Proceedings of the fourteenth annual convention of the Southern Wisconsin Cheesemakers' and Dairymens' Association held at Monroe, Wisconsin, Thursday and Friday, February 12 and 13, 1914. 1914

Southern Wisconsin Cheesemakers' and Dairymen's Association
Monroe, Wisconsin: Times Printing Co., 1914

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PROCEEDINGS

OF THE

FOURTEENTH

ANNUAL CONVENTION

OF THE

Southern Wisconsin Cheesemakers' and Dairymen's Association

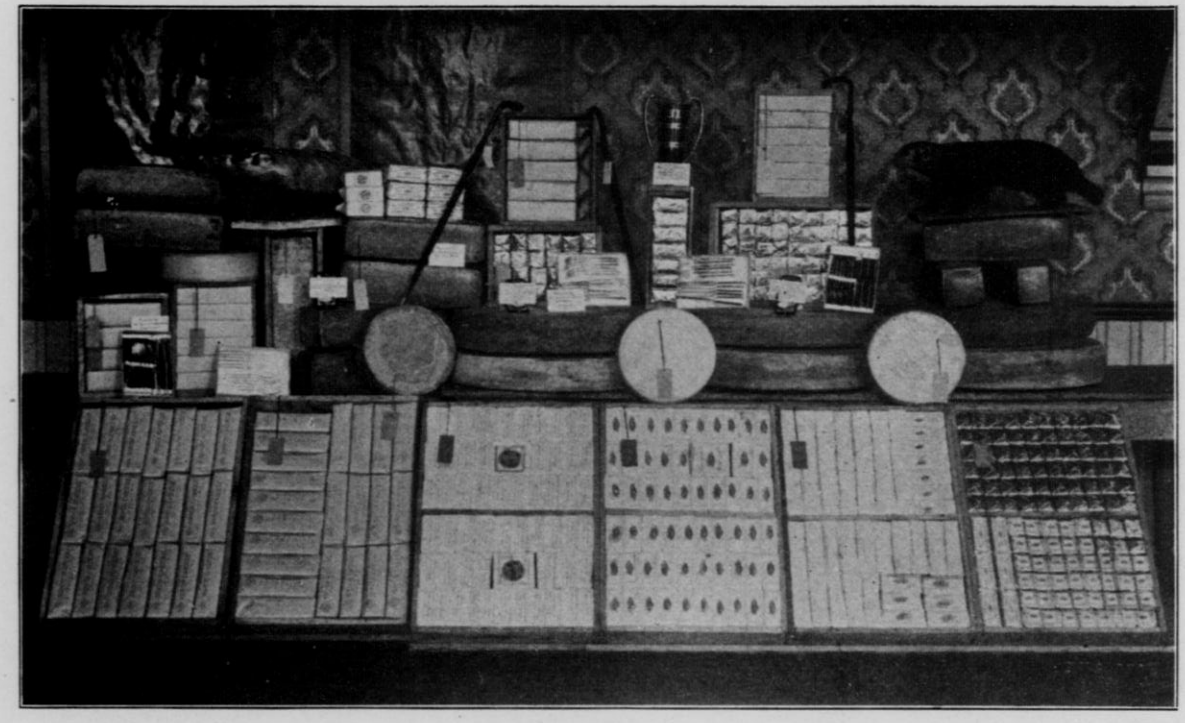
HELD AT

MONROE, WISCONSIN

Thursday and Friday, Feb. 12-13

1 9 1 4

TIMES PRINTING CO., MONROE, WIS.



CHEESE EXHIBIT AT THE MONROE CONVENTION, 1914

PROCEEDINGS

OF THE

FOURTEENTH

ANNUAL CONVENTION

OF THE

Southern Wisconsin Cheesemakers' and Dairymens' Association

HELD AT

MONROE, WISCONSIN

Thursday and Friday, February 12 and 13, 1914

TIMES PRINTING CO., MONROE, WIS.

OFFICERS FOR 1914.

President—S. J. Stauffacher, Monroe, Wis.
Vice President—Dallas E. Davis, Monroe, Wis.
Secretary—Henry Elmer, Monroe, Wis.
Assistant Secretary—Herman Regez, Monroe, Wis.
Treasurer—Joe Trumpy, Monroe, Wis.

DIRECTORS.

John Waelti, Monroe, Wis., for three years.
Nicholaus Schmid, Monroe, Wis., for two years.
Albert C. Trachsel, Monroe, Wis., for one year.

Dairy Instructor .....

JUDGES ON CHEESE.

Joe Williman, Monroe, Wis.
Ernest Regez, Blanchardville, Wis.
Chas. Zuercher, Sr., Brodhead, Wis.

COMMITTEE ON RESOLUTIONS.

John Luchsinger, Monroe, Wis.
George Legler, Argyle, Wis.
Gottfried Dallenbach, Monroe, Wis.

AUDITING COMMITTEE.

Chas. R. Schepley, Monroe, Wis.
Joe Trumpy, Monroe, Wis.
Jacob Regez, Jr., Monroe, Wis.

CHEESE SCORES.

Limburger Cheese:

Jacob Gahwiler, South Wayne, Wis., 96.33 points.
Received Gold Medal.
1 Silver Loving Cup, donated by the Conley Foil Co., New York City, N. Y.
1 set Silver Knives and Forks, donated by The Marshall Dairy Laboratory, Madison, Wis.
1 Silk Umbrella, donated by the J. B. Ford Company, Wyandotte, Mich.
Gottfried Steinmann, Monroe, Wis., 94.66 points.
Received Cash, $2.00.
George Altmann, Belleville, Wis., 92.66 points.
Badger Cheese Co., Monroe, Wis., complimentary score 95 points.

Brick Cheese:

Carl Indermuehle, Knowles, Wis., 96.33 points.
Received Gold Medal.
1 set Silver Knives and Forks, donated by Hanson Laboratory, Utica, N. Y.
1 Silk Umbrella, donated by the J. B. Ford Company, Wyandotte, Mich.
Gottfried Vogel, Monroe, Wis., 93.33 points.
Received Silver Medal.
Fred Indermuehle, Oakfield, Wis., 91.33 points.
John Streich, Woodford, Wis., 88.66 points.
Fred Emmenger, Ramona, Wis., 85 points.
Badger Cheese Co., Monroe, Wis., complimentary score 95 points.

Block Cheese:

Wm. Leutenegger, Monroe, Wis., 98 points.
Received Cash, $4.00.
1 Silk Umbrella, donated by the J. B. Ford Co., Wyandotte, Mich.

John Streich, Woodford, Wis., 97.66 points.
Received Silver Medal.
Badger Cheese Co., Monroe, Wis., complimentary score 94.33 points.
Gottfried Vogel, Monroe, Wis., 84 points.
Received for using Marshall's Lab. Wurst, 1 set Silver Knives and Forks, donated by the Marshall Dairy Laboratory, Madison, Wis.
John Wyss, Brodhead, Wis., 83 points.

Domestic Swiss Cheese:

Peter Acherman, Clarno, Wis., 93 points.
Received Cash, $4.00.
Chris L. Koenig, Clarno, Wis., 91.66 points.
Received Silver Medal.
Badger Cheese Co., Monroe, Wis., Complimentary score 90.33 points.
Fred Emmenegger, Ramona, Wis., 89.66 points.
John Scherli, Woodford, Wis., 88.66 points.

American Cheese:

Badger Cheese Co., Monroe, Wis., complimentary score 97.33 points.

MEMBERSHIP

Of the Southern Wisconsin Cheesemakers' and Dairymen's Association, 1914.

A.

Aeschlimann, John ..... Monroe, Wis.
Atherton, O. H. ..... Monroe, Wis.
Augsburger, Rudy ..... Monroe, Wis.
Acherman, Joe ..... Monroe, Wis.
Andrea, Bert ..... Verona, Wis.
Abraham, H. ..... Portage, Wis.
Alexander, C. B. ..... Chicago, Ill.
Alverson, E. D. ..... Milwaukee, Wis.
Acherman, Peter ..... Clarno, Wis.
Altmann, George ..... Belleville, Wis.
Amstutz, Sam ..... Monticello, Wis.
Arn & Zimmerli ..... Monticello, Wis.
Arn, Adolph ..... Monticello, Wis.
Aegler, John ..... Monticello, Wis

B.

Bennett, C. W. ..... Monroe, Wis.
Booth Bros. ..... Monroe, Wis.
Becker, Wm. A. ..... Monroe, Wis.
Benkert & Stauffacher ..... Monroe, Wis.
Botsford, R. O. ..... Monroe, Wis.
Burkhalter, Jacob ..... Monroe, Wis.
Bolender Dry Goods Co. ..... Monroe, Wis.
Bear, W. G. ..... Monroe, Wis.
Becker, Dave ..... Monroe, Wis.
Boss, Fred ..... Monroe, Wis.
Burke, Peter ..... Monroe, Wis.
Blum, Sam ..... Monroe, Wis.
Buehler, John ..... Monroe, Wis.
Baltzer, M. E. ..... Monroe, Wis.
Bayerhoffer, Edward ..... Monroe, Wis.
Blumer, Adam, Sr. ..... Monroe, Wis.

Blumer, Adam, Jr. ..... Monroe, Wis.
Blumer, Fred J. ..... Monroe, Wis.
Blumer, Jacob C. ..... Monroe, Wis.
Ball, Henry ..... Monroe, Wis.
Blum, Werner ..... Monroe, Wis.
Bast, Ray T. ..... Monroe, Wis.
Brown, William ..... Monroe, Wis.
Bushnell, E. ..... Route 7, Monroe, Wis.
Baumgartner, Jacob ..... Monroe, Wis.
Barmore, F. J. ..... Monroe, Wis.
Burkhard, John ..... Monroe, Wis.
Bollinger, Henry ..... Route, Monroe, Wis.
Babler, Fred ..... Blanchardville, Wis.
Blumer, Jacob ..... Route 3, Monticello, Wis.
Blickensdorfer, John ..... South Wayne, Wis.
Buholzer, Emil ..... Orangeville, Ill.
Baebler, Albert ..... Monroe, Wis.
Becker, D. E. ..... Blanchardville, Wis.
Bekler, William ..... Blanchardville, Wis.
Bank of Monticello ..... Monticello, Wis.
Bontley, W. E. ..... Monticello, Wis.
Botteron, Alfred ..... Monticello, Wis.
Burke, Fred ..... Monticello, Wis.
Baebler, Vincent ..... Monticello, Wis.
Baumgartner, William ..... Monticello, Wis.
Burgy, Jacob ..... Monticello, Wis.
Bontley, Ed. A. ..... Monticello, Wis.
Blumer, Ezra ..... Route 4, Monroe, Wis.

C.

Clayton, W. D. ..... Monroe, Wis.
Chambers, C. L. ..... Monroe, Wis.
Chadwick, W. W. ..... Monroe, Wis.
Caradine, W. H. ..... Monroe, Wis.
Clark, R. B. ..... Monroe, Wis.
Chadwick, Howard W. ..... Monroe, Wis.
Carroll, Edward ..... Monroe, Wis.
Crow, Ray R. ..... Monroe, Wis.
Carr, George J. ..... Monroe, Wis.

Corson, F. E. ..... Monroe, Wis.
Collentine, J. F. ..... Route 7, Monroe, Wis.
Cheesbro, Allen ..... Monroe, Wis,
Collentine, Arthur, ... Route 7, Monroe, Wis.
Carver, C. A. ..... Milwaukee, Wis.
Cleary, Tom ..... Blanchardville, Wis.

D.

Dunwiddie, William & Son ..... Monroe, Wis.
Dunwiddie, J. D. ..... Monroe, Wis.
Duerst, J. Henry ..... Monroe, Wis.
Discher & Schneider ..... Monroe, Wis.
Deininger, Fred ..... Monroe, Wis.
Dodge, Chas. S. ..... Monroe, Wis.
Dodge, A. C. ..... Monroe, Wis.
Dahms, Herman ..... Monroe, Wis.
Dahms, Fred ..... Monroe, Wis.
Downs A. ..... Route 7, Monroe, Wis.
Duerst, Math. C. ..... Monroe, Wis.
Davis, Austin C. ..... Monroe, Wis.
Dettwiler, Fred ..... Route 4, Monroe, Wis.
Davis, Frank ..... Monroe, Wis.
Dallenbach, Gottfried ..... Monroe, Wis.
Dodge, Leroy ..... Monroe, Wis.
Dickhoff, William ..... Route 4, Monroe, Wis.
Dettwiler, A. J. ..... Route 4, Monroe, Wis.
Deininger, E. M. ..... Juda, Wis.
Dibble, C. A. ..... Milwaukee, Wis.
Dahler, Andrew ..... Blanchardville, Wis.
Deininger, Chas. ..... Hollandale, Wis.
Disch, John, Jr. ..... Monticello, Wis.

