest ever known.

About the 28th of August (though we had an introductory tornado and hail storm before, there commenced a series of storms, which have wasted this whole region, and filled the low lands and prairie "saggs" and "sloughs" more overflowing than our heaviest winter and spring freshets.

Potatoes, that had apparently escaped the usual disease, are now, September 20th, nearly *all* rotten, or rotting in the ground; and the rot is, I should say, due to the rains, acting of course on the debilitated and predisposed constitution of the tuber.

Unstacked and temporarily secured oats and wheat have been spoiled or wasted, and much of the mown, and more of the unmown prairie grasses—upon which we mainly depend for wintering stock—are, or have been, under water and worthless; a melancholy illustration of the old saying, "one extreme follows another."

H. L. Brush, of Ottawa, writes that on the 4th of January, the mercury fell to 11 deg. below zero; and he gives that as his lowest mark.

If so, the cold current must have passed around his place; as from but little north of there I have much lower figures.

I saw only an occasional specimen of fruit on peach trees, even 15 miles south of Ottawa, and if I remember, *none* there. I therefore conclude that Mr. B. did not observe the coldest morning, which was before the 4th of January, because I consider the death of the peach bud, on well, matured wood, not prematurely started, *a certain evidence* that the cold has been equal to about 15 deg. below zero.

The last was one of our dryest, and most delicious, of our usually delightful autumns. The wood of trees and shrubs was most thoroughly ripened, and was not excited to an untimely action at any time. The proof of this is found in the fact that not a twig of wood was killed on peach or nectarine, though the flower buds on these were *all* dead here, and even the plum and cherry developed but few flowers, except on some of the hardiest seedlings.

There were buds enough formed; on the branch of a peach, accidentally buried in December, and disinterred in April, there was a mass of flowers and some fruit. The same last year on branches buried in snow, and also on some trees screened from the morning sun and from cold winds, there were very few specimens of fruit on exposed branches.

Our coldest winter winds are from the west. In this direction there is no open water in winter—no elevation of note—or timber of sufficient density of extent, to interrupt or modify the stream of cold air that rushes down from the Rocky Mountains and traverses a thousand miles of bleak and naked prairie, which radiates or exchanges no heat with the current, even growing denser and gathering more force, until it comes upon us in this angle or bay of the grand prairie, “butt end foremost,” and as cold as though it had blown out of Siberia, or over icebergs, instead of the back bone, or the semi-deserts of temperate North America.

Altitude and aspects are not sufficiently considered in this cold excitable climate. The greater specific quantity of cold air tending to keep it in the valleys, on still nights, during all seasons; though a current of air may draw through a valley and prevent frost in summer or spring, when its icy fingers are busy on the heights, and radiation

may act locally, and save a low spot that ought not to escape according to the above rule.

So also slight irregularities in the general surface of the country, and especially the occasional groves of timber, crowning the highest elevations, do unquestionably sometimes turn the cold stream aside, and thus make a difference of several degrees in the same vicinity.

But, after all, the general rule holds good, and you will find killing frost ten times in the lowest to once in the highest situations. Peaches much oftener fail in the low lands than on the high swells in this region.

And here again aspect does as much as a preventive to loss from cold. The *frost* does not cause death in all cases, though it does in many, and predisposes to death in the others, where the *thawing*, when rapid, is alone to blame. Rapid transitions, rather than extremes, produce the mischief,

And a northern or western exposure will preserve the tree and its incipient fruit, when a southern or eastern one would often be met by a bright sun, a sudden thaw, and a certain injury or death.

Some writers are of opinion that a western aspect for peaches is a dangerous one in winter, on account of our cold winds always coming from that quarter during that season; and it is truth to say, our peach trees are "winter killed" four times while they are spring killed once. But the further south the reverse is the case. And my experience leads me to doubt the truth of the above supposition; for my *trees*, when winter killed, have suffered most when facing the south, and *least* when fully exposed to the north-west, as my peach orchard now is, though at one time I had many trees on a southern slope, of which not one survives.

INSECTS INJURIOUS TO FRUIT—In many parts of this State, the question of insects is one on which depends the cultivation or abandonment of some varieties of fruit.

I regret to say I am not a scientific entomologist, and yet I am fully aware of the immense amount of injury caused by the untold millions of these depredators. The farmer suffers as much as the pomologist, and both are too often alike ignorant of the appearance, habits and history of their busy enemies.

I have been asked more than once if I could account for the premature fall of a glorious promise of plums. One man who had a fine plum yard, told me that he should cut down his trees, though they were of choice varieties, and generally set full. He had made up his mind that choice plums would not grow in Illinois. I showed him the grub of the curculio, and he, for the first time learned that an insect destroyed his crop. I much doubt our ever getting rid of the curculio altogether; but we may find a partial, if not a certain remedy, which may be more readily applied than those now known.

I have conversed with many plum growers, during the past season; all unite in saying that jarring the trees regularly every morning, at or before sunrise, and catching the brettele on sheets, for a few weeks, immediately after they commence depositing their seed, will save a fair proportion of the crop, on trees thus treated. But few have patience and perseverance, for this remedy. And I fear the LIME treatment may be open to the same objection; for, as near as I can learn, it must be applied as often as may be necessary to keep the germ actually covered with the material; for the roughness of the surface seems to have something to do with this preventive.

All insects, so far as I have observed, have their antipathies, and most of those we deprecate, dislike strong odors, bitter tastes, and alkaline bodies. I have sometimes thought that the hog disturbed the curculio by his disagreeable odor; but it is more probable that the instinct of the insect leads him to fear danger from his appetite, or that the rooting propensity of the animal may disturb its progeny in its earthy burrow. We must take more pains to study the nature of this insect, before we abandon the cultivation of the plum.

THE ROSE BUG.—In my vicinity this loathsome insect is confined as yet, to the flower garden; farther south, they attack every green thing, and destroy much fruit, especially grapes. When I was south, they had disappeared, though I saw a few on shrubs in the woods, that a farmer said was the same bug that had eaten his fruit. This insect was not our rose bug. It was preying upon the foliage, and appeared to be much more voracious and more timid than the rose bug of our garden, though in general appearance not unlike.

I was told that bushels had been gathered by shaking them upon sheets, from fruit trees and vines; still their numbers are so great and

their food so general, that few persons had attempted to fight them systematically.

THE MEASURING WORM.—Through the month of June, 1850, these worms were very destructive, especially to recently planted fruit trees that, from the early drouth, had failed to vegetate at once. I have shaken twenty of them from a small nursery tree, from which they had eaten every leaf. I never knew them troublesome before.

THE CATERPILLAR.—There is a small native caterpillar that is always found in groves in summer, where he feeds on the leaves of nearly every species of tree and shrub. I have never noticed him in the orchard until this season. In the central and western parts of the State, I found him in possession of nearly half of the apple trees. At first he merely eats the cuticle from the leaf, which gives the limb on which he fastens a very skeleton-like appearance—but as he increases in size, he makes sure work, and scarce leaves more than the footstalk; and, when fully grown and concentrated on the branch or body of a small tree, he eats even the bark. This worm spins a light but very tough web, and often ties several branches and sometimes the entire top of a small tree together. They do not go out of their web for food; and it is very easy to strip them off, shroud and all, with the hand, or by twisting a stout stick into the nest, when out of reach of your hand, you may bring down the whole colony; for they do not try to escape, and their strong viscid covering envelopes the worms, and brings them away without difficulty.

These caterpillars are very disgusting objects, and are apt to ruin a tree, if not removed. I have lately discovered several small trees in my nursery, that had been overlooked, and the caterpillar has not left a leaf or a green shoot on them. In central Illinois, I saw them the first of July, and I found them here on my return about the last of that month; and now, September 20th, there are still a few to be seen in the center of the nests. It is our own fault if they injure us; for it is no trick at all to destroy fifty colonies in an hour or two; and yet I think I have seen five hundred of their nests in an orchard of fifty trees—giving it the most ghostly and disgusting appearance imaginable.

There is another gregarious caterpillar, much larger than the one above described, and more voracious, which I once mistook for the

“canker worm,” (which I do not know that I have ever seen.) This worm has no web, and the head moves from branch to branch always taking every leaf before them. I have found them from near June to October. They seem to like the apple best; but last autumn I saw this worm in Mr. Hovey’s nursery, near Boston, on the cherry. You will almost always find them in a heap, and can either remove the limb with them on it, or jar them off into fire or water, in some vessel held by an assistant. For large trees you may want a ladder; but I have generally found these, and nearly every insect feeding on foliage, rather partial to small trees, when to be found.

BLIGHTS, FIRE BLIGHT, PEAR TREE BLIGHT, &c.—A disease known under the above and other names, has shown itself in my orchard this summer. It commenced here about the middle of June, in bearing quince trees. The trees affected had been highly manured last fall, and were loaded with flowers this season, and gave every indication of an enormous crop, until the appearance of this disease,

At first, I noticed that the sets were withering, and in a few days I found the extremities of nearly all the shoots blighted. The dead twigs were all removed with the knife, and I did not see them again until the last of July, when I found the disease had broken out below the amputation, and in some cases extended to the base of the branch.

About the first of August, I found that a few very thrifty young apple trees some rods from the quinces, were diseased, though, in general, but a few shoots of the new wood were involved. I amputated as before, and apparently with better success, than in the quince; still the disease was not removed, as the blight again appeared generally on new shoots of the main branches first affected.

Only two pear trees have suffered, the one (Harvard) slightly in extreme leading shoots, the other (unknown) in one large main branch, which is dead to the body of the tree, where there is also some disease on the side from which the limb grew.*

There is one circumstance connected with this affection in my orchard which is a little suspicious at the first thought—the blight *is confined to one corner of my grounds*. But before we conclude that this evidence of the transmission of the disease from one subject to

*Quere.—Is this the same blight

another, we must remember that this corner of my orchard has been highly cultivated, and I think much too liberally manured, while the balance has had no manure, and little cultivation for the last two or three years.

And then, again, in the middle of the State, where I found this disease shockingly conspicuous, I noticed that its attacks were not circumscribed, healthy and diseased trees standing side by side, through most orchards, and in every instance, the thriftiest trees seemed to be the most blighted.

I saw much more of this blight on the east than on the west side of the Illinois river, and I find it much more prevalent south than north, and I was told that the disease had been noticed in the apple last year, and something like it in the pear, in previous seasons, though never so destructive as at present.

I found the popular opinion of the cause of this affection to be the same as that held by some good Pomologists, *insects*. In accordance with this notion, I have looked for insects, and you may have heard, perhaps, that Doctors are famous for finding what they *look for* in post mortem examinations.

With the aid of a tolerable magnifier, as well as my desire to find them, I discovered a few grubs, in diseased twigs, and some lively little insects on the dead leaves, and wood, and other *appearances* not natural, and yet I have been obliged to come to the conclusion that these are *effects of decomposition*, rather than causes of disease.

The grubs found (which had certainly killed the twig, by entering at the base and working up,) did not produce *blight*, the appearances in the case being very different on dissection, and something very like the other insects and appearances were found on shoots dead from other causes.

I therefore believe that we must look for the cause of this affection in the high cultivation, or faulty food of the tree, in the air, or in the earth. I think that it is a true epidemic, which attacks, as in animals, the grossest feeders and enfeebled constitutions, in preference to the hardy and temperate subjects.

The disease is not unlike "*mildew mortification*" or "*dry gangrene*" in the human subject. If left to itself, "*a line of demarcation*" is formed, and a separation of the living and dead parts ensues.

It may be best to use the knife freely; and yet from my experience, I have doubts on this point. I think the quince, which was cut the most freely, will never recover. On that the disease has certainly maintained itself with renewed powers; perhaps we did not cut low enough. Another season will be required, in order to come to any satisfactory conclusion with regard to this treatment. I do not believe that this disease is a new one. It has appeared before, and then disappeared for years. I think that I have seen something like it in forest trees a year or two ago, and I doubt not that we shall see more of it hereafter. If the disease be more prevalent now than it was a century ago, it is because it has more subjects to act upon.

I think that insects and diseases are not proportionably more common now, but are more *noticed*, because we are beginning to value fruit more highly; and the choice varieties receiving higher culture, are becoming more and more enfeebled in constitution, and more obnoxious to the attacks of the natural diseases and enemies of the orchard and garden.

And, now, *is this disease the pear blight of the east?* It is *not* like the disease I saw in Albany, New York, and not like that which has shown itself in some of my small pear trees brought from New York city, and Cleveland, Ohio. In these cases, the body of the tree was first attacked, while in the blight I have been describing, it is first developed in the bark of the current year's wood, or in the circumference of the leaves thereon. It most always commences near, though not always at the terminal shoot. In a very few cases, I have seen twigs at the base of a leading shoot affected, and the bark of the shoot at the origin of the twigs partially involved, while the main shoot itself had a healthy appearance above this spot of disease.

In a few cases, wood of one, and even two years old, is dead on the quince trees; and I have seen a few inches of one year old wood dead in the apple and pear; but in general, only the current year's growth is involved in the mortification.

What shall we do for this serious affection? I am at a loss to say. Let us not do too much. I am inclined to think that we have manured our orchards too highly, and cultivated them too irregularly—sometimes through the whole summer, sometimes not all. It were best, perhaps, that young trees should receive some culture, and *that* between the middle of October and middle of June annually.

It must be borne in mind, too, that the past has been a most singular season.—very dry until July, and very wet since, and fruit trees are even now (Sept. 20) making wood rapidly. The great prevalence of this disease may be attributed to this circumstance. I have some facts that seem to favor this idea. On the west side of the Illinois, and near the Mississippi, where I saw but little blight, there had been more rain in the early part of the season.

Let us watch and work. Try the knife on some, and potash, sulphate of iron, &c., on the bark or at the roots of others. Do not despair, there must be a remedy, or at least a preventive. Let us look for it.

GENERAL REMARKS ON FRUIT AND FRUIT CULTURE IN ILLINOIS.—That there were some excellent apples and pears grown in the southern portion of this State long before the settlement of the northern portion thereof, I have no reason to doubt. In my report to “The N. A. Pomological Convention,” I state that I had “no certain evidence that there is a fruit tree of a cultivated variety, *forty* years old in Illinois”—nor thirty, as I have been quoted; and, of course, I meant by “a cultivated variety,” one in general cultivation.

I have yet “no certain evidence” that I was far out, in this statement, maugre the strictures of the Rev. John M. Peck, in the *Western Watchman*, to which severe handling my loose manner of expression had, perhaps, made me justly obnoxious.

But omitting the reverend gentleman’s not over flattering personal remarks, I quote with pleasure the information he affords on “The era of Illinois fruit.” He says :

“More than 30 years since we feasted on luscious pears gathered from trees in Kaskaskia, which had then been planted about half a century. And should he visit the old settlements in St. Clair, Monroe and Randolph counties, we can show him the sites of apple orchards planted by the first American settlers, after the conquest of Illinois by G. R. Clark, the trees of which attained their full growth, performed good service as fruit bearers, and died of old age. In 1820, we were presented with an apple gathered within two miles of our present residence, and which measured thirteen inches and a half in circumference. The first generation of orchards in southern

Illinois, having served their period, have gone the way of all the earth.”

Notwithstanding his personal remarks, I feel grateful to Mr. Peck, for he is the only person who has afforded me the least reliable information from “Lower Egypt”—that land of unsurpassed fertility—intended by nature for THE GARDEN OF THE WEST; but the greater portion of which has fallen, I fear, into the hands of those illy calculated to develop its wonderful resources.

Now, do not misunderstand me, I pray you. The people of this region are men after my own heart. I love them and their ways—for I was once of them, and my *practice*, as a farmer, is too much like theirs now; and, certainly, my feelings and my acts are often in unison with the natural manners and customs, careless hopefulness and “good intentions” of the genuine frontiersman, the legitimate son of the southwest.