E.

Etter, John T. ..... Monroe, Wis.
Einbeck Bros. ..... Monroe, Wis.
Eaton, C. H. ..... Monroe, Wis.
Elmer, Henry ..... Monroe, Wis.
Elmer, Alvin A. ..... Monroe, Wis.
Elmer, John H. ..... Monroe, Wis.

Elmer, John C. ..... Monroe, Wis.
Eaton, George W. ..... Route 9, Monroe, Wis.
Elmer, John A. ..... Monroe, Wis.
Emmenegger, John ..... Gratiot, Wis.
Emmenegger, Fred ..... Ramona, Wis.
Eyman, Homer ..... Chicago, Ill.
Elmslie, Alex ..... Milwaukee, Wis.
Elmer, Blasius ..... Monticello, Wis.
Erb, C. ..... Blanchardville, Wis.

F.

Fritz, David ..... Monroe, Wis.
Frautschy, Christ ..... Monroe, Wis.
Fitzgibbons Bros. ..... Monroe, Wis.
Frey, George ..... Monroe, Wis.
Faeser & Geiger ..... Monroe, Wis.
Fidler, James O. ..... Monroe, Wis.
Fritsch, John ..... Monroe, Wis.
Fiechter, Jacob ..... Route 1, Monroe, Wis.
Flannegan, William ..... Monroe, Wis.
Fritsch, Will ..... Route 1, Clarno, Wis.
Fritsch, Edward G. ..... Route 1, Clarno, Wis.
Fritsch, John F. ..... Route 1, Clarno, Wis.
Frautschy, E. D. ..... Monticello, Wis.
Friedli, Robert ..... Clarno, Wis.
Freitag, Walter ..... Route 6, Monroe, Wis.
Figi, Jacob ..... Monticello, Wis.
Freitag, Jacob M. ..... Monticello, Wis.
Freitag, Benkert & Holloway ..... Monticello, Wis.

G.

Gross, Ernst ..... Monroe, Wis.
Gloege, Emil H. ..... Monroe, Wis.
Grinnell & Miller ..... Monroe, Wis.
Geigel, Math. ..... Monroe, Wis.
Gruessi, Herman ..... Monroe, Wis.
Gettings, Miles T. ..... Monroe, Wis.
Gettings, John ..... Monroe, Wis.
Gorham, R. D. ..... Monroe, Wis.

Gnagi, W. B. ..... Monroe, Wis.
Geiger, W. J. ..... Monroe, Wis.
Galle, Streit & Co. ..... Monroe, Wis.
Gempeler, Jacob ..... Monroe, Wis.
Gifford, R. B. ..... Monroe, Wis.
Gempeler, Jacob, Jr. ..... Monroe, Wis.
Gapen, Levi ..... Monroe, Wis.
Gahwiler, Jacob ..... South Wayne, Wis.
Grenzow, John ..... Juda, Wis.
Gates, George P. ..... Madison, Wis.
Gilgen, F. ..... Brodhead, Wis.
Gempeler, F. ..... Hollandale, Wis.
Gemperli, John A. ..... Monticello, Wis.
Gerber, Fred ..... Monticello, Wis.

H.

Haren, D. H. ..... Monroe, Wis.
Huffman, E. A. ..... Monroe, Wis.
Hoehn, Henry ..... Monroe, Wis.
Hauser, John T. ..... Monroe, Wis.
Hodges, G. T. ..... Monroe, Wis.
Hefty, Henry ..... Monroe, Wis.
Heer, Abraham ..... Monroe, Wis.
Haack, Carl ..... Monroe, Wis.
Heeren, J. B. ..... Monroe, Wis.
Hinds, Thomas ..... Monroe, Wis.
Holcomb, R. T. ..... Monroe, Wis.
Hanson, J. ..... Monroe, Wis.
Hauser, Thos. ..... Monroe, Wis.
Heusser, Albert ..... Route 9, Monroe, Wis.
Hartwig, William ..... Route 5, Monroe, Wis.
Henn, William ..... Monroe, Wis.
Habermann, Henry ..... Route 7, Monroe, Wis.
Hanley, M. J. ..... Freeport, Ill.
Huber, Lawrence ..... Jonesdale, Wis.
Huber, Anton ..... Darlington, Wis.
Haldimann, Fred ..... Route 8, Monroe, Wis.
Held, Fred ..... New Glarus, Wis.
Hofer, Fred ..... Route 2, Monticello, Wis.

Haefeli, Otto ..... Monticello, Wis.
Hofer, Fred ..... Monticello, Wis.

I.

Ingold, Ferdinand ..... Monroe, Wis.
Isely, Clarence ..... Monroe, Wis.
Isely, William ..... Route 7, Monroe, Wis.
Indermuehle, Carl ..... Route 1, Knowles, Wis.
Indermuehle, Fred ..... Route 27, Oakfield, Wis.
Ingold, John ..... Route 5, Monroe, Wis.

J.

Jeffery, F. D. ..... Route, Monroe, Wis.
Jennings, Janet ..... Monroe, Wis.
Jennings, A. A. ..... Chicago, Ill.
Jenny, Peter ..... Route 8, Monroe, Wis.
Jackson, E. R. ..... Blanchardville, Wis.
Jaussi, John ..... Blanchardville, Wis.
Jordan, C. ..... Monticello, Wis.

K.

Krueger, S. W. ..... Monroe, Wis.
Kohli Bros. ..... Monroe, Wis.
Knipschild, John, Jr. ..... Monroe, Wis.
Kohli, Louis H. ..... Monroe, Wis.
Kohli, Chas. R. ..... Monroe, Wis.
Keegan Bros. ..... Monroe, Wis.
Knipschild Bros. ..... Monroe, Wis.
Knight, M. J. ..... Monroe, Wis.
Kundert Bros. ..... Monroe, Wis.
Knight, W. J. ..... Monroe, Wis.
Kaufman Clothing Company ..... Monroe, Wis.
Kundert, Henry ..... Monroe, Wis.
Kauffman, Luther ..... Monroe, Wis.
Karlen, Jacob, Jr. ..... Monroe, Wis.
Karlen, Gottlieb ..... Monroe, Wis.
Klassy, Joshua ..... Monroe, Wis.
Krueger, Chas. ..... Monroe, Wis.
Kundert, J. B. ..... Monroe, Wis.

Kundert, Edward ..... Route, Monroe, Wis.
Kubly, Vincent H. ..... Route 7, Monroe, Wis.
Koenig, Christ ..... Clarno, Wis.
Kirk, Walter ..... Chicago, Ill.
Kueng, Sam ..... Blanchardville, Wis.
Karlen, F. J. ..... Winslow, Ill.
Keller, Otto ..... Route 2, Woodford, Wis.
Klassy, Henry ..... Route 6, Monroe, Wis.
Kratzer, F. ..... Brodhead, Wis.
Kittleson, M. ..... Blanchardville, Wis.
Kaech, A. G. ..... Blanchardville, Wis.
Korupp, J. ..... Blanchardville, Wis.
Kaeser, E. F. ..... New Glarus, Wis.
Koller, Anton (2) ..... Argyle, Wis.
Kooreman, George ..... Monticello, Wis.
Knobel, F. B. ..... Monticello, Wis.
Kubli, Abraham, Jr. ..... Monticello, Wis.

L.

Ludlow, Henry ..... Monroe, Wis.
Ludlow, Edwin ..... Monroe, Wis.
Ludlow, Willis ..... Monroe, Wis.
Lanz, A. & Sons ..... Monroe, Wis.
Lewis, A. Hardware Company ..... Monroe, Wis.
Lanz, Fred ..... Monroe, Wis.
Luchsinger, F. B. ..... Monroe, Wis.
Lamboley, F. E. ..... Monroe, Wis.
Luchsinger, Thomas ..... Monroe, Wis.
Leutenegger, William ..... Route 6, Monroe, Wis.
Legler, Lee ..... Monroe, Wis.
Lichtenwalner, John P. ..... Monroe, Wis.
Lenherr, Jacob ..... Monroe, Wis.
Legler, John ..... Argyle, Wis.
Losberger, Gottlieb ..... Route 3, Monroe, Wis.
Lehnherr, R. ..... Blanchardville, Wis.
Lengacher, John ..... Monticello, Wis.
Loveland, W. A. ..... Monticello, Wis.
Lemon, Jesse ..... Monticello, Wis.

Luthi, Nic ..... Monticello, Wis.
Legler, Herman G. ..... Monticello, Wis.
Loebl, H. J. ..... Milwaukee, Wis.

M.

Miller, J. H. ..... Monroe, Wis.
Maeder, Mrs. Fritz ..... Monroe, Wis.
Moyer, S. R. ..... Monroe, Wis.
Miller, Walter ..... Monroe, Wis.
Monroe Auto Company ..... Monroe, Wis.
Monroe Steam Laundry ..... Monroe, Wis.
Miller & Kubly ..... Monroe, Wis.
Moore & Monroe ..... Monroe, Wis.
Monroe Land Company ..... Monroe, Wis.
Mauermann, J. F. ..... Monroe, Wis.
Meythaler Bros. ..... Monroe, Wis.
Monroe Electric Company ..... Monroe, Wis.
Meythaler, Chas. T., Sr. ..... Monroe, Wis.
Monroe Light & Fuel Company ..... Monroe, Wis.
Miller, C. Fred ..... Monroe, Wis.
Meier, Adolph ..... Route 8, Monroe, Wis.
Moe, H. H. ..... Monroe, Wis.
McManners, H. S. ..... Madison, Wis.
Marschell, A. J. ..... Madison, Wis.
Marty, Carl ..... Chicago, Ill.
Matter, Otto ..... South Wayne, Wis.
Matter, Gottfried ..... South Wayne, Wis.
Miller, Frank H. ..... Juda, Wis.
Motz, Anton ..... Fitchburg, Wis.
Meier, A. ..... Route 3, Monroe, Wis.
McKenna, F. J. ..... Blanchardville, Wis.
Mueller, Christ ..... New Glarus, Wis.
Marty, Fred ..... Argyle, Wis.
Monticello Auto Company ..... Monticello, Wis.
Martini, August ..... Monticello, Wis.
Marty, Dietrich ..... Monticello, Wis.
Meier, Fred ..... Monticello, Wis.
Marty, M. S. ..... Monticello, Wis.

N.

Neuenschwander, Fred ..... Monroe, Wis.
Newman M. J. ..... Monroe, Wis.
Norton, G. W. ..... Monroe, Wis.
Naeff, John ..... Route 4, Monroe, Wis.
Nauscawen, F. R. ..... Milwaukee, Wis.
Newton, C. E. M. ..... Chicago, Ill.
Newman, T. G. ..... Juda, Wis.
Neuenschwander, Fred ..... Route 1, Belleville, Wis.
Neuweiler, Albert ..... Monticello, Wis.

O.

Odell, Emery A. ..... Monroe, Wis.
O'Brian, James P. ..... Milwaukee, Wis.

P.

Pietzsch, George ..... Monroe, Wis.
Pfund, R. G. ..... Monroe, Wis.
Provision Company ..... Monroe, Wis.
Pfeiffer, George, Jr. ..... Monroe, Wis.
Priewe, Charles ..... Route 1, Monroe, Wis.
People's Supply Company ..... Monticello, Wis.

R.

Ruehli, Chas. ..... Monroe, Wis.
Ruf, Paul A. ..... Monroe, Wis.
Rottler, G. H. ..... Monroe, Wis.
Roub, J. F. ..... Monroe, Wis.
Rote, Alvin F. ..... Monroe, Wis.
Roth, Christ ..... Monroe, Wis.
Rubin, Fred ..... Monroe, Wis.
Regez, Jacob, Sr. ..... Monroe, Wis.
Regez, Jacob, Jr. ..... Monroe, Wis.
Regez, Herman ..... Monroe, Wis.
Rundell, O. S. ..... Madison, Wis.
Roethlisberger, Simon ..... Monroe, Wis.
Roelli, Adolph ..... Route 2, Shullsburg, Wis.
Ruprecht, O. H. ..... Dubuque, Iowa
Regez, Ernest, Sr. ..... Blanchardville, Wis.

Regez, Ernest, Jr. ..... Blanchardville, Wis.
Ryan, T. S. ..... Blanchardville, Wis.
Ryan Bros., ... Blanchardville, Wis.
Ruppert, Henry ..... Monroe, Wis.

S.