Thus much may be allowed me, in answer to my questioned pomological accuracy, and the charge of partiality to the north; and permit me to add, that it is my full belief, that were a few of our western editors, like Mr. Peck, to unite in urging the subject of primary schools, and subscriptions to agricultural and horticultural papers, these farmers of the south would soon excel us of the north, in fruit culture and general farm products, as much as they now do in raising corn and making pork; for that they have the best soil and best climate, there cannot be a question.

And I think the remarks of Mr. Peck, and my own recent enquiries, bear out another statement of mine in the above named report, to wit: the western seedlings are much superior to those of the east. For I still presume, from what information I have been enabled to gather, that the “luscious pears” and apples mentioned were true western fruits.

I saw some large pear trees, the present season, in the city of Springfield, the fruit of which, the proprietor, Dr. Todd, informed me was truly excellent. The Doctor purchased these trees twenty-five years ago, and supposed them to be engrafted, but they are unlike any known variety, and show unmistakable evidence of their native origin.

Fruit trees, in central and southern Illinois, make wood with astonishing rapidity. Trees of no more than 25 or 30 years' growth are of almost forest sizes, though growing in uncultivated soil. I have seen nursery trees, where the cultivation had been liberal, as large at 2 or 3 years, from graft or bud, as ours are at 4 or 5.

Nurserymen south sell trees at half less than our prices, and still make more money therefrom than we do in this northern region; and from their rapid growth, their trees are much cleaner and handsomer than ours; and every man who sells trees knows the benefit of this specious appearance in effecting rapid sales.

Of all the towns visited by me in Illinois, Springfield can boast the best show of fruits and flowers, and also "Jimson weed" (*Datura*) in the streets and vacant lots. And, by the way, Illinois streets and roads, and old fields, are fast filling up with these *Daturas*, the "Indian mallows," (*Alutylon avicenæ*), "May weed," (*Maruta cotula*), and common mustard.

For the introduction of one or two of these pests, horticulturists are responsible, and I therefore note them as worthy our attention, and think the sooner we set about eradicating the three former and confining the latter within proper bounds, the better for the farmer and the pomologist, for they are all found in the western orchards and gardens, as well as roadsides, and all, except the mustard, are useless weeds, and next to Canada thistles for their powers of perpetuation and extension.

I was indebted to my old friend, J. Frances, editor of the Illinois Journal, for much local information, and for the pleasure of visiting at least one garden, equal to the best in the east; and many fruit yards, rich in oceans of morello cherries, and what is far more to the purpose, in a promise for better fruits, especially grapes, of which I saw a most encouraging abundance.

The whole of central Illinois is liberally supplied with this worthless morello cherry, and what is worse, the fruit is highly prized for cooking; and as it costs nothing, is occasionally a profuse bearer, and is as hardy as a black jack-oak, and people will let it grow and cumber ground in towns and villages, which might produce really delicious fruits. In the country, where land is plenty, I have no objection to these cherries; they are useful to feed birds, if nothing else; and birds are often our best and most delightful assistants.

I saw some fine plum trees in the yard of Mr. Francis, but the fruit all punctured; this is the case every where.

The first peaches I observed were in Peru. From this point south they become more and more plentiful, and soon every tree was overloaded. I think that in central and southern Illinois the peach crop of this year must be one of the best; out of the grounds of nurserymen, I saw but few "worked varieties," most farmers insisting that their seedlings could not be beat. One gentleman informed me that he could sell his seedlings for the same price that budded varieties brought, and often for more, as they were *larger* than the best sorts under name.

This state of things is really the effect of ignorance, for not one western man in an hundred ever tasted a first rate peach, or pear, or even saw a really fine cherry. My experience, and the evidence of others, who know what first rate fruits are, convince me that these native seedlings *are* often "good," but not "best," or even "very good," according to the rules adopted by this congress, and which guide well informed pomologists, where fruit culture is a science.

Still, I am of opinion that it may be well for western nurserymen to test some of the best of these tolerably "good" local varieties, as my experience and observation lead me to believe that they are sometimes hardier, and better bearers than some of the varieties known in the books; and it is better to have a bountiful supply of "good" peaches, than only an occasional specimen of the "best" known sorts. But do not misunderstand me. I would still propagate freely the best known sorts, until their powers of endurance and comparative productiveness are better known in this extremely uncertain and changeable climate. As it now stands, we cannot say that we have given them a fair trial, and it may be that most of these will prove as hardy as our own hardiest seedlings.

A degree or two south of Chicago, western varieties of the apple are very popular, and some nurserymen work more of these than of eastern sorts; and in this they may be right, for there are some apples that yield abundantly in New York, which have hitherto proved to be very shy bearers here, while some old sorts have gone ahead of our own seedlings in productiveness as well as quality.

I have never seen a seedling tree in Illinois better loaded than our Poughkeepsie, or Winter Russets, Rambour, Frank, Tapson, Spice Sweet, Hawthornden, Keswick, Codlin, &c., though none of these are strictly "first rate" fruits.

The evidences of this year have led me to believe that the apple is much more productive in this lake region than in central Illinois. In cherries, grapes and peaches, they certainly beat us. We have had one large crop of delicious plums here. Further south, this fruit has generally been almost an entire failure, at least so far as I could come at the plum statistics.

The pear tree flourishes, as well as the apple, south. In the gardens at Peru, and in the grounds of the Peoria nurserymen, I saw small standards of the Bartlett and other good varieties, literally loaded with the largest and fairest specimens.

Edson Harkness, of "Fruit Farm," Peoria county, has, I should say, about 20 large worked pear trees, on which the fruit hung in ropes the last of July; but I will not anticipate his description and show of these, which you will doubtless have before you. I must be permitted to add, however, that Mr. H. has really the largest and healthiest looking orchard of bearing trees, of their age, that I ever saw in any country. I think he has about 1,000 apple trees in bearing.

But this is nothing to what Isaac Underhill, of Peoria, has "put in for," in the orchard line. I passed Mr. Underhill's orchard in the evening, and had but an indistinct and unsatisfactory view of it; but I here append a letter from him, describing his five hundred acre orchard, &c.

PEORIA, July 20, 1850.

DR. J. A. KENNICOTT :

Respected Friend :—In accordance with your request, I will now give you a brief account of the "Rome Farms," and the orchard I am endeavoring to rear on the same. The farms are situated at the head of Peoria Lake, eighteen miles north of Peoria; soil a black loam, intermixed with sand. I have about two thousand acres under fence, all fit for cultivation. I have, the present season, about one thousand five hundred acres in crops, principally corn and oats, with some spring wheat. The land is farmed by thirty tenants on shares.

I have not been very successful in raising winter wheat. In the summer of 1842, I harvested three hundred acres of very fine wheat; the price was then so low that it did not much more than pay for harvesting. I sold the crop for 33 cents per bushel. The following season I put in one thousand acres of wheat; the ensuing winter was a severe one, and my wheat was all winter-killed.

Finding it unprofitable to hire laborers to cultivate the soil, I adopted the plan of renting on shares to tenants. The advance in the price of produce enables those tenants that are temperate and industrious, to make money for themselves and a fair profit for the farms. The tenants are now preparing the soil for a few hundred acres of winter wheat the ensuing season.

Having been persuaded that an orchard, well cultivated, would be profitable, I appropriated one field of five hundred acres for that purpose, and in the spring of 1848, I commenced planting the trees. I have set out, in rows about 30 feet apart, twelve thousand of the best varieties of grafted fruit, principally winter apples; about ten thousand of them are alive and growing finely. I lost about one thousand trees by putting too much unfermented manure in the space dug for the trees; also, about one thousand more by letting the roots of the trees get frozen after they were taken from the nursery. The trees were principally raised by my brother, David C. Underhill, in Lasalle county, Illinois; the grafts for which were taken from the nursery in Westchester county, New York, where we got our pomological education. I have set, also, in orchards, about seven thousand peach trees, which are doing finely. The principal enemies I have had to contend with, in rearing apple trees, were rabbits and caterpillars. The former I soon disposed of by paying twenty-five cents each for their scalps; after paying out about \$75, there were hardly enough left for seed.