Schmid, Carl ..... Monroe, Wis.
Schindler, Arthur J. ..... Monroe, Wis.
Soseman, G. S. ..... Monroe, Wis.
Stearns, G. O. ..... Monroe, Wis.
Strahm, John ..... Monroe, Wis.
Steffen, Jacob ..... Monroe, Wis.
Schmid, Adolph ..... Monroe, Wis.
Schindler, Fred ..... Monroe, Wis.
Stauffacher, Peter ..... Monroe, Wis.
Scheidegger & Marty ..... Monroe, Wis.
Schmidt, Adam ..... Monroe, Wis.
Stauffacher, Math. ..... Monroe, Wis.
Slinde Bros. ..... Monroe, Wis.
Scott, G. A. ..... Monroe, Wis.
Summeril, Earl S. ..... Monroe, Wis.
Schepley, Chas. R. ..... Monroe, Wis.
Schober, Rudy ..... Monroe, Wis.
Schuetze, W. A. ..... Monroe, Wis.
Schindler, Chas. A. ..... Monroe, Wis.
Schneider Bros. ..... Monroe, Wis.
Shriner Bros. ..... Monroe, Wis.
Schneider, C. H. ..... Monroe, Wis.
Schiess, Conrad ..... Monroe, Wis.
Siegenthaler, Fred ..... Monroe, Wis.
Schaad, Emil ..... Monroe, Wis.
Smith, M. J. ..... Monroe, Wis.
Stocker, Albert ..... Monroe, Wis.
Sullivan, M. J. ..... Monroe, Wis.
Stewart, J. W. ..... Monroe, Wis.
Stauffacher, I. M. ..... Monroe, Wis.
Stauffacher, F. J. ..... Monroe, Wis.
Stauffacher, S. J. ..... Monroe, Wis.
Schmidt, Nick, Jr. ..... Route 7, Monroe, Wis.

Stempfli, Fred ..... Route 3, Monroe, Wis.
Schmid, Theodore ..... Monroe, Wis.
Steinmann, Gottfried ..... Monroe, Wis.
Schindler, John A. ..... Monroe, Wis.
Stuart, Richard ..... Monroe, Wis.
Stauffacher, Jacob ..... Route 7, Monroe, Wis.
Schindler, Casper A. ..... Monroe, Wis.
Smith, Chas. J. ..... Route 4, Monroe, Wis.
Smith, Roscoe ..... Route 4, Monroe, Wis.
Smith, Richard ..... Monroe, Wis.
Scherli, John ..... Woodford, Wis.
Streich, John ..... Route 2, Woodford, Wis.
Stauffacher, John C. ..... Monticello, Wis.
Schlaginhaufer, Otto ..... Hollandale, Wis.
Schwels, H. J. ..... Madison, Wis.
Sprecher, J. U. ..... Madison, Wis.
Stantz, H. B. ..... Milwaukee, Wis.
Skinner, D. P. ..... Milwaukee, Wis.
Shumway, C. P. ..... Milwaukee, Wis.
Schneider, Jacob ..... Blanchardville, Wis.
Schrapfer, C. ..... Blanchardville, Wis.
Smith, S. M. ..... Blanchardville, Wis.
Schindler, S. A. ..... New Glarus, Wis.
Strahm, Ernest ..... Monticello, Wis.
Senn, Jacob ..... Darlington, Wis.

T.

Theiler, Robert ..... Monroe, Wis.
Treat, B. G. ..... Monroe, Wis.
Tschudy, Otto ..... Monroe, Wis.
Treat, Frank ..... Monroe, Wis.
Thorp, James ..... Monroe, Wis.
Trachsel, A. C. ..... Monroe, Wis.
Thorp, George E. ..... Monroe, Wis.
Trukenbrod, W. F. ..... Monroe, Wis.
Tschudy, Fred ..... Route 5, Monroe, Wis.
Trumpy, Joe ..... Monroe, Wis.
Trumpy, Dan ..... Monroe, Wis.
Trumpy, Fred ..... Monroe, Wis.

Thorp, Harry ..... Monroe, Wis.
Tochtermann, Christ ..... Route 3, Monroe, Wis.
Theiler, J. H. ..... Monroe, Wis.
Tschudy, J. Jacob ..... Monroe, Wis.
Trumpy, Henry ..... Monroe, Wis.
Tschabold, Alexander ..... Route 3, Monroe, Wis.
Thomas, H. D. ..... Blanchardville, Wis.
Theiler, John ..... New Glarus, Wis.
Tschantz, John ..... Monticello, Wis.

U.

Uren, J. J. ..... Blanchardville, Wis.
Uhlmann, M. ..... Chicago, Ill.
Urban, John ..... Monticello, Wis.

V.

Van Wagenen, Henry G. ..... Monroe, Wis.
Vogt, Carl ..... Monroe, Wis.
Voelkli, Henry ..... Monroe, Wis.
Vogel, Gottfried ..... Route 5, Monroe, Wis.

W.

Weirich, P. J. ..... Monroe, Wis.
Wenger & Norton ..... Monroe, Wis.
Wenger, Rudy & Company ..... Monroe, Wis.
Woodle, L. A. & Son ..... Monroe, Wis.
Whalen, George ..... Monroe, Wis.
Wenger, Samuel ..... Monroe, Wis.
West Side Drug Store ..... Monroe, Wis.
Wilbur, Henry ..... Monroe, Wis.
Wenger, J. C. ..... Monroe, Wis.
Wilkinson, George W. ..... Monroe, Wis.
Weber, Grant ..... Monroe, Wis.
Weber, J. H. ..... Monroe, Wis.
West, F. F. ..... Monroe, Wis.
Willimann, Jos. ..... Monroe, Wis.
Woelfli, Thos. ..... Route 9, Monroe, Wis.
Wenger, Ed. ..... Monroe, Wis.
Waelti, Gottfried ..... Route 6, Monroe, Wis.

Wyss, Jacob ..... Route 2, Monroe, Wis.
Wald, Carl ..... Route 8, Monroe, Wis.
Waelti, John ..... Route 4, Monroe, Wis.
Weiss, John ..... Brodhead, Wis.
Weiss, Fred ..... Brodhead, Wis.
Wenger, Ernest ..... Blanchardville, Wis.
Wielli, John ..... Route 1, New Glarus, Wis.
Wittwer, Ed. ..... Monticello, Wis.
Wittwer, G., Sr. ..... Monticello, Wis.
Wenger, Fred ..... Monticello, Wis.

Y.

Young & Co. ..... Monroe, Wis.

Z.

Zinser & Duebendorfer ..... Monroe, Wis.
Zilmer, A. W. ..... Monroe, Wis.
Zilmer, Edward F. ..... Monroe, Wis.
Zeller, Conrad ..... Monroe, Wis.
Zilmer, W. F. ..... Monroe, Wis.
Zumkehr, Peter ..... Gratiot, Wis.
Zwygart, Otto ..... Brodhead, Wis.
Zum Brunnen, Ed., ... Route 4, Monroe, Wis.
Zuercher, C., Sr. ..... Brodhead, Wis.
Zuercher, C. Jr. ..... Brodhead, Wis.
Zentner, Casper ..... Monticello, Wis.
Zentner, Dietrich ..... Monticello, Wis.
Zentner, Fred ..... Monticello, Wis.

Address of Welcome.

By J. H. Durst

Cashier of The Citizens Bank, Monroe, Wis.

Mr. President and Members of Southern Wisconsin Cheesemakers' and Dairymen's Association:

When, a few days ago I was asked to deliver a short address of welcome at this convention, I wondered why I should be accorded that honor. It afterward occurred to me that it may have been because of my position as an officer of a bank that I must be able to judge the benefit this community receives from the dairy business. My grandparents were among the early settlers who emigrated from Switzerland and settled in what is now the prosperous village of New Glarus in this county. These people brought with them the knowledge of the manufacturing of our Swiss cheese, which was the foundation of the present great industry.

I have had a splendid opportunity to watch the growth and gratifying results that the dairy business has brought to all of us. It is a pleasure to drive during the summer months through this and adjoining counties and see the beautiful alfalfa fields, the fine herds of cattle, the large, modern barns and comfortable homes of the farmers.

It is not everywhere that so large a per cent of the farmers can demand and receive big loans without security at their banks as they can in this community. The dairy business, which is of such great benefit to the man engaged in it has been a source of big business and good profit to all of our merchants and banks. It is easy and safe to do a credit business among such good people.

Their income from the dairy business is sure and regular practically throughout the whole year. The early pioneers in this business builded well and our present energetic and bright business men who are behind this movement of conducting the dairy schools as they might be called are entitled to great credit and all men in and out of active business should support and encourage them. For what is good to the men directly interested is of great benefit to all of us.

We are proud of our great industry in Southern Wisconsin and proud of the place that the State of Wisconsin has attained through its leading position in the nation in the dairy business.

We are also proud of the character and ability of our good farmers and our dealers in the dairy business.

Therefore, I want to say that I know that I voice the sentiment of all of the people in our community when I tender you a hearty welcome to our city.

Secretary's Report.

By Henry Elmer.

Mr. President and Members of the Association:

At the close of another year, I have again the honor to report upon the work of our Association.

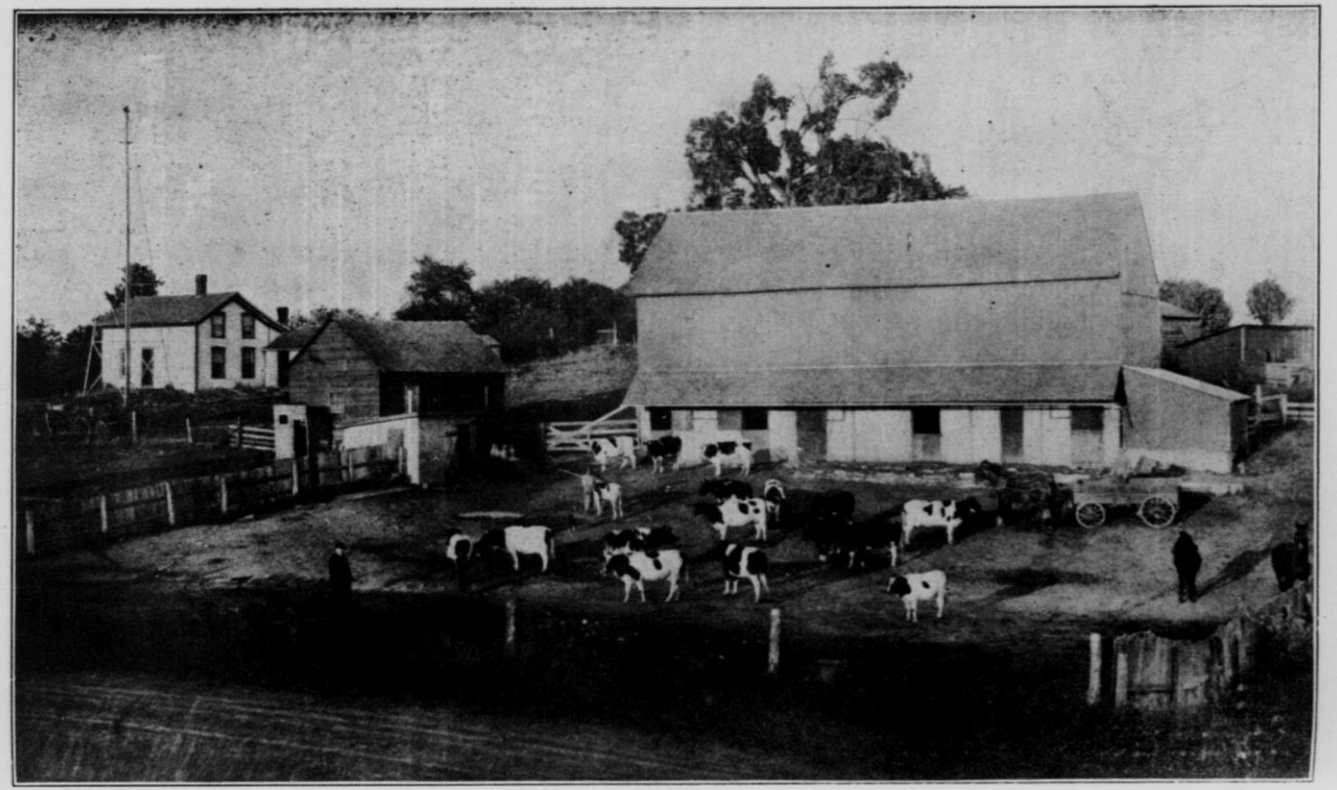
On April 26, 1913, the officers and directors held a meeting and elected Mr. John Aeschlimann, of the city of Monroe, as Cheese Factory Instructor for the season of 1913, at a compensation of six dollars per day of actual work. It was also moved, seconded and carried to print the proceedings of the 1913 convention and printing to be done by the lowest responsible bidder.