The large caterpillar is very troublesome in May and June, and the small caterpillar, or wire worm, in July and August. By close attention, I keep the trees nearly clear of them. I do not sow any of the small grains in the orchard. The trees do best where the ground is cultivated in corn. Keeping the ground spaded for a small distance around the trees appears to do but little good. Great benefits have accrued to the trees where they have been well mulched with straw or

coarse manure on the surface. I also like the plan of having the limbs of the trees branch within two or three feet of the ground; they are more safe from the effects of the high winds of this country, and it affords some protection to the bodies of the trees from the sun.

My fences are principally made of rails, called the Virginia worm fence. I made about two miles of board fence, black walnut and oak posts; in 7 or 8 years the posts began to rot off at the ground; but by staking and riding I manage to keep it up. I have tried the Osage Orange for hedging, but did not succeed in making a fence. The seed did not come up well.

Yours, truly,

ISAAC UNDERHILL.

HORTICULTURE has been aptly called “the fine art of rural life”—the poetry of rural labor. That branch of horticulture on which we unite, presents more substantial matters to the animal appetite, as well as a refined and luxurious enjoyment to the educated mind.

Americans are said to estimate every thing in dollars and cents. Pomology is therefore the popular feature of horticulture in the United States. It creates food, preserves health, saves medicine and money, and to the moralist, I might add, tends to make mankind wiser, better, happier and more desirous of sharing the blessings which they have proved, with the many who might enjoy, without diminishing them. Horticulture is a humanizing and christian profession—pomology makes it a paying one.

SCIENTIFIC AGRICULTURE *is gardening on a large scale.* We are therefore agriculturists, and as such we are bound to stand by our class. But of that anon.

FARMING, without science, is like quackery in the practice of medicine and surgery—a little experience goes a great ways, and quacks sometimes hit right, and so do uneducated farmers, and nature does the rest. A good constitution and a slight affection may do well in the hands of a medical quack, and a rich soil, until exhausted, yield fair crops to hereditary or traditional tillage.

There may be some excuse for medical quackery, or good reasons why more than the ignorant tolerate it. The science of medicine, though one of the oldest, *is not perfect*, and its great truths have here-

tofore been locked up in THE SCHOOLS—a sealed book to the million—and those who have just dipped into the surface of a science have more faith therein than he who has searched to the bottom. Man loves mystery and delights in the marvellous; and in sickness men have little reason and much credulity.

But there is no excuse for quackery in the cultivation of the earth. The eternal truths of this science are as palpable as the rocks from which our soils are derived, or the nature of the plants which they sustain. We should not tolerate quackery, and yet nine-tenths of our practice is empirical. Our sons are born farmers much as “the seventh son” is supposed to be “a doctor.

And now as I have incidentally mentioned the science of medicine, indulge me in a tribute to my whilom professional brethren, and a warning to the farmer’s son, to seek some less arduous and responsible employment, if he *will* leave the plough. No man sees so much misery—feels so much painful anxiety—has so little certain leisure, or natural rest—or is so poorly paid, or so little honored, in proportion to his actual worth and professional usefulness as the physician.

The study of medicine is the study of nature. Its students are therefore good theoretical agriculturists, and from the very uncertainty of their own chosen profession, they turn the more naturally to a kindred one; and enjoy their success in gardening or farming, in proportion to their greater knowledge of “the principles of life,” in all its forms and phases, as it runs through the perfect chain from the mineral to the man.

The man who must labor with his own hands for the support of his household, has little leisure, and often less inclination for study, for as you all know, constant bodily toil is incompatible with perfect mental developement, or much mental effort, though a moderate amount of physical exercise is positively essential to the healthy growth and permanent integrity of the organ of thought, as well as the functions of animal life.

The body and the mind should both be educated, and both should labor. With more knowledge there would be less toil; with a better wrought frame there would be a less overwrought muscular system. “Head work” and “hard work” should go together.

But in *practice*, whatever it may be in *theory*, we have two "classes," operatively as distinct, as though of two races. The one in round numbers, nine-tenths of the whole, are PRODUCERS, and mostly "uneducated;" the balance belong to commerce and the "PROFESSIONS," (including a few rich men, and some "Loafers,") and are more or less "educated." These *produce* no wealth, though they often gather much that we create. Some of these, as the merchant, are necessary to the producer—the others may be more or less so, though sometimes little better than "necessary evils."

A few among the sons of toil continue to give one of their children a "liberal education." But from a mistaken notion that wealth, and fame, and true happiness are to be found only in commerce or the professions—nearly all of these favored sons leave the pursuit in which they were born, and carry fresh energy, and new power to the small privileged class, whose vocation is often the perpetuation of abuses, and whose action is too often like the brake upon the railroad cars—a check to natural progress, and that reasonably approximating equality—the legitimate offspring of our free institutions.

It is nevertheless a gratifying fact, that a man of mind and liberal education, occasionally returns to the plough, and aids the less fortunate farmer by precept and example; and there are many more who by energy and perseverance, continue to educate themselves, without troubling our colleges; most of these are amateurs, and some of them professional pomologists. They are of us and with us. The force that these men have given to the Agricultural Press, and the consequent agricultural improvement, can scarcely be estimated.

The men of the budding knife have ever held out a friendly hand to those of the plough. Disguise the question as we may, as a body we have more leisure, and perhaps more inclination for scientific pursuits. We have more *esprit du corps*, and our moral force is more concentrated, and can be wielded with more efficacy. *We must not forget our younger brethren* in our own more immediate pursuits; and while we settle our particular affairs, we must not neglect those of the less fortunate husbandman.

It cannot, I fear, be denied, that as a body, farmers are ignorant and bigoted, and full of most illiberal prejudices. We think too meanly of ourselves and of our pursuits, and too highly of those whom chance and old custom have placed nominally and operatively above us. And it is certain that few men ever become great in any

pursuit which they deem degrading, or which "the world" holds in contempt.

Ignorant farmers sometimes think that they know all about their business, and often say so—some affect to despise the effeminacy of those engaged in trade and the professions, and to put a just estimate upon their own independent position, and healthful and manly employment, but alas, many of these deceive themselves; we know that we lack knowledge, and FASHION is an arbitrary master, and I fear our sons and daughters too often envy the soft hand and fine coat of the "counter jumper," and the inane ease and conventional gentility of the city belle, or the brainless foppery of her male prototype.

I trust that our children, though wedded to the plough, are in a fair way of being divorced from these fancies of the ploughman. The dignity of labor is beginning to be acknowledged, and the class that has hitherto monopolized the sources of a "liberal education," and which actually exercises all political power, must resign its potency with its privileges, when the few shall have become merged in the many.

We know, that in mental organization, the producing classes are not inferior to this privileged "caste," who fill our colleges—occupy our pulpits—attempt to cure our diseases—direct our armies and our navies—make one law for themselves, and another for the million—and to whom millions are freely given, while a few thousands, modestly asked in the name of "OVER THREE-FOURTHS OF THE PEOPLE,"* is coldly denied.

Whose fault is this? Our own, most decidedly. Can we reasonably expect our rulers, and those who have held these privileges, since the foundation of government, and the time when "knowledge became power," to freely aid in divesting themselves, and their order, of the power and consequence which the present system guaranties? By doing too much, politicians might partially change to a fact, that beautiful fiction of our political creed, "that all men are born free and equal."

As a body, we are not yet fully prepared to demand all our POLITICAL RIGHTS. But we should demand, and we shall obtain, a little notice, and, it may be, a little aid, to help the farmer till his acres, with less labor and greater profit; and with reference to the future, as well as the present demand upon the capacity of the soil.

*See Minority Report of committee in Congress on Agricultural Bureau.

Our law-makers admit that agriculturists are the "majority," and this same "majority" is the only argument that ever brings conviction to the mind of a mere politician.

My friends, the uneducated farmer is not yet ready to advance this argument. And it is, I well believe, expected of us, that we shall assume the responsibility of demanding specific aid to the agricultural interest, as well as a specific education for the sons of farmers.