Mr. John Aeschlimann, elected Factory Instructor, worked in the month of May, but on account of his health failing him, he was forced to give up the work and was succeeded by Mr. Peter Zumkehr, former Factory Inspector.

Mr. John Theiler, editor and publisher of New Glarus, Wis., being the lowest bidder for printing the 1913 convention proceedings, was instructed to print 500 copies of the proceedings.

Mr. John Aeschlimann and Mr. Peter Zumkehr visited during the months of May, June, July, August, September and October, 175 cheese factories and it was often a repeated fact that two and three calls came in the same day from factories in different localities. $816.00 were paid to the instructors for their work in 1913. Mr. Peter Zumkehr will give us a more detailed report of their work.

On December 13, 1913, also on January 3, 1914, two more meetings were held to prepare a program and get ready for the 1914 convention and good, thorough work was done by your directors and officers which will be amply proven by the excellent program we all will enjoy during both days of our convention, while listening to the beautiful music, singing and acting, and receiving



A TYPICAL GREEN COUNTY FARM SCENE.

instruction from the ablest speakers to be had.

Each man has his hobby and so I have mine (although my hobby could be put very easily in practice) to bring each year before the association. My hobby is that the Southern Wisconsin Cheesemakers' and Dairymen's Association should be solely supported by the dairymen, cheesemakers and cheese dealers, that is those who are directly in that line of work and occupation, and I wonder till when the cheese factories will start to send in through their respective treasurers their annual dues of one dollar for each patron and cheesemaker to the treasurer or secretary of our association. While this would not create any hardship whatever to the different cheese factory companies it would create ample funds to carry on the work of the association without seeking outside help every year and the business men of the city of Monroe could enjoy a well earned rest. Which cheese factory company will be the first one to start in in that line of help?

Our treasury is in good condition. We have a balance of $..... cash on hand. Mr. Dallas E. Davis will tell you in detail from what sources our money was received, and to whom it was paid out.

Thanking you for your many courtesies extended to me during the past year, I am, Yours very truly,

HENRY ELMER, Secretary.

Treasurer's Report.

By Dallas E. Davis.

Mr. Chairman and Members of the Convention:

Your treasurer submits the following report:

Aug. 12, 1913, cash on hand	$1,893.96
Cash received Sept. 15, 1913, interest	6.22
Cash received Nov. 1, 1913, interest	11.00
Cash received Dec. 18, 1913, interest	48.00
Total on hand Feb. 10, 1914	$1,959.18

Disbursements.

Order No. 142, S. J. Stauffacher, trip to Madison to see dairy and food department	$ 2.85
Order No. 143, John Aeschlimann, 19 days work	114.00
Order No. 145, Wells Fargo Express Co. (1913 proceedings)	1.92
Order No. 144, John Theiler, printing 1913 proceedings	100.00
Order No. 146, Peter Zumkehr, 27 days work	162.00
Order No. 147, Peter Zumkehr, 26 days work	156.00
Order No. 148, Robert Kohli, 4 mo. ad for factory instructor	3.00
Order No. 150, Peter Zumkehr, 22 days work	132.00
Order No. 149, John Theiler, factory Ins. ad., 4 months	3.00
Order No. 151, Peter Zumkehr, 27 days work	162.00
Order No. 152, S. J. Stauffacher, stationery letter heads	2.50
Order No. 153, Emery A. Odell, 225 5c wrappers	11.41
Order No. 154, Western Badge and Novelty Co.	80.94
Total expenditures	$ 931.62

Cash on hand	1,027.56
Total which balances	$1,959.18

Respectfully,
DALLAS E. DAVIS,
Treasurer.

PRESIDENT'S ANNUAL ADDRESS.

By S. J. Stauffacher.

We have assembled here today in convention for the fourteenth time. If the program of the morning session and the large number gathered here this afternoon is an indication what we can expect from this gathering, it will be one of the best conventions ever held by this association. Ever since the organization of this association March 3, 1900, it has gradually grown in numbers, interest and usefulness until today its influence is not only county or state but nation wide. Every year—from the north and the south—from the far west and the east kindred organizations and interested parties have written us for information and assistance in various lines. But eliminating all the help and information we have given our more distant friends—our greatest field of usefulness has always been in southern Wisconsin, the great dairy section of the state and the greatest Swiss cheese center in the Union. With about 500 factories located in southern Wisconsin—several thousand happy, successful and prosperous dairymen living here and thousands of dollars invested here, it behooves us, man for man in every walk of life to stand together and put forth our very best effort to develop to its fullest extent that which we have already so successfully started and carried on.

The Southern Wisconsin Cheesemakers' and Dairymen's Association has always been the forerunner that clearly pointed out the very best way to follow along definite dairy and agricultural lines. It has acted the part of the teacher that faced the difficult problems and solved them. Every year some of the most experienced, aggressive and successful dairymen and cheesemakers of the Union are brought here to enlighten and assist us in solving our particular problems. Take from your shelves the

annual proceedings of former conventions—read over the topics discussed and you will find every real, live, important subject—every difficult perplexing dairy or agricultural problem thoroughly considered by men who are not mere theorists but practical men of national repute. Men who through actual experience and success know what they are talking about. No man can attend these conventions and not go away a more practical and successful farmer or cheesemaker. He may not be able to go home and give the correct balanced ratio of a daily feed for a dairy cow or the details for the manufacture of a fine open Swiss cheese. But what he will receive is a new impetus, new inspiration and a greater enthusiasm for the line of work he pursues. Every farmer, cheesemaker and cheesedealer of southern Wisconsin should attend these conventions—it is money in his pocket.

True, not every problem presented here, has been solved, nor very great forward movement advocated by friends and members of the association accepted. But such has been the history of all great forward movements, discoveries and experiments the world over. In this respect we are all Missourians and reply "Show me."

Take for instance the currency reform bill passed at the last extra session of congress. One of the greatest needs that faced this country the last quarter of a century. Yet for years statesmen, bankers, capitalists and men in every walk of life vigorously fought every forward movement of this kind. While on the other hand other statesmen and men of different vocations with equal vigor fought for a change from the old currency system that had been in effect since the days of Hamilton. These men were coming men in a growing country—neither opposition or prejudice, intrigue or defeat at the hands of a powerful, selfish opposing organization who did not have at heart or care for the future interests and welfare of the great common people cause them to give up. They everlastingly kept up the agitation wherever and whenever the opportunity presented itself. And finally after a long and well fought battle it was the rare privilege

of the Honorable Woodrow Wilson, twenty-eighth president of these United States to sign such a bill.

I was indeed very sorry to hear on my return from a business trip that the Green County Board of Supervisors at its last session had found it necessary to vote down Supervisor Deininger's resolution for a dairy and agricultural school for Green county. Such a school would be the greatest stimulus we could possibly bring to our people for up-to-date, progressive and successful dairying, farming and cheesemaking. It would do more to hold our boys and girls on the farm than anything I know of. It surely could not have been the cost of such an institution that prompted the postponement. For facts and figures, testimonials and personal experiences of similar institutions elsewhere prove without a doubt that these schools more than pay for their maintenance. Our delay in this matter is not a saving for the county as some people would have you believe, but rather a loss. But my friends, I have not lost faith that the day will come and that not in the far future when the aggressive dairymen and friends of the county will demand the establishment of such an institution or the engagement of an experienced dairy representative who shall devote his entire time to the development of our dairy and agricultural interests. It required a decade and more before the people of this state and the Union could impress upon the great political organizations of this country that it would be better and more conducive for good government to elect our representatives and senators direct by the people than let a number of selected representatives give the final decision. For years bright, intelligent, progressive men pleaded with these chosen representatives and worked to have these measures passed, but of no avail. Years passed. Young progressive representatives were chosen and a new order of things took place. And today you and I and the people of this great country are enjoying the prosperity and blessings of their actions. The wheels of progress may be retarded temporarily, but they never can be stopped in the presence of a free thinking people.

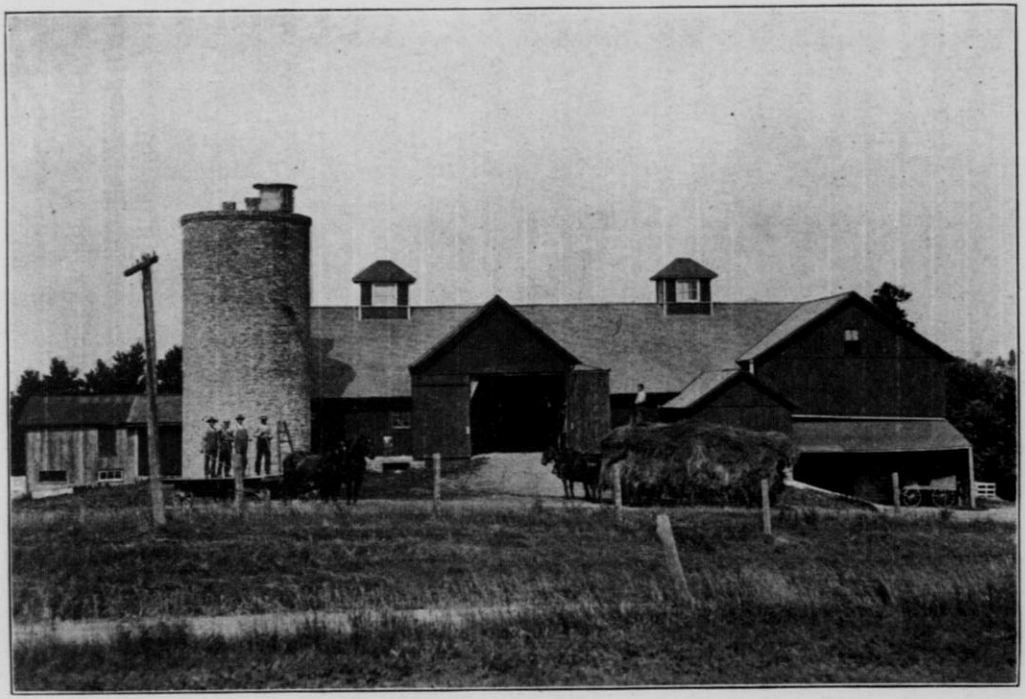
Green county will yet awake and give her boys and girls, her richest, most substantial asset a chance to make the most of themselves and thereby bring not only greater happiness to themselves but all future generations and larger prosperity to the county. Many friends of such a school have expressed their regret in the delay in the establishment of such an institution—to those who are here I would say do not become discouraged—push on—victory is sure.

One of the greatest reforms needed in the cheese industry today, is in the method of buying and selling cheese. The old practice of buying the cheese overshelf, regardless of quality is doing more harm in checking the development and progress of our industry than anything that I know of. The parties primarily at fault in the matter, are not the cheesemakers, as some would try to indicate, but the cheese dealers and farmers. Until these two parties get together and take some definite stand and buy the cheese for what it is worth according to grade, our industry will never flourish as it should. Let the farmers and cheesemakers do the right thing—buy every factory's make at what it is worth according to quality and grade and the cheesemakers will fall into line and endeavor to manufacture only A No. 1 quality.

One of the pressing needs of the cheese industry today is a better educated and trained class of cheesemakers. Every year about 28,000,000 pounds of cheese and thousands of pounds of butter are manufactured in southern Wisconsin within the jurisdiction of our association. The loss estimated on account of a poorly manufactured article is from one-half to one cent per pound. Take the minimum estimate of one-half cent per pound on 28,000,000 pounds of cheese and you have $140,000, a conservative estimated loss sustained annually by the milk patrons delivering milk to the factories of southern Wisconsin. We have a goodly number of educated experienced and successful cheesemakers who thoroughly understand the manufacture and curing of cheese. It is this class of cheesemakers whom you will find attending conventions

of this kind, reading over dairy and agricultural papers and are abreast of the progress of their vocation. But on the other hand, we still have too many unskilled, untrained, careless, indifferent men who have never mastered the art of cheesemaking, consequently they cannot help but manufacture an inferior article. This not only causes a great loss to the milk patrons but a greater loss to the industry in ruining the market by flooding same with an inferior article. Nothing will so quickly kill a market as a poor grade of cheese. Every cheesemaker should understand milk thoroughly, be familiar and know how to operate the Babcock test, the Wisconsin curd test, the Hart casein test, the sediment test and know how to make a uniform starter from day to day. Any lower standard than this is sure to prove fatal. To the maker who is unable to measure up to this standard I would suggest that he, for his personal benefit and success and the good of the great industry, endeavor as soon as possible to complete some good dairy course. To this end I would recommend our Dairy School at Madison.

With the recent tariff revision of 20% on imported cheese it is necessary that we cooperate in order that we may hold our ground in the markets of this country. The past season imported Swiss was delivered practically at the very door of our industry, Chicago at the following figures: 21½, 18, 15¾, according to grade. Bavarian limburger was delivered at 14, 14½ at New Orleans right at a time when the dealers of southern Wisconsin were paying 13, 13½ at the factory. Take your pencils and figure for yourself. A hundred pounds of imported limburg at 14c would be $14. A hundred pounds of Wisconsin Limburg at 13½c would amount to $13.50. Add to this 10c per cwt. freight, discount 14c, brokerage ¼c per cwt., 25c total $13.99 leaving the enormous profit of 1c per hundred pounds for interest on investment, insurance on stock, bad accounts, office help, and handling of goods. What does this signify? It simply means that we must stand together and work for a better article or our cheese will be forced off the market or sold at a lower



Barns and Silo on Farm of South Bros. and Davis, Monroe, Wis.

price which we are compelled to do today. Therefore as on former occasions I would again plead that we all cooperate and endeavor to build up a standard A 1 quality. It is absolutely the only thing that will preserve our Siwss and limburg industry from the inroads of the imported cheese. Inroads unless checked will ultimately be the downfall of our great industry.

Another thing that we as an association should keep our eyes open on is the legislative regulations that is being placed on our industry by our state and national governments. Perhaps one of the most impracticable useless and unjust laws recently passed to go into effect Sept. 4 is the Net Weight law.

LAW NO. 419.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section eight of an Act entitled "An act for preventing the manufacture, sale, or transportation of adulterated or misbranded or poisonous or deleterious foods, drugs, medicines, and liquors, and for regulating traffic therein, and for other purposes," approved June thirtieth, nineteen hundred and six, be, and the same is hereby, amended by striking out the words "Third. If in package form, and the contents are stated in terms of weight or measure, they are not plainly and correctly stated on the outside of the package," and inserting in lieu thereof the following:

"Third. If in package form the quantity of the contents be not plainly and conspicuously marked on the outside of the package in terms of weight, measure, or numerical count: Provided, however, That reasonable variations shall be permitted, and tolerances and also exemptions as to small packages shall be established by rules and regulations made in accordance with the provisions of Section three of this Act.

Sec. 2. That this Act shall take effect and be in force from and after its passage, Provided, however, That no penalty of fine, imprisonment, or confiscation shall be en-

forced for any violation of its provisions as to domestic products prepared or foreign products imported prior to eighteen months after its passage.

Approved March 3, 1913.

From this you will see that it is expected that every cheese be weighed separately at the factory and the net weight marked on each package. To do this in our limburg factories will necessitate the employing of additional help which will naturally cause added cost to the product manufactured, without rendering an adequate benefit in return. Weigh the small limburg known as the Ramadour cheese and you will get all kinds of figures, such as 15⅝, 16⅛, 16½, 15¾ ounces, etc., as it is practically impossible to get cakes all weighing alike. Again, the shrinkage varies with the grade of the limburg and the condition under which it is stored, so that when it ultimately reaches the consumer the original marked weight will be incorrect in the majority of instances. Yes, but someone says, there will be an allowance for shrinkage. True, but there cannot be any accurate test because of the conditions already mentioned. It seems to me that in the passage of this law our representatives were not properly informed regarding the impractibility and added cost such an act would have upon the cheese industry without any adequate returns. I would suggest that at this time a petition be circulated and signed by the dairymen, cheesemakers and cheese dealers of southern Wisconsin, stating the unreasonableness and injustice of the act and praying that this law be repealed or at least amended so that it may come within practical bounds of economy and improvement of the cheese industry.

Another bill that should receive attention by this association is the Buchanan Bill introduced Dec. 5, by Representative Buchanan of Texas. The object of this bill is to repeal the 10c tax on colored oleomargarine and ¼c per pound on the uncolored as a means of reducing cost of living. The cry reduce cost of living is the mantle under which many interests have paraded the past year. The prime movers of this bill is not the great rank and file

of the common people but the cotton seed producers. What the passage of that bill wiuld mean to the dairy farmers and dairy interests needs no explanation or argument. In this case as in the net weight law I would recommend that some action be taken by this association to get in communication with our representatives at Washington and request them to do all in their power to defeat the passage of this bill.

Another bill to which I wish to draw your attention is the Lever Extension bill which recently passed the Senate and is now before the House of Representatives for consideration. The intent of this bill is to teach the farmers on their own farms by directly assisting them to increase their crops and dairy products. Not any money appropriated by this bill is to be used for teaching at the agricultural colleges or for construction of buildings but is to be spent for agricultural education and demonstration work direct with the people on the farms. Seventy-five per cent of the money must be used for actual field demonstration, five per cent may be used for printing and publication and twenty per cent for instruction in household economics or for further field demonstration. This is a good bill and this association should take definite steps to get our representatives to use their influence to have this bill passed. Each one of these bills will have a direct bearing upon the development of the great dairy and agricultural interests of the state and we, the residents and voters of this great commonwealth, should do our utmost to prevent the passage of any act that would have a tendency to undermine our interests and belittle the fair fame which we have won as the leading dairy state of the Union.

In conclusion I would say, the future of Wisconsin truly depends upon the development of her dairy and agricultural interests. May we not in our zeal for a better dairy cow, finer cheese and richer acres forget that these without the guiding hand of a bright, intelligent, educated constituency who will be deeply interested in their work cannot endure. Therefore let us not forget that to

insure the future of Wisconsin rightly we must first secure the training and education of our boys and girls—the men and women of tomorrow—upon whose shoulders will fall the burden of the next great forward stride of our great commonwealth, Wisconsin.

Alfalfa Farming.

By Hon. Joseph E. Wing
Mechanicsburg, Ohio.

I believe this afternoon I will talk expressly about alfalfa and answer questions. Some of the essentials I found most necessary were deep drainage. Father's old tiles I took up, and laid tiles about four feet deep. The deeper the drainage the better the alfalfa grows. Drainage is the first necessity.

Any questions you want to ask here?

Q. Drainage should be made on low land?

A. On land that needs drainage.

Q. Suppose land will raise corn, is it not too wet for alfalfa?

A. Yes ordinarily. If you dig a post hole and if it fills up with water in a wet time, it would pay to drain.

The next essential thing is deep plowing. The reason why alfalfa likes the land plowed deep is doubtless because the letting in of air and moisture favors the life of alfalfa, promoting bacteria. These thrive especially well in soils where the air can penetrate easily. The bacteria supply alfalfa with nitrogen. The deeper you plow the better the ground. We plow once in six years as deep as sixteen inches with the Spaulders deep tilling machine. One of the finest farms I have ever seen is in France, where they plow twenty inches deep. With four good horses we can plow one and one-half acres a day. You don't have to do this, but it will pay you if you have the time.

Manure is another essential thing. You are dairymen and have plenty of it. Manure alfalfa and it will be luxuriant. Manure is the mother of alfalfa, but the manure should be plowed under. The deeper under the better. Don't manure after the alfalfa has started, before hand and turn under.

Have you any questions or suggestions?

Q. How many loads to an acre?

A. That depends on how much you have and how the land is like, probably ten loads to an acre. It is like going to see a girl once in a while and gradually increase it.

A man asked me once, "Wing, I wish I knew whether my land will grow alfalfa or not?" Don't you know? Will tell you how to find out. Did you ever try to kiss a girl? You try it, and you will soon find out, that is the only way, try it. If dry land, well drained, plenty of manure and limestone, take my word for it, it is adapted to alfalfa. I believe I would not use less than ten loads of manure to an acre, and phosphorous by all means.

Next thing is the winter grown seed. If you plant seed here from Oklahoma or Kansas, it will not live through the winter. It is not hardy enough. Alfalfa grown in the north is hardy, and thus will live through the winter and make the seed hardy. Seed from Minnesota, Dakota or Montana will be hardy here. Sow it in any manner most convenient, either through a wheelbarrow seeder or through a drill, taking care not to drill it in too deep. Go immediately over the land with an efficient harrow, trying to cover the seed one inch deep. It is no harm to apply more fertilizer at the time of sowing this seed. It will only push the young plants the more rapidly forward. Nearly all of our farms are deficient in phosphorus. Have used basic slag with fine results. It comes from England. You can buy acid phosphate reasonable. I am buying it in Ohio for $12 a ton. You ought to get it and use it freely. It has a very stimulating effect.

Q. Would it pay to put acid phosphate on every year?

A. Yes. A funny thing I discovered when we put on plenty of acid phosphate and potash, the pigeon grass, you have that here, would be six inches high and alfalfa thirty inches high. The pigeon grass was smothered out, and when we left a strip and did not put on acid phosphate, the pigeon grass was higher than the alfalfa. It is cheaper to feed alfalfa than to fight pigeon grass. If you are troubled with grasses in the alfalfa, blue grass,

harrow out any sort of grass or weed with a short kind of spring tooth harrow. It pays to buy an alfalfa grower. Will not hurt the alfalfa. Used once in the summer after the second cutting is off or the first. We have one twenty feet wide pulled with an engine, and have a narrower one pulled by horses. Can't harrow it too much. Harrow out the Kentucky blue grass. You can disk it also, but the disk harrow is liable to wound the crowns.

Now two more things I must tell you. In order to succeed with alfalfa and keep it, you have to understand it. I have gotten so I know it as if it were my children. Know what is the matter with the field. I have seen alfalfa in every state in the United States except two, and almost all foreign lands. First thing is to know when to cut it. Sown in the spring the little alfalfa plants grow up and get about eight or twelve inches high, and stops growing and starts to bloom. Get on your knees, and if you can't get on your knees, don't sow alfalfa, because you are not the right kind. Get on your knees and part the stems and look for little tiny buds that come, little shoots. If these shoots have come, it is time to cut it, and if cut at the right time, will come out strong again in thirty or forty days, and these little shoots come again, mow again, and that is the rule for alfalfa. Always cut when the little buds have started, because if this is done the alfalfa will not start off promptly, and when it does start will be singularly deficient in vigor and thrift.

Q. You would advise to cut the alfalfa close all the time?

A. Yes, cut close.

The next thing I am going to tell you, may be you will obey, but not until you have lost a field of alfalfa. Don't cut it the last time. Cut it three times in Wisconsin, and never four. Leave a growth knee high to hold the snow and protect the crowns, and when an ice sheet lays over the alfalfa field, if the stems are up through to let the air down and save its life, where if all covered over smooth, it kills it. The little stems act like smoke stacks. It is an important lesson. Don't pasture it late either. Don't

let anybody drive across an alfalfa field in winter. Keep animals off.

Q. Any other questions or suggestions?

Q. If I understand you correctly, you recommend plowing manure in?

A. We turn manure under for alfalfa in the beginning. May be for a previous crop of corn. Grow a crop of corn and then alfalfa the next year. Don't top dress manure.

Q. Do you use rock phosphorus?

A. Yes used it with manure on the field and believe it did good. Mix with manure when you use rock phosphorus.

Q. What would be the last sowing you would advise?

A. Sow up to about the middle of July.

A firm in New York who sells us acid phosphorus sells it for $9.00 a ton and pays freight. The Consumers Fertilizer company, Long Acre Building, New York City.

Anybody interested in sweet clover? Try making it. You can make more money than your father by saving sweet clover seed along the road. Cut it down and lay in little piles, then come in a few days with a stick and knock out the seeds, it is worth thirty-five cents a pound. Growing it a lot in some countries. Give as much milk as on alfalfa, but not as good a plant as alfalfa, harder to make hay, and only get one crop of hay in a year. It only lasts two years, but will grow on the poorest land, and make that land good.

Bought a field which just happened to join us. The fellow had been farming it for hundred years without manure, and so bought it and the first thing I thought of was to sow the field with sweet clover, and sowed it with barley. That was in the spring of 1912. Learned several lessons in that sweet clover field. You know how it grows along the road. Grows anywhere, but after it was planted a while it looked as if it was going to die. Got a big knife and found it had no bacteria on the roots, land not inoculated. Hoped inoculation would come itself. Took the manure spreader and went over the field and

washed the bacteria down and the sweet clover grew fine. The next year the sweet clover field was a wonderful sight, was as high as my waist, and made from one to three tons an acre. Cut when it came into bloom. Fed that hay to colts, sheep and lambs, ate it as well as alfalfa, and did as well on it.

Q. In sowing sweet clover how high should it get before turning the stock on it?

A. Twelve inches high.

Q. Will sweet clover bloat the cattle?

A. It will not.

Q. Does corn have to be inoculated?

A. Just as much as alfalfa.

I saw a little plantation of sweet clover in Louisiana that never got one sprout, because it was not inoculated. Gets it naturally along the roadside. Take soil from a field where alfalfa or sweet clover has grown, make it fine and mix with seed, have used twenty pounds of soil mixed with fifteen pounds of seed and got perfect inoculation.