There is no arrogance in this. It is known that the Horticulturist is the true friend of labor, and the enemy of all humbug and pretension. We are not politicians, few of us ever meddle in the affairs of the nation; but we have a duty to perform, and an object in view, which may cause us to step from out the shadow of "our own vine and fig tree," to see that our brother has justice—that the husbandman who feeds and clothes, and supports the nation, shall be of "some account" in the councils of the nation."

Should it ever become necessary, it were easy for us to unite the sons of labor for "party purposes," but politicians are shrewd observers, and will not have the folly to deny what we may justly demand, for they know, as we do, our dormant power—that the mechanic and manufacturer are of us, and with us—that the merchant is our factor and our friend; and more than this, they know, what all history hath shown, that from among us the breed of great men has always sprung. As the priests of old were from the tribe of Levi, so hath God decreed that God-like souls should come from among the sons of noble labor.

All great political movements require concert and combined action, to secure success. So far as the farmer is concerned, we must effect a revolution in political sentiments, if not in political combinations.

It has been said that all great revolutions require "a man of destiny," to lead them a successful result. Not so; at least, not here, nor in this 19th century. PUBLIC OPINION creates revolutions. Great men, like Cromwell and Bonaparte, guide the storm they do not raise. But we shall have no lack of leaders, should we find it necessary to give a right direction and efficient action to the opinion fast gaining ground, that more patriotism, and less pretension—more action, and less talk, are desiderata in our legislative halls.

Those among us who are inclined to take a narrow and restricted view of the objects of this Congress, will doubtless deem this long preamble a mass of irrelevant, if not uninteresting matter. But, my friends, there can nothing be done to aid the many, without effort in the few. We represent a strictly agricultural interest. An individual, however bold and enthusiastic in a good cause, can never move politicians; but as a respectable and intelligent body, we may, and we are in duty bound to "set this ball in motion," which the AGRICULTURAL PRESS will then "roll on" until its weight and impetus shall become irresistible, and the farmer be made "of some account in the State." As individuals, it is true, that we have little to hope from an Agricultural Department connected with the machinery of our government. If properly and faithfully conducted, it might even tend to diminish the profits of our business. But God, and our profession, have made us philanthropists. Our object is not so much individual interest, as "the greatest good to greatest numbers."

Though much enlarging our sphere of usefulness as a self-organized and republican body, we are not transcending our duties, when we adopt as a subject worthy of our united action, this measure, recommended by Washington and Taylor, and in which "three fourths of the people," and the class to which we belong, are deeply interested.

We can see a thousand ways in which an Agricultural Bureau could be made immediately and largely serviceable, to this great and indispensable interest; and if we select the poetry of agriculture as our branch of the profession, we have the greater reason, and the more precedent, to constitute us its legitimate champions.

Of course the profits to be expected from an Agricultural office at Washington, will be somewhat in proportion to the amount of means at its disposal, and the fitness and energy of those who may chance to be placed in charge thereof. These matters may not be deemed unworthy of our consideration, for if Agricultural and Horticultural associations neglect them, this office of ours may chance to become a mere political machine, and help to keep the farmer in his present position, by flattering him that he has the substance, when he may have not even the shadow of a useful national agricultural organization. A "Bureau," governed by party, or administered by politi-

cians, might prove an unmitigated evil, retard scientific progress, and divide, instead of uniting agriculturists—and God knows we are sufficiently divided now—into a small class that read books and rural journals, to teach them how to work, and a much larger one, that work as their fathers did ; and as their lack of science requires much labor for the same results, they seldom have much time, and in reality no inclination to read aught save the partizan papers, put in their hands by their party leaders ; and except modern novels, this is often the least profitable, and sometimes the most debasing of all printed matter.

That some sort of an Agricultural office will soon be created, no one, who reads the signs of the times, can doubt. It is true, that the report of the Senate committee is not *very* encouraging — proposing the *enormous sum of sixteen thousand dollars*, for the benefit of *sixteen millions of Agriculturists!* And “the immediate Representatives of the people” have (the *majority* of the committee,) refused to report at all — and yet, a minority *has* modestly suggested that we might be bought a thousand dollars cheaper than the Senatorial offer!

This only proves what I before advanced, that we think meanly of ourselves, and our pursuits ; and instead of *demanding* as farmers by profession, and “three-fourths of the people” *at the polls*, we permit ourselves to be played with, by political gamesters, who move us as they would the “pawus” on a chess board.

In the name of common sense and human nature, how long shall we put up with such indignities? There are good men enough in Congress, to look to our interests, if we seriously stir in the matter. Those who know our wants, and respect our worth, will see to it, if we seriously demand this Agricultural Bureau, and the talking politician will be very shy of risking his popularity and his *place* by opposing us.

Does any one pretend that the money this department will cost, is an object worth talking about? If so, refer him to the reports and “estimates” of the engineer departments for 1849–50, and the appropriation bills of every year. I open at random, a volume sent me by “our member,” page 221, I find that for the fiscal year \$35,000 is asked for one fort, and 3 pages on, \$75,000 for another—and

this, too, in an age, when even military men hold, that the breasts of Americans are our best fortifications, and that there is no fort in existence, that good soldiers cannot reduce.

But I have said enough on this subject. *Policy*, under the circumstances, should have kept me clear of this theme. But I am no politician, as all know; and as a liberally constituted Agricultural Department, connected with the machinery of our government, might, in my opinion, be made all efficient, in organizing and educating farmers, I am bound to advocate it, regardless of any personal consequences, which may attach to my interference.

But I have little hope from such an office, unless by universal consent it be turned over to us, when created, *irrespective of party, and independent of partizan obligations*. One principle in our government, like that saving one in our constitution — our highest judiciary — that may preserve its usefulness, free of party trammels, and partizan warfare.

In no other way can such a department be made generally popular, and permanently useful—and without this feature, it would only tend to divide and distract the efforts of individuals, and the great and beneficent associations that are now raising the tiller of the soil from a mere machine, to a reading, thinking and scientific agriculturist.

If I have made myself understood, you will have gathered from my many words, one thought worth pondering. It is this: That we, though calling ourselves Pomologists, *are*, in reality, scions of the great family of husbandman; and as our particular branch of tillage has opened to us more leaves of the book of nature, than the farmer can read—and that our tastes, or our necessities, have made us reasoning and observing men; and moreover, our good fortune has led us to unite in Congress, for the general good of Pomologists, we are bound by every generous tie, to aid the less fortunate of our class, in all things connected with the cultivation of the earth.

And the first and last thing wanted by the farmer, is *education—knowledge*. In this we can assist him—and what we *can do we should do* in this connection.

Agricultural and horticultural societies, have done much towards waking up and encouraging all who labor for bread—the mechanic,

as well as the farmer and pomologist. At the shows of these societies, our brethren see what others have done, and what science may do. And the people of the "universal Yankee nation," are very apt to believe, that "what man has done, man can do again." Thousands are annually startled from their old routine practice, by what they see at these exhibitions, and try to imitate or excel the products of the farm, or the work-shop, which have thus excited their professional emulation.

Let us therefore help to establish county and State societies throughout the land, and let us add one feature to them, which most of those in existence now lack—not exactly lectures, but brief observations on every new or extraordinary subject. This may be done, by a system of familiar questions, put to every exhibitor, by the proper officers of the society, and publicly answered.

I have read reports of such public conversations, in the proceedings of the AMERICAN INSTITUTE, New York city, and some other societies. This mode of conveying information, though not always as clear and reliable as written statements, possesses many advantages. Let it be generally adopted, and much good will result therefrom, and the persons who cannot or will not read, may possess themselves of a few facts, on which to base their own experiments. I have heard of the adoption of this plan in small neighborhoods, without shows, and with the happiest and most encouraging results.

But after all, our principal engine, is the *agricultural press*. The press may have been brought into existence by the societies, though that admits of doubt. The press is, however, the organ, and the very soul of the associations. Man is a vain animal, and loves to see himself "in print," and he often works hard, and effects much good, with that powerful, though unacknowledged desire.

The agricultural press must be sustained. Public opinion is the true sovereign of the Anglo Saxon; and he will give even money, (which is too often his God,) to propitiate it. Say what we may about the press being but the mirror of public opinion, it certainly *creates* as well as reflects the mighty power.

Let us sustain then our agricultural journals. If we cannot give money, as politicians do to theirs, we can give a little time. Many of us have influence and powers of persuasion. Let us exert these with

our neighbors, and procure legitimate subscriptions—knowing as we do, that for every dollar we induce our brethren to disburse, they will receive the value of ten, in useful knowledge.

The agricultural press is now the most efficient and legitimate advocate of common school and specific agricultural education; and this is a subject of more general and vital importance, than all the agricultural bureaus and societies in the world.

The farmer's son must be educated for his profession—the mechanic for his calling, and the voter *for the perpetuation and extension of our free institutions*, and the perpetuation, and “the manifest destiny” of the Anglo Saxon race.

And better than our sons, should we educate OUR DAUGHTERS. If “the boy is father to the man,” the MOTHER not only bends the twig, but her influence for good or for evil, is often on the joint product of both parents, or the future career of the son, as palpable as the successful graft of the pippin on the crab, or a melting pear on a native thorn.

Do not for a moment, suppose that I believe the minds of man like this paper, on which I can write what thoughts I please. Men are as different in mental organization as in features. And yet, even idiots are susceptible of some education; and pippins will sometimes grow when inoculated on crabs, and pears on thorns, though not on hemlocks or black jacks.

Scientific education can do much towards redeeming a bare or sterile mind; and it can do every thing with that on which God smiled at its inception and development. But without education, this child of the deity will be but as the statue in the block of marble, or this paper, before it was blotted by my uneducated speculations, and chance thoughts, which the very system I advocate, might have converted into gems of beauty and usefulness.

Agricultural education may be thought, (as some who live by agriculture have said,) “one of the humbugs of the age.” Still it is a principle that I hope to see tested before I die. I would ask no larger hold on fame, than I could rest on the broad results of such a system as I advocate. But, alas, my powers in this, as in most things, are far below my enthusiasm and my appreciation of the great thoughts of other men. But, thank God, great men and men of power see thi^s

matter in its true light, and have dared to countenance and sustain it, even against self-nominated legislators, who neglect our interests, and self-constituted manufacturers of public opinion, who underrate or slight them.

Massachusetts has already commenced her system of agricultural education. And who has been and is among the leaders of this first successful movement? Our own President, Marshal P. Wilder. Here we have "precedent," if you require it, for what I have taken the liberty to urge upon scientific cultivators, though associated here as mere pomologists.

New York, ere five years, will have more than one agricultural college; and soon she will have one in every grand division of the State. The system is only delayed, not abandoned. And what member of this Congress, in those from the Empire State, that does not feel that he has done something towards creating "the public sentiment," that will cause this glorious consummation?

In little Rhode Island, an old-fashioned "institution of learning"—one of the breed of colleges created by the monks, in the old world, to perpetuate their power, by hoarding knowledge within its walls, and spreading a pall of darkness and ignorance over every mind not "vowed" to them—BROWN UNIVERSITY—has declared that the son of the farmer must be educated, and the mechanic and civil engineer ought not to be compelled to load their brains with dead languages and old monkish lumber, in order to pick up a few crumbs of the science that occasionally fall from the desks of these hitherto exclusive dispensatories of "a liberal education."

Francis Wayland must have his full share of the credit of this startling movement—though of course the men who lend the "sinews of war," are entitled to the lasting gratitude of the sons of labor, who are to reap the benefit of this unhoped-for liberality.

One of the arguments used by President Wayland, to bring about this innovation, is truly characteristic, and shows the tact of the worthy President, and his knowledge of the calculating Yankee. He not only convinces the board that the system is unjust and devoid of practical utility, as well as opposed to the ideas of the age, but that it will *not pay*; that the concern must fail, if conducted in the middle of the 19th century; if not with the same objects, at least in the same man-

ner, and with less actually accruing usefulness, than in the dark ages of monkish rule and christian barbarism.

That argument of "dollars and cents" was a good one, and doubtless had its weight, and why should we not use it, and show that a specific education for the farmers, would add millions to the wealth of the nation, for every thousand expended, while it gave a greater share to the producer?

I cannot go the full length of the figures of my old friend Dr. Lee, in his Patent Office Report, and yet there is much truth in his statements, and *entire truthfulness* in most of his deductions, however startling his arguments may appear, to one not used to this kind of demonstration.

"Westward the star of empire takes its way,"

and "the great west" has the greatest stake in agricultural and horticultural improvement; and, of course, in the first means to be used for the desired end—EDUCATION. 'Tis said that we do nothing by halves in the west. Let us neither *overdo*, nor *half do* this matter. Let us strike at once, and make the new west the school as well as the granary of the Old World.

Let us preserve the fertility of the soil, and increase the quantity of its products, instead of seeking a further west, where our little agricultural knowledge may give its usual returns to our hard labor, and which will, in the end, compel our children to yet another remove, when our improvident cultivation shall have left us no rich and virgin west within our present limits.

Then conquest must come to the aid of emigration, before the sure influence of our free institutions, and the irresistible force of our national character, shall have had time and opportunity to prepare the southern portion of this continent for our certain advent.

If we do nothing now, towards preserving the fertility of the territory of our Union, in process of cultivation, or rapid settlement, our next "west" must be a southern one; and we must conquer or colonize to that end; and crowd the Spanish race, from the richest portions of this continent, as we have nearly done the Aborigines of the north.

This movement is inevitable, in the course of human events, and in its accomplishment, we can have few scruples, for they are but forcible and despicable intruders, or worthless crosses of other races in the land from which we must, ere long, expel or extinguish them.

But, what all reflecting patriots deprecate in this immediate alternative, are the natural consequences of a warmer clime, of almost spontaneous production, and its peculiar concomitants in this case, on the character of our people, should they mingle too soon with this race, so every way inferior, and in whom virtue and knowledge, energy and enterprise, have long been but a name, or at best but a feeble and distorted reflection of their glorious past.

REPORT *from Canada to the Pomological Congress, Cincinnati.*

Owing to a want of a pomological knowledge in Canada, and also to a lack of interest, apparently, in the subject, I have not been able to procure information from the different parts, so as to make up a satisfactory report to the Congress.

From the extent and varied climate of the Province, (embracing in its fruit-growing region nearly five degrees of latitude,) it would be impossible for one report to do anything like justice to the subject. I shall therefore, in a great measure, in this, confine myself to my own experience, leaving to some future time (when better aided by reports from other parts of the Province,) a more extended one, embracing, as much as as possible, the whole of Canada.

I shall commence with small fruits in their rotation of ripening.

STRAWBERRIES.

Owing to the great drouth, in the months of April and May, fears were entertained that this crop would be a total failure, but the rains from the 7th till the 9th of June, (the first, of any consequence, we had for nine weeks,) quite renovated them, and the crop was one of the best I ever saw here. Of fifteen varieties that I have fruited extensively, there are only a few that I consider worthy of extensive cultivation.

Burr's New Pine I would place at the top of the list. If it continues, after longer trial, to prove as good as it has done, its earliness and delicious flavor, together with its hardiness and productiveness, will fully entitle it to this.

Black Prince proves, with me, a hardy and great bearer, and, to my taste, a high flavored and excellent berry, and if pulled before being too ripe, it is one of the most beautiful.

Hovey's Seedling is a great bearer, and the fruit of largest size, but here it is very deficient in flavor, and rather dry.

Ross' Phoenix, this year, was one of the greatest bearers, largest and finest flavored I had; but it is not always so, though so far as my experience goes, if protected, it is one of the best of the Staminate.

Swaniston's Seedling, though large and of good flavor, does not, with me, come up to its character, as one of the highest flavor.

Of those I have cultivated, I would recommend for general cultivation, *Burr's New Pine*, *Large Early Scarlet*, *Black Prince*, *Hovey's Seedling*, and *Hudson, of Cincinnati*. The latter is quite distinct from the *Hudson's Bay*, and is a much more prolific and better strawberry for general culture; the fruit is rather acid. There are probably others equal to some of these, but I have not yet tried them.

CURRENTS.