Q. Manure from stock inoculating?

A. Yes.

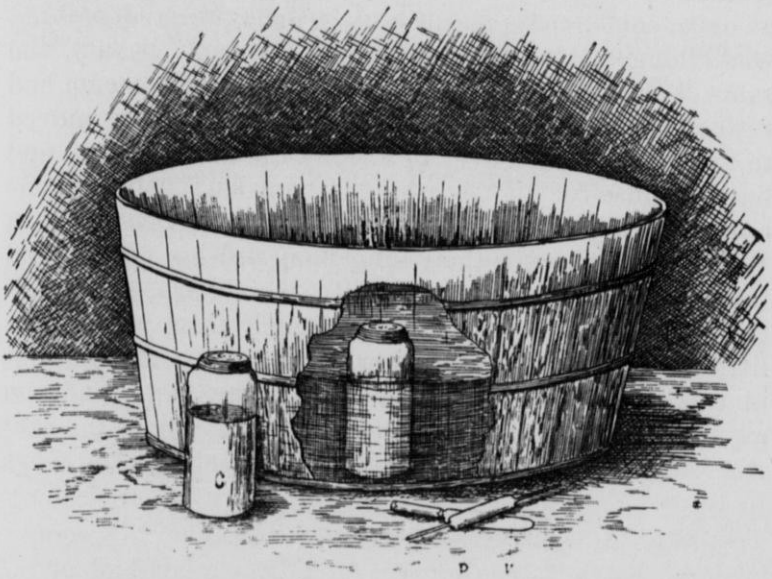
Will now tell you about the finest farm I have ever seen in all the world was in France. Saw the Minister of Agriculture, and asked for the finest farm, and he said, "Let me think, I believe I will send you to Monsieur M. Delacum, who has a fine farm." Said I was very glad and went away. When I returned the landlord met me with ceremony, and said while I was gone a gentleman called to see me, Monsieur Delacum, and he will come to take me to see his farm. The next morning he came and didn't look like a farmer. Had on a long black coat, tall silk hat and gloves. He spoke no English. We started for the farm, and began talking to each other. How did we do that? I used to live with the Indians and understood the sign language. As we rode along on the train and looked out of the window and pass a nice farm, we would wave our hands and show our appreciation. It was about forty miles to his farm. A beautiful carriage met us and

drove us out into the field. Realized I had never seen such land as this. The first field was wheat, and men that wheat was a little higher than the back of the oxen. Three yoke, and a young man walked and drove the oxen, and another man rode the binder, and that wheat was level with their backs. When the binder took the wheat off the ground, left the ground green with young alfalfa under it. We went on through the wheat field and came to the meadow. Alfalfa mixed with sweet clover, san foin. There were eight men cutting the hay with a mower. Beautiful work, and I never saw such wonderful grass, nearly as high as this table. We went on through the meadow and came to an old village on top of the hill. This old village was a village where laborers lived, who worked on this place. There were eleven hundred acres, and the working people lived in this old village. We came to a great archway and drove through, and came to a great castle, and we were in the court yard, and as soon as we came in a girl came running out and came up to us, and said, "Pardon me Sir, are you not the English gentleman?" "No, I am an American." Q. "Speak French?" A. "No." "Well I am to be your interpreter. I am the Governess of his little child." And so at once our lips were unsealed through the aid of this girl. Along the court yard on one side was a great stone stable, full of sheep. There were two thousand sheep, all in nice dry clean yellow straw, eating this green alfalfa. Splendid sheep. Every one the picture of health. There were also cows, those great Normandy cows. They were milking them, and feeding them also alfalfa silage. Was also shown the horses, and finally went to dinner. At the end of the court was a residence, and we went up a great flight of stone steps. When we got inside it was a most beautiful and elegant house. Full of fine pictures and books, very beautiful furniture and all of that. That dinner, I thought it would kill me. They had many different wines to drink. When dinner was over we had a pleasant conversation, and sat down in the old drawing room to rest, as we were well in need of after that dinner,

and sat where we could look out of a window. All the windows looked out in the court yard. As I sat there I saw two thousand sheep come with a wise old shepherd dog. And looking into that old court yard, what do you suppose I saw? Nothing but a pile of manure, and as I sat and looked at that through his elegant plate glass windows, I was trying to figure out what kind of a man he was. While sitting there he observed I was gazing out, and turned to the girl and talked, rapidly explained something and turned to me, and said, "Mr. Wing, you gaze out through the window and do you see that pile of manure?" I said, "Yes I do see that." "Mr. Wing, Monsieur Delacum asked me to tell you that their ancestors lived more than twelve hundred years, and ever since have been famous for piles of manure they were able to accumulate, but this pile is the most splendid one, the finest one that has ever been piled up. Proud of it, and Mr. Wing he asked me to say to you that those fields you saw this morning, they are fed from such piles of manure as this."

"Will you ask Monsieur Delacum to excuse me a little while? I want to go somewhere." "But may we not go with you?" "Please let me go alone." They didn't understand, but I knew why. I took my camera, and made a picture of the sheep and looked all the way down over that marvelous farm, and that splendid alfalfa and wonderful fields and looked at the soil. I said, Joe Wing, this is the most wonderful farm you have ever seen. How does this come about. Why in Ohio where you have lived, men have not been there one hundred years, and here is a farm hundreds of years old. Yes five hundred years ago this was an old farm, a thousand years ago this was an old farm, and is yet more fertile. They fed the stock alfalfa, and saved the manure, and put on the fields with phosphorus, and put it on year and year, and the land got better, and they loved it. The old man loved the land, his father before him and his son after him.

Eight years afterward I found myself again in France, with a memory of that farm strange upon me. I wrote



WISCONSIN CURD TEST NO. 1.

WISCONSIN CURD TEST NO. 2.

to Monsieur Delacum and asked to come out, and it seemed like a dream, it can't be true, and when he wrote at once, come, come and see us, went again and nothing was changed, the same old stock, the same beauty, the same clover crop, the only change, Monsieur Delacum had retired. Where? Into his castle, not sold out or moved to town, but turned over to his boy the management, and built a house for his boy in the oid garden. A little stone house where the boy and his wife lived, and two children. When I talked with the young man and his wife, found them just the same, in love with their work, and I felt that in a hundred years from now his farm would be a little better and a little richer. I wish we could see that in this country, and feel that this is my land, and am going to live here, and my boy after me. Start in that way, and begin to think I don't have to sell out and move to town.

I thank you for your attention.

Story of Woodland Farm.

(Mr. Wing's Own Farm)

By Hon. Joseph E. Wing, Mechanicsburg, Ohio.

Ladies and Gentlemen: "I feel we got mixed up on our program this morning. The story of Woodland farm and alfalfa is not a boastful sort of song, just the work of our endeavor, and no doubt each one of you would have something just as interesting to tell. The work of any man's life is interesting.

I was not born in Ohio. I was born in New York on a farm so poor and hilly, that father used to farm the fields on both sides and then only get half a crop. When five years old came to Ohio and took father and mother with me, and there settled on a new farm, that was very much better than the one we left, but after father had settled on this new farm and paid a good round price for it, the neighbors came to us and said, "Wing, do you know what you have done?" "I don't know." "You bought the poorest farm in all the country. Can't keep eight head of cattle on it." Father did not believe it, and started to prove it was not true, not the poorest farm in the country. It was a farm that had been farmed for a long time by tenant farmers. Rented out. This farm had been badly managed, and got down as poor as a farm could be, and father took it, and started to build it up. I understand now the man he was. A big fellow, bigger in every way than I am, and had the biggest hand I ever saw on a man, and he used to wrap that hand around mine and take me with him over the farm, and talk to me as though he thought I had as much sense as he had, and don't you know, I did. If I didn't know as much because I was only a boy, don't know but what I had as much sound sense as father, if talk sensible. "My boy this old farm is very poor, don't you remember how

old that corn was and how thin the grass was, and am going to make it rich. Come with me out to the barn with the cows and sheep. Son I am going to have cows and make butter and sell it and get money, and will have manure, which makes the land rich." Didn't I want to see it the same as father did. Got interested in the farm, and helped all I could, and even though only a boy, was father's companion wherever he went. I fed the cows and sheep. Little by little the farm got in shape. Cut the weeds, drained the land and put manure on the fields, and grew clover, and finally had forty acres as good as anybody's farm, and the rest we left in pasture and woodland, and I was his partner, and after I became a young man, and years went on that way, I didn't know what the farm was making, father didn't tell us boys. When I was twenty-one I discovered I was threatened with consumption, and after talking it over with the old doctor, he advised me to go west, and talked it over with my father, and said if I went west would probably get better out there, and do well. So father consented and gave me all the money I needed, said you can have $75.00 if you need that much, and go west and you will do well, and if you don't come back, you will always find your old overalls on the nail where you left them, and so I went west intending to be a governor of one of those states, or president of a bank, but didn't find any of those states that didn't have a governor, and found myself working on a ranch, an old cattle ranch in the Rocky mountains, the greenest cowboy there, but got well and strong, and while working on this ranch learned to grow alfalfa. There was an old log cabin, our headquarters, and fixed it up, the corners had not been sawed off, and planted some flowers, and felt that while I stayed here, would have a pretty place. So the first chance I had was one Sunday, and thought I would not go to church because the horse was lame, and another reason it was 165 miles to church, so got out an old saw and began to saw off the logs, it was 110 in the shade, and it was not in the shade where I was, when an old cowboy came out of the cabin, and

said, "Joe, what are you doing?" "Sawing off these old logs." "Who told you to?" "Nobody." "If you like to saw logs as well as that you are a fool." I said I know it. Now it happened that the old man who was manager of the ranch was inside keeping the flies off of himself, saw that green cowboy sawing logs when not told to. Well after that several days this man and I rode together on the ranch, we had twleve hundred cattle to look after, and used to walk it, the only cowboy that ever walked, walked and led the horse. When this man went back to the city, he called me to one side and astonished me very much, and said, "How would you like to be foreman of this ranch?" I said I would rather be that than the president, but didn't know enough. "There are lots of things you don't know, the greenest fellow, but you learned one thing, and that is to work when you don't have to, and if you want the job it is yours." Rode back thirty miles to headquarters again and I was foreman. Never had a ride in an aeroplane, but trotting the horse on the ranch, thought it was an aeroplane. I explained to the boys he had made me foreman, and was ashamed because I didn't know one-half as much as they did, but tell me and I will get along. I soon learned the only difference was I was to get up first in the morning and pull out the other fellow, and get breakfast, but could make them wash the dishes. Stayed four more years, the best years I ever spent. Never have four more as happy. So plentifully full of work. Young and strong, and came into full strength, and the days were never too long. Anything I wanted to do, could. Our closest neighbors were thirty miles away. Whatever I wanted to do, I did. Cleared rocks and put in alfalfa, and increased the cattle. All the while I was remembering my old father at home, and in 1886 sent him alfalfa seed, and wrote him and said alfalfa is the best thing in the world, and wish you would sow it. So father sowed it and I came home two years later and asked to see my alfalfa, and father said it was not doing well, and would not grow on our soil. He liked clover better. Looked at the alfalfa in dismay, it was

not like western alfalfa. Father said don't talk to me about it, it is not adapted to our soil. It looked funny, and father left me standing there looking at it, and while looking at it began to know that those little plants had to be cut. Alfalfa is that way, you must cut it. Discovered another thing, mother's chickens were thriving on it. Carried water and watered it, and put an old barrel over it, and after a month looked at it again, and to my joy that alfalfa had grown to the top of the barrel, and called father to come and see this thing. Say it will not grow, look at that. Father was amazed. I went back to the ranch knowing that alfalfa would grow in Ohio. I didn't want to go back, was happy where I was. Had an idea things were not going well at home, my two brothers and sister were at home, and one day got a letter from father. He used to write nice letters, but this one I didn't like. It read like this: "My boy you have to come home. This farm does not pay. Don't know how to make a living for your mother, sister and brothers, and you have to come home and help me." Well I didn't believe it. It couldn't possibly be true, and yet knew father was in trouble, knew he was not well and went home to see about it. Only went on a visit, and the visit lasted all these years. Got home before Christmas, 1889, and had a happy home coming and took them by surprise and walked to the old farm house and walked in the old sitting room, and there sat old father with his kind old face all weather beaten, his kind old voice and kind old eyes. I was glad I was home again, and my old mother, God bless her. Still living. Was happy with the old people, and then went out and walked over the farm. Had 196 acres. Part of it was woods and weedy. Father had raised about 60 bushels of corn and 30 tons of hay. Had a few cattle and hogs. I soon saw I could not stay, the farm was too little and my chances too small, and made up my mind I could not stay and had to go back west. My position was open for me. Father read my thought, and so one day called me into the house and talked business with me. Said, "I suppose you did great things in