May's Victoria, *White Grape*, *White and Red Dutch*, *Black Naples*, and *Black English*, have all been bearing with me for some years.

May's Victoria proves highly valuable, and a most beautiful fruit; its greatest drawback is, that it is of rather a weak growing habit.

The Red Dutch, as it is a much more vigorous grower, and as great a bearer—the fruit being as large, though the bunches are not as long—will probably continue to be the most profitable market fruit.

White Grape is a very beautiful large currant, and is quite distinct in its growth and foliage from any other; it is also a valuable fruit.

White Dutch.—There appears to be a good deal of confusion as regards this variety. I have four distinct varieties, all procured as

White Dutch, only two of which are valuable. One of these varieties I procured from Rochester; it is a very handsome pale colored fruit, with long bunches, ripening rather late, and rather acid in flavor. The other I procured from Cleveland, the fruit of which is quite large, more of an amber color, with shorter bunches, ripens earlier, and is much sweeter than the other, and, in my opinion, superior.

Black Naples, except for hanging long on the bush without shriveling—which the Black English does—is inferior in flavor to that old variety, and is not larger in size. It has been praised, in my opinion, higher than it deserves; but I think that there are several sub-varieties of the Black English in cultivation, probably accidental variations from seed, some of which are much larger than others, which may account for the different relative value placed upon it by some cultivators.

I think too little attention has been paid to the raising of currants, and other small fruits, from seed. It is so easily done, and they come into bearing so early—in general the third year—that I think intelligent cultivators, who raise the fruit on a large scale, might, in many cases, raise their young plants from seed instead of cuttings; very few would be inferior to the kind of which the seed was planted, and some might be much superior. I have a large stock of young plants coming on from seed saved from the largest berries of May's Victoria, White Grape, &c.

GOOSEBERRIES.

Like all Scotchmen, I am rather prejudiced in favor of this fruit, and though it does not attain here the flavor that it does in a colder and moister climate, still, by judicious culture, it can be grown to great perfection. I have paid a great deal of attention to this fruit, for the past fifteen years, and have raised many hundred varieties from seed, some of which have proved very superior, and, I flatter myself, more suitable to the climate than the greater part of the foreign varieties.

For several years after I moved to my present residence, my gooseberries were completely destroyed by mildew. The bushes then grew in a garden enclosed with a high, close board fence on three sides, and my house on the greater part of the other. Being satisfied that it was caused by the want of a proper circulation of air, I removed them to a place slightly elevated above the surrounding ground, and where the wind had free access to them on every

side, and since then, some six years, I have never had a mildew berry. I am therefore inclined to think, from this and other experiments, that more depends on situation and exposure than on soil, in the culture of this fruit.

The great heat and drouth of our summers are very injurious to the gooseberry, and heavy rains in midsummer, followed by a hot sun, destroys a great number of bushes if on a retentive soil. In 1848, when six inches of rain fell in the course of three days in July, more than one-half of my bushes were killed; a very hot sun followed the rain and shrivelled up the leaves, giving them the appearance of being boiled. One end of my plat, however, escaped entirely; it was the lowest, and had been the wettest, but had an under drain running through it; all within the influence of the drain continued to be perfectly healthy, while, in other parts, where, owing to a retentive clay sub-soil, the water did not run off quickly, they all died. I infer from this that the best mode of culture is to plant on rather elevated ground, *thoroughly underdrained*, where there is nothing to obstruct a free circulation of air; in addition, I would plant rather closely together, and cover the whole of the ground, to a depth of several inches, with tan bark, to keep the ground cool and moist. If this plan is followed, I am satisfied that excellent gooseberries can be grown free of mildew. Of course the ground must be well manured before putting on the tan bark.

Of imported varieties, I have found the Ocean to be the hardiest, strongest grower, greatest bearer, and most suitable for this climate, of any I have tried; and where the fruit is to be used green, I would consider it the most profitable for market culture.

The Warrington Red is decidedly the best gooseberry grown, for the dessert. The flavor is one of the finest, skin thin, and it will hang on the bush a month after all the others are past, (though ripening at the same time,) and be as fine then as at first.

Houghton's Seedling has not borne with me yet, but from its foliage, &c., it is evidently either a sub-variety, or a hybrid of the small, smooth red, wild gooseberry. Amongst five hundred seedlings that have borne fruit this year for the first time, with me, there is one that is evidently a hybrid from the wild prickly fruited variety. Its habit of growth is the same as its wild parent; the young shoots grow very strong and upright, attaining four times the height of the strongest of the other seedlings beside it, and are covered with light brown prickles like the wild; the foliage is more like the wild than the tame. The

fruit is red, of good flavor, and ripens at the same time as the English gooseberry, ten days before the wild, and is covered with hairs instead of prickles. I mean to plant it and the Houghton, beside some of the largest and finest flavored varieties, such as the Warrington, and save the seeds from both, in hopes of getting an improved variety perfectly adapted to this climate.

Several bushes of the wild prickly fruited gooseberry are growing on my lawn, not far from my other gooseberries, and I suppose the bees (of which I have plenty) have been the hybridizers. As the wild blossoms about ten days after the English, it must have been some of the earliest blossoms of the one that impregnated the latest of the other.

RASPBERRIES.

Of this fruit, I cultivate only the *Red* and *White Antwerp*, *Franconia* and *Fastolff*. Of these, I prefer the two former, though the white is not so suitable for a market fruit. The *Fastolff*, I think, has been overrated; at least, in my soil, it is not much superior to the *Franconia*, and is not so strong a grower. The fruit is no comparison to the true *Red Antwerp*. The greatest fault of the *Antwerp* is their weaker growth; they therefore need high culture.

CHERRIES.

I have fruited a large number of different varieties this year, several of them only for the first time.

Early Purple Guigne commenced ripening this year on the 8th of June, and was fully ripe by the 13th, and escaped the birds, which eat nearly all my later ones. Taking all things into consideration, I consider it, as far as yet proven, one of the very best cherries, and only equalled, in my opinion, for general cultivation, by the *Black Tartarian*. I have found the young trees pretty free growers, and the older trees are of handsome growth, and as large as the generality of its class of the same age.

Baumann's May commenced ripening on the 11th of June. It is also a valuable fruit on account of its earliness, though not equal in

size, or color, or flavor to the previous. Owing to its ripening later, the red-headed wood-peckers found them out and finished before I was aware; I however finished the wood-peckers, or at least as many of them as I could reach with my gun. I fancy I hear many on reading this, saying: How barbarous! How behind the age! How little he knows of the use of birds, more especially wood-peckers! &c., &c. But let me tell these gentlemen that few of them have studied the natural history of birds more than I have, or watched them closer or more attentively in their haunts and habits, and, therefore, I will not give up my views on the subject till they can bring some other argument of which I am not aware at present. The red-headed wood-pecker I consider a great pest, here at the North, as it does not winter with us, and does not make its appearance in our gardens until the fruit is ripe, and, therefore, does little good by killing insects to make up for the enormous quantities of fruit it destroys, which appears to be its principal food while here. The other wood-peckers, that remain all the year with us, I would in no way injure, as they do more good than evil. Many other birds should be protected, such as the cat-bird, thrush, &c., &c., though they eat a great deal of fruit, still, as they are about the gardens from the commencement of the season, building their nests in the shrubbery, feeding their young with insects from our trees, and cheering us with their song, they more than pay us for their food. But there are some others, such as the cedar-bird, red-headed wood-pecker, and in some localities, such as this, where they are overly plenty, even the robin and Baltimore oriole, I would consider it no sin to destroy. Of course a just discrimination should be used, and the habits of the bird ascertained, as it is only those which commence resorting to the gardens when the fruit is ripe, and leave as soon as it is over, that there would be any excuse for killing, and that only in localities where they take all the fruit as it ripens. I would not object to their getting a moiety, or even two-thirds, but where they take all, as with me, and that before it is ripe, I have no hesitation in trying to reduce their numbers to a more reasonable extent. But when I began, I did not intend to write a treatise on Ornithology; it is, therefore, time to return to our cherries.