the west, you probably had 2000 cattle. Maybe you did. I want to show you this old farm is not played out either." Then he took down from the shelf his old account book and read off the items, all duly set down in black and white, the wheat that he had sold, and the hay, the pigs and the potatoes and the cattle. And together we footed it all up. It amounted altogether to a little less than $800.00. And when I thought of the salary in the west, and all the bright hopes and prospects, to come home on a farm that does not produce more than $800.00 and pay taxes, repairs and labor. Then father turned to me and said, "Boy don't give your reply too quickly. When you left me you were only a boy, and I was a man. You come back a man and I am only a boy. I will be a good boy if you will be the man. You can make more than this and build up the farm again." "All right father, if you will let me have my own way, I will take hold of the old farm and do what I can with it. I want to grow alfalfa." "Well you will have to try it, I don't put much stock in that." It was a bargain. Took a walk over the farm and came to a field of flat clay land, all over the field rose little clay chimneys, the work of crayfish. May I drain this field? Yes it should have been done long ago. It is the first work I will do. "All right boy, if you work this, I will feed the cattle." Very well, that was a bargain. Got the ditching spade and started out to ditch, and as soon as the mud rubbed in, forgot about the western ranch, that is to go back. Stretched a line where the first ditch was to be made, and began digging a long, narrow ditch in which to lay tiles. Got men to help me. Dreamed a dream. The men had gone home, and stood there leaning on a spade, and said, some day I will make you all dry, some day make you rich. Cover you with clover, alfalfa and corn, and say old field out of you shall sprout and grow a home for that sweetheart of mine, and looked at my watch and it was 5 o'clock and it was time to take off those old overalls and go and see the sweetheart. The dreams came true. The old field was not hard to make rich, and grow better alfalfa, and a

home grew out of that field better than I ever dreamed, and that sweetheart is now my wife and we have three boys. And I say to the boys, don't be afraid to dream.

When spring came I had the field pretty well drained, and said I have alfalfa seed from the west. Father said, "How much?" "Four bushels." "I would not sow such a lot, it has not been tried out. Take the little potato field, sow that." The little potato patch was a piece of good land, had limestone, and was rich because the cattle had been fed there, inoculated with alfalfa bacteria, because sweet clover had been grown on the farm. So the alfalfa grew well, and thought there was no difficulty in growing alfalfa in Ohio. Had a path worn to the alfalfa field, and took my sweetheart to see it. "Look at this, dear, is it not beautiful?" "Yes, Joe, beautiful." Said I would cover all the farm with alfalfa, and she said, "Don't do that, when will you have time to see me?" Last year we harvested on that farm four hundred loads of alfalfa.

The year I married the sweetheart and built a house of four rooms and moved in, and that year my old father died, so he never saw much development of the farm.

The next year I sowed a larger field, and learned a lesson. Part of the field went down by the creek, and part went over dry gravel places with plenty of limestone, and part of it was flat poor cold clay. The dry soil was full of carbonate of lime, and the alfalfa grew beautifully. I scratched my head and said we will grow alfalfa all over the farm. Will drain the wet land and enrich the poor soil. Put on more manure and some day I will have forty acres. That winter I changed off from feeding cattle in the woods, and put a bunch of cattle and sheep in the barn. Two hundred lambs, and fed them clover, hay and a little bit of alfalfa, and never had lambs do so well before or since. They weighed 55 pounds when I put them in the sheds, and in the spring weighed 108½ pounds. Don't know why they did so well. Had a young wife at that time, not married long, and on Sunday afternoon she came to the barn with me, and while I put in

the hay, she put in grain. So if you want to make a success, get a young wife, and take her to the barn to see the sheep on Sunday afternoons, and they will do better.

When spring came found I had $115 profit from feeding these lambs, and had more manure to haul on the fields and put where the corn would be grown and ready for alfalfa the next year. That is the story all told. We are doing something now. Here we were in 1891, had 200 lambs and got more feed and fed 300, then 350, and then built a larger barn and 700 were fed. The next year we had more hay and fed 1000, then 1200, then 1400 and now 1500, besides 28 horses, mules and colts and yearlings, and growing our own grain and alfalfa and selling some. Last year we had 350 tons of alfalfa hay, and harvested 6000 bushels of shelled corn, and pastured 28 head of horses and pastured cattle for the neighbors.

I am telling you this story not in the spirit of boasting, because anyone could do better, but to show how marvelous it is. Grow the corn and hay, feed the cattle and lambs, and put the manure back on the land and increase the fertility. Think about it. Auso put a top dressing of acid phosphorus, and have not anywhere reached the end of fertility of Woodland farm. That thought came to me when in the field with my boys, fine boys. They ought to be. I selected the mother from over 10,000 or more, and courted her for seventeen long years, and got discouraged and married me. We have three splendid boys. We went to the top of the highest hill and looked at the marvelous alfalfa, and told me if they were willing to work with me, and some day they could stand up before the American people and say from 100 acres you have grown 500 tons of alfalfa hay. I know they will do it, know some day those boys of mine will have grown 500 tons of alfalfa on 100 acres of Woodland farm. This is all the story of Woodland farm, except that it is a continued story. Dream about it at night.

I thank you for your attention."

Limestone the Mother of Fertility.

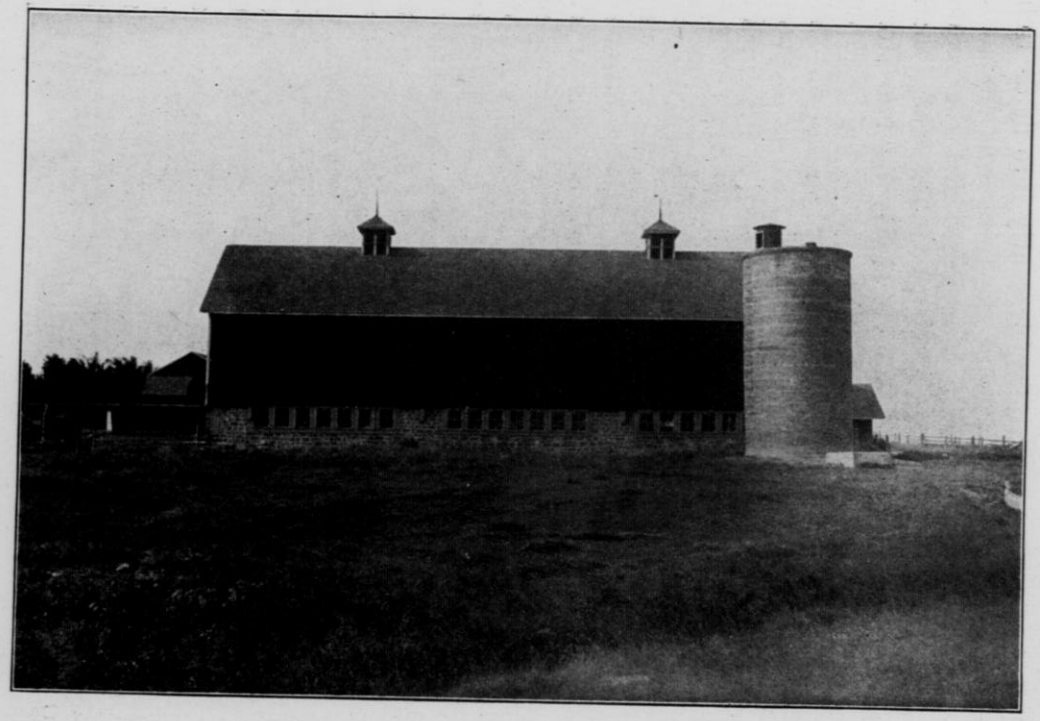
By Hon. Joseph E. Wing, Mechanicsburg, Ohio.

It is very important that you keep the milk clean, that will nourish people well. This I got from the Department of Agriculture showing the effect of furnishing clean milk, or as clean as can be made to the boys. They have been having trouble in a boys' school in not furnishing clean milk. After it was made as sanitary as possible, it was perfectly marvelous how the boys' health increased. Really the dairymen's work is one of great responsibility, besides there is profit in it. Feeding babies, feeding mothers, responsible for the development of the race.

Limestone in the soil grows clover and alfalfa well. If the soil has plenty of limestone, the alfalfa will be rich in protein and will make a fine dairy region. Dairy cows require large amounts of protein. That is why Holland is such a wonderful dairy region, it is rich in limestone, and the grass is rich. And where the soil is good, you will also find good men and good women and civilization. It is a glorious fact. Where there is no limestone, the people are sour looking, it is not their fault that they were born on such soil, but their fault in keeping the soil as it is. I was going through Tennessee, the hilliest farm in Tennessee, had poor fields, very bad roads and neglected fences, and little cabins, and kept looking out of the window wondering why anybody would have to live here. Then presently the train stopped, and a man came in and sat down beside me and began talking. Asked him if he was going to the convention, and said he was. I replied he was late, and he said yes, but I could not go before. "Why not?" "I am the school master as well as a farmer, and had to wait until school was out." I said, "Out for the winter vacation," and he said, "No, out for

the year." "How long have you school?" "Three months of school." "Why not longer?" "Because we don't have the money, cannot raise taxes enough." I said no more. We came down presently into fields rich with limestone, and the face of the thing was changed. The land was covered with blue grass and the roads were splendid, and instead of little cabins, they had lovely homes, and the train went slowly by two story schools. They came with carriages to take the children home and some on horseback. Is it not too bad all children have not these advantages. The truth is the very foundation of civilization is to have plenty of lime in the soil. What is the value of limestone in the soil? Two things, plenty of limestone enables the soil to have black-humus and becomes mellow and brown. And the next thing of even greater importance is the accumulation of nitrogen in the soil. Nearly all soils are deficient in nitrogen. Carbonate of lime stops the waste of nitrogen, and will accumulate nitrogen. Decaying vegetation or humus in the soil creates nitric acid, that is readily soluble, and unless taken up by the plants soon leaches away and is gone. Should there be a sufficient supply of carbonate of lime present, the tiny drop of nitric acid seeking to escape touches a particle of carbonate of lime, the two unite and form a calcium nitrate. This locks up the nitrogen and holds it in the soil. Nitrogen exists in enormous amounts in the air. Nearly 80% of the air is pure nitrogen. Bacteria in some way digest nitrogen and assimilate it.

One day I was called to see a poor Ohio farm, a clay farm. A farm that had been made up by buying several farms, and the man who owned the farm was living a beggar's life, and sent for me to see it. I looked it over, and found two things necessary to be done, first drain it, and next limestone. He said all right I will drain it and get limestone. I want some alfalfa, can I grow it? I am seventy-one years old and I want it right now. All right. Started in work, ten tons of ground limestone to an acre, 125 pounds to a square rod. Drained the land,



Barn and Silo on Edwin Ludlow Farm.

plowed seed, got some fertilizer and used it liberally and sowed the seed in June, and the next year had marvelous alfalfa, and getting richer every year. Could not have done a thing without those two things, drainage and limestone.

Possibly tell another story. I was one day in England, the old county of Lincolnshire, the farm of Henry Dudding, of Lincoln sheep and Short-horn cattle fame. Driving over the farm I discovered a glorious thing, a new country. For England's fields were square and not so small, and the horses were rather old. I said, "Mr. Dudding, this is the grandest looking place, a new country." He said, "It is." "How do you explain?" "When I was a boy there was nothing here except a little bit of brush, a little wild grass." "Why was that?" "The land was too poor." "What makes it good now?" "Well, Mr. Wing, the land was sour, not an acre in clover. Everybody tried to farm and gave it up. So we put lime on the land." "What kind?" "Chalk rock and burned it and put it on the land, with this marvelous change."

Tell another story. Down in Georgia there was another farmer and he sent for me because the farm didn't pay. Can tell any man how to make his farm pay, if he will do as I tell him and follow my instructions, I will make it pay. Must get up early in the morning, that is the first thing, to get up early, and take a good gait during the day. Well I walked over the farm and discovered that the land was naturally well drained, and that there were layers of limestone rock. "Did you lime the land?" "No." "Why didn't you?" "This land don't need lime, limestone country." "Do you suppose that rock over there is doing any good?" "You must grind up the rock and put it on the land." "Are you sure?" I said I am sure. So the rock was ground up and put it on the land ten tons to an acre. Also some manure and soil where alfalfa had grown and plowed sixteen inches deep, and this farm is now a success.