Boyer's Early Heart is undoubtedly different from *Early White Heart* — it is considerably larger, a few days earlier, and all things considered, is much superior, so much so that the propagation of the latter is not advisable.

Elton and *Bigarreau Couleur de Chair* appear to me to be identical, and as the latter is rather a jaw-breaking name to many, it should be discarded.

Belle Magnifique proves here, to be the best cherry of its class for the North and the South, where the *Bigarreau* and *Heart* cherries do not succeed. The finer kinds of *Duke* and *Morello* cherries should be more extensively cultivated, and endeavors made to raise still better varieties from seed.

I have had very little trouble with the gum, so injurious to the cherry in Ohio, &c., but it may be owing to having planted my trees on the lawn, which has checked their over-growth and prevented the bark bursting.

I consider the greater part of the *Heart* and *Bigarreau* cherries as ornamental trees for a lawn as any other that could be got, and very suitable for that purpose, combining the useful and ornamental.

APRICOT.

Owing to the ravages of the curculios, I have had very few apricots for the last few years; jarring the trees, which to a certain extent succeeds with plums, will not do with the apricot, for if you jar hard enough to bring down the curculios, you will bring down nearly all the fruit with them.

The only varieties that have ripened any fruit the two last seasons, are the *Breda* and a *Seedling*—the latter is the hardiest I have; an excellent large fruit and a better bearer than the *Breda*.

Dubois Early Golden is not in bearing with me yet, so I cannot compare it with the preceding. My old trees of *Moorpark* and *Peach* were all winter killed two years ago; and even in the nursery rows, they suffered more than other varieties.

PLUM.

The same remark as regards the curculio, applies to the plum; from a couple of hundred large bearing trees of all varieties, I did not save

a bushel of fruit this season, even with constant jarring the trees ; what I saved from the curculio being destroyed by the rot.

I have tried both dusting with lime, and white-washing the leaves and fruit, without any success, for as much of the fruit was punctured by the curculio after white-washing as before, and the white-wash, though thin and kept some time before application, completely destroyed the fruit of an apricot tree, as after it was put on, the apricots ceased growing, and partly shrivelled on the side where the most wash had been applied. Though very few of the fruit were punctured when the wash was applied, the greater part were afterwards, and nearly all fell off with a worm in them ; what few escaped and ripened, were nearly uneatable from the particles of lime adhering to the fruit, giving it a bitter taste ; as the whitewash will not adhere to the plum, it is useless for that fruit. Dusting with lime to prevent the rot, I have found also to be useless ; two trees that were dusted every day, rotted as much as those not dusted. A few years ago curculio and rot were unknown here, and we could raise the finest crops of plums, apricots and nectarines.

Is there any hope of these scourges passing away? Is any locality where they formerly prevailed, now exempt? Luckily there are still many localities where the curculio is not found, or where they are so few in number as not to injure the general crop, and it is in these places where plums and apricots should be planted to supply less favored localities.

In Eastern Canada all the early and medium ripening varieties succeed admirably.

NECTARINES.

From the same causes, curculio and rot, I have had no fruit for the last two seasons.

PEACH.

This fruit has been little cultivated throughout the greater part of Western Canada, though it would no doubt do well if proper varieties were procured and attention paid to having the trees planted in proper situations.

Here it succeeds admirably, and in ordinary seasons all the varieties ripen well, even the latest, such as *Monstrous Pompone*, *Heath Cling*, *Druid Hill* and *La Grange*, usually come to perfection; last season being a fortnight later than usual, some of these varieties did not come to perfection, though all ripened their fruit.

The great desideratum, yet to be arrived at, is to raise an early peach, say equal to George 4th, that will ripen about the time of the nutmegs. I think if pits of the first ripe and finest fruit were planted, and the fruit of those that proved earliest and finest planted again, that in a few generations the point would be gained.

Serrated leaved peaches in general cannot be relied upon for a good crop, as some years the mildew effects them badly. The *Serrate Early York* is the one least subject to mildew, of any of this class, and in general it can be relied upon.

The *Early Tillotson* fruited with me for the first time this season, or rather it ripened its fruit for the first time, as the two former years the fruit was destroyed by mildew. It is the earliest peach I had this year, and were it not for its liability to mildew, would be valuable.

My only bearing tree of *Early Malden* was nearly destroyed by the red spider, before I noticed it, and the fruit did not ripen well. I doubt, however, if it will prove much earlier, if any, than the *Serrate Early York*. The *curl* in the leaf is bad in this vicinity, but it is only a few years since it commenced here, previous to which no such thing as curl was known here; it therefore, in my opinion, cannot be caused by cold, as we must have had as severe weather formerly as now. I thought last year I had discovered the cause in a very minute insect, but this year I could not find it, or any other insect.

It no doubt is injurious to the crop, causing a large portion of the fruit to drop, and retarding the growth of the tree, as also the ripening of the fruit.

GRAPE.

The *Isabella* and *Catawba* ripen regularly, here, and I am satisfied as good crops of well ripened fruit could be raised here, of the latter, as at Cincinnati.

The *Clinton* is the only native grape I have proved here, but I expect in another year to have the *Diana* in fruit. I have fruited a considerable number of seedlings but have not proved them sufficiently to decide. One that fruited last year, appeared to me, to be nearly allied to the *Diana*. It did not bear this year.

The foreign grapes formerly did well in open air, here, but for the last three years, they have been quite a failure from the ravages of a small insect, I suppose to be the *thrips*.

PEARS.

Have been very healthy here till this season, and no fire blight has taken place as far as I am aware. A great number of my trees have been attacked this year for the first time, by an insect that is quite new here, it appears to me to be one of the aphid species, but it does not attack the points of the young shoots like the common aphid; its favorite place is around the bud on the young shoots and spurs; and at the base of the petioles, where they are in large quantities, leaving the whole of the bud and shoots covered with a black excrement, of which flies and wasps appear to be fond. It is very injurious to the trees, and those that are of weakly growth, are apparently affected by it in the same way as the fire blight is said to act.

A few of my bearing trees have been killed this fall by another insect, which I suppose is the insect blight. About the middle of September, the trees were in perfect health apparently, when I took fruit from them to take to the Provincial Fair at Niagara, but on going to the trees on my return to get specimens for this Congress, I found the trees dead. The sap had run out in large quantities at small holes, in general placed just below the first main limb. In cutting into the tree, I found the small holes went straight into the stem about half an inch, and in each one there was a small insect, something like the pea-bug, but smaller; in one tree there were five or six of these little holes in a cluster, each with its insect.

Is the insect the cause of the disease or the effect of it? I have not been able to procure a copy of Professor Harris' work on insects, though I have been endeavoring to get some of the Detroit book-sellers to bring it on for the last three years, and as I am no entomologist, I am not aware if these are well known insects or not.

In East Canada, the culture of the pear has been nearly discontinued, as the young trees nearly all get winter killed. There are, however, some very large old trees in the neighborhood of Montreal, in the gardens of the Seminary of St. Sulpice, of the Summer Bonchretien and other old French varieties, which were planted when the country was first settled, by the priests of the Seminary, and which

are still quite healthy and bear well, though the apple trees planted at the same time, are long since gone, and even the second and third generations of them.

M. Villeneuve, the Vice President of the Montreal Horticultural Society, and the priest who has charge of the gardens of the Seminary, informed my brother, who called upon him to enquire, why it was that the pear succeeded formerly, when it would not stand the winter now? that the only difficulty in the culture of the pear was to protect the young trees till they got the rough bark on, after which they were as hardy as the oak. The method they formerly adopted, and which they still practiced to protect them, was at the commencement of winter to wind a straw rope around the stem, and as far up the branches as possible—this was found to be ample protection.

In closing these remarks, I must apologize for the great length to which they have been drawn out.

JAMES DOUGALL.

ROSEBANK, near Amherstburgh, C. W., Oct. 1, 1850.





St. James
London
17th Nov 1841
Dear Mother
I received your kind
letter of the 11th and
was glad to hear from
you and to hear that
you were all well.
I am well at present
and hope these few lines
will find you all the same.
I have not much news
to write at present.
I am, dear Mother,
affectionately,
Your son,
James