Not all land needs lime. Maybe your land here does

not. It is easy to note the evidence of lime. Soils rich in it are naturally covered with grass.

Raw limestone is a carbonate of lime. Burning it drives off the carbon and makes it quick, or caustic, lime. The burning drives off nearly half the weight of the natural limestone, so if it must be shipped a long way by rail it may save so much in freight that it will be better to use the burned lime. If it is used in excess it will destroy bacterial life, so caustic lime is not so safe to use as the raw rock ground, the true carbonate of lime, which increases bacteria in the soil. You can buy it cheap. I don't know what it costs here, but down in Illinois you buy it for one dollar a ton.

Will tell you a story about the effect of limestone in eastern soil. Down in Pennsylvania there was an old man by the name of VanMctoy, who used to be an attorney general, and has retired and taken up farming. A pleasant old man. He used to write to me about his farm, and asked me questions about what he should do. Used to fool over his letter, could not read them. Had a stenographer, who was kind and patient, and would have her copy them on the typewriter and read them. So following my instructions he started planting alfalfa. Told him how to put on the manure, how to drain, also putting on phosphorus, but did not tell him about putting on lime. Don't know why I didn't, but suppose he had limed it. The next year I got a letter, but didn't have my stenographer, and turned it all ways, and could make out the word alfalfa, also yellow and dying. So came to the conclusion the old man had alfalfa trouble. So threw his letter in the waste paper basket, and wrote him, and told him the reason his alfalfa was yellow, is because it needed lime. Get it and put on limestone, six tons to an acre and a little phosphorus, and I think your alfalfa will be all right. I didn't hear anything more, until he called me up and said, "Mr. Wing aren't you coming out to see me and my alfalfa?" Jumped on the train and went out twenty miles. He took me out to the farm. Said I am glad to see you. "Came all this way

to see me?" "Yes and your alfalfa, and came for another thing, to ask you what was in that letter you wrote me last year." "Didn't you read that letter?" "No, I didn't, I could not, and I don't believe you could either." "Bless my soul, how did you come to answer the way you did?" So explained from the few words I could read in his letter, knew his land needed limestone.

If your land needs lime, you had better lime it. If you don't need lime, thank the Lord you don't. Make a little investigation, get a bottle of muriatic acid, and put some dirt in it, and see whether you get any bubbles, if not, take it for granted your land needs limestone.

Raising heavy crops of alfalfa inpoverish the soil.

It was my father's ambition to grow one hundred bushels of corn to an acre, but he never did. Put manure on the field, and cultivated it thoroughly, but could not get much above 85 or 90 bushels, and died having never seen his ambition. Took up his work after his death, my brother and I. My mother still lives there. Put some of the land in alfalfa, and it grew beautifully. Cut it four times a year. Had been down helping with the hay, and came and sat down on the old porch with mother, and load after load went by, beautiful loads of hay. "Mother is that not beautiful?" "Yes boy, it is." "Something troubles me." "Is it about father, have you had a dream about father?" "No but I am thinking about what father would say if he knew how you are using this land." I said, "Why mother, not using the land well?" "How long have you had alfalfa on that field?" "Four years." "Put any manure on it during that time?" "Not a bit." "That is what I thought." "How many times did you cut hay in the four years?" "About thirteen times." "Son when you come to plow that land it will be so poor it will not grow anything." "I am going to plow the land this fall and put it in corn, and if corn will not grow as well as father's did I will own up I am wrong." "All right, I will watch you." So plowed it deeper than usual, and next spring got a seed bed easily. That fifty acres made 5,100 bushels of corn.

Mother said I was wrong, but still it was not you, it was the Almighty's doings. "Yes you are right, but I am his partner." I make it a practice of giving our alfalfa fields an annual dressing of phosphorus, and find it pays well. If you grow heavy crops of alfalfa year after year and do not put back the phosphorus, it will leave the land poorly in time. We use a machine to distribute the fertilizer, which simply sows the stuff broad-cast on the surface. There are various types of these machines.

Q. How long do you keep a field in alfalfa?

A. I don't know. We have grown it since 1886 and have not learned all about it. Used to keep alfalfa about four or five years and it would get thin, and learned the trouble was in cutting it too late in the fall. We usually grow alfalfa four or five years, then plowing it and put in corn for two years, and then back in alfalfa again. The second time it grows better than before.

Q. What time of the year do you think best to sow alfalfa?

A. Early in the spring, about the second week in April. Our practice is to sow early in the spring, and get a clean perfect stand, which will then outgrow the weeds.

Before I forget I want to say a word about the effect of manure on alfalfa. I do not put manure on top of alfalfa. I have not told you that I love to get it under the ground. Buried deep in the ground. Get it under the ground and see the alfalfa.

One year we bought a poor field. The poorest field, bought from people who didn't care much, but just lived. Got so poor, they got afraid to farm it, and we bought it. The last crop was not above ten bushels to the acre. So we put in some tiles to let the water out. Put on manure from our sheep barn. One day in winter I saw Frank, my man, with manure. I called to him where he was going. Said he was going back to that new field. "Why not take the manure spreader?" "Not work back there." "Why not?" "Land too blame poor there." Knew what he meant, it didn't throw the manure out heavy enough.

Also put on some phosphorus on it and buried the manure deep, and planted corn and it did fairly well, and then I plowed that land and put in alfalfa, and it grew fine.

Q. What are the objections to putting manure on top of the alfalfa?

A. It is seldom good practice to apply heavy coats of manure and at once sow alfalfa. The trouble is from the strong growth of weeds and grasses that will result and which may in part smother the alfalfa. Manure is often filled with weed seeds, has a tendency to rush rapidly all weeds that naturally spring up and these worthless things outgrow the little alfalfa plants.

Q. For spring seeding do you use a nurse crop?

A. Yes, some with winter rye and some with spring barley. We can get a much better stand of alfalfa with a nurse crop of beardless spring barley than we can to sow it alone, and we get the barley hay as a clear gift. Also use winter wheat in the fall. Have used it for several years.

A man came to my field, came in an automobile, and wanted to know if I would show him my alfalfa field. So took him out to see the alfalfa. This man had a large foot, and as he went through the field he deliberately stepped on my alfalfa. I wanted to get hold of him, but could not say anything. Went along myself stepping in between. He went stepping right on them. He said I don't think alfalfa is adapted to my land, and I said I am sure it is not. That fellow didn't have the alfalfa tread. Could not make an alfalfa man out of him unless he was born again.

The next thing after alfalfa is sown it will grow vigorously for about forty days, the barley growing with it. After about forty or forty-five days it will stop growing. Next you begin to wonder when it is time to cut the barley. Get right out and down on your knees. If you can't get on your knees don't do it. Only a man who can get on his knees. Look at the little plants, not thinking about the barley, part the barley and look at the alfalfa

plants. What are you looking for? Looking for the little shoots or buds. Don't cut it until those little shoots appear, and cut as low as you can. That is a rule for cutting, always cut it just after those little buds have come and not before.

Last year I had 100 acres of alfalfa as beautiful as you want to see. I wanted people to see it. So to show it we offered a picnic and invited people to come, and on the 27th or 28th of May the patient people came, thirty-five hundred of my neighbors came. Was never so amazed. We were a little scared, not prepared for so many. We cut the alfalfa before the little buds had come. Wondered what the result would be, and when the little buds had come we cut the rest of the field. When the second crop came where we had cut it before the little shoots had appeared it was only six inches high, and where we cut it when the little buds had appeared it was two feet high The reason is not known, but the fact is observed that when a part of a field is mown only a few days too early and the rest of the field after the shoots have appeared there will be a difference of 100 per cent or more in the yield of the next crop in favor of that cut at the right time.

Q. If you let it run over time would it not be harmful? soon A. Much better to cut it after it is too ripe than too soon. Making alfalfa hay. Our rule is to dry hay as dry as we can. Our test is to take a wisp of hay, choosing some of the moister part, and twist it hard to see if we can wring any moisture from the stems. If we cannot we put it in the mow or stack as fast as we can get it there. When you put it in the barn, have enough so you can spread it. Keep it level. Have been investigating the cause of spontaneous combustion, and find that if you put a layer all over the barn evenly, and put more over it evenly, you will have little trouble with spontaneous combustion.

I once put green oat hay into the mow, many tons of it, and spontaneous combustion set in this mow, and steam filled the lower story for days. We kept adding

hay above and thought little of it. The mass cooled down, but when the hay was taken out there were tons of charred hay that could not be handled with the fork. If we had dug into the mass no doubt we would have lost the barn. The best thing usually when one fears spontaneous combustion in the barn is to watch it carefully and avoid opening it or doing anything to let the air into the mass.

Q. Would an up-right post in the barn let the air in?

A. A brace is worse than a post. There ought to be no beams or ties in the mow for hay to rest on.

Investment of hay crops. They should be made about 42 inches square and have weights at each corner. A convenient way to make these weights is to make them of balls of moist cement. By putting a hole as large as a cent piece in the corner of the square and squeezing the ball of cement so that it will surround the corner of the cloth and pass through the hole it will become very firmly attached. These weights are better than cords and pegs, which get tangled in handling covers.

Q. Is sandy loam a good alfalfa soil?

A. It is fine alfalfa soil, lets air in.

Nothing said about the feeding value of alfalfa. Alfalfa makes very good silage. Have never put in any myself. Keeps well. Alfalfa is easily cured in most countries, and where corn silage is fed there is need of dry alfalfa hay. So would advise that alfalfa be made into hay and corn made into silage. Although alfalfa silage has a very pleasant flavor.

Feeding value of alfalfa for horses. Some people claim it is not good for horses. Have twenty-eight head of horses, colts, mares, driving horses and working horses, that know no other hay but alfalfa, and are all in perfect condition. There are two things to remember. First thing alfalfa hay for horses is not cured, not moldy or dusty. Next thing to remember that alfalfa hay is just as rich as wheat or oats. Horses will eat alfalfa twenty-four hours out of the day. They will eat it as long as they can reach it. Must not feed too much as there is too much protein in it.

For a while a few years back alfalfa was not good for brood mares, did not have fine grades of colts, some mares did not conceive at all, and some born dead and some weak. The only trouble was they were over-fed. When we stopped feeding too much and cut off part of the corn also had no trouble at all. Mares conceived as well as any and colts born were all strong. Last spring we sold four yearling colts for $1,000.00. We find we have no trouble with colic or heaves when feeding alfalfa. It is the best pasture in the world.

One more and I am done. Don't ever cut alfalfa late in the fall, and never pasture it in the fall. Always leave a growth of a foot high. One thousand miles north of you they grow alfalfa beautifully.

Sanitary Conditions in the Cheese Factory and on the Farm.

By Joseph E. Williman

Dairy and Food Inspector, Monroe, Wis.

For the fourteenth time we have assembled in convention to co-operate and progress; through the untiring work of our officers the association was maintained, and we must concede that they brought before us the best of authorities in the country on dairying, agriculture and cheesemaking, which is proven by the progress which has been made on farms and cheese factories, which gives us an advertisement far beyond the borders of our association, as being the producers of very large quantities of good milk and cheese. Condensing companies saw fit to place their factories in the very heart of our section on that account.

We must further concede that the condensing factories in connection with the teachings at our conventions, have accomplished several things, promoting welfare and financial results. The standard of milk has been raised through their efforts to produce clean, well-cared-for milk to be delivered at the market, and the motto to buy only clean, good milk. I claim, and it is my conviction, that the moment we deliver only such milk at the cheese factories as the condensing factory requires, there will be no more No. 2 cheese, this providing the cheesemakers know their part, having in my mind the scientific part of cheese making, taught by our notable Wisconsin dairy school and Prof C. F. Doane, of the United States dairy department of Washington, D. C.

Last year I concluded my address to you by saying that I would have you go home and act upon what we had heard and learned, so we would not have to come back the next year and bewail bad conditions. And I am gratified, and must compliment you upon the fact that you have acted in accordance with the suggestion. Factory improvement, condition of milk, and sanitary conditions have taken a good jump forward, and should I be called upon for proof, I could make good. You must know we must try to manifest to the public the conviction that we are producing only clean, good, wholesome milk, cheese and butter in up-to-date dairies and factories, sanitary conditions being the chief issue. And it is up to you to make good in every instance, for you do not know where I may drop in with the public to prove our claims.

And it is here I ask and urge a few things more to aid and make the above claims complete. Mr. Wing, speaking to you on alfalfa, said, "and, listen, one thing you must never do—that is, to cut your alfalfa before the new sprouts near the ground are appearing." I say, you must never milk a cow before you thoroughly clean off the flanks and udder of the cow and take unconditionally to the use of the partly closed milk pail; provide good, clean places for cooling and keeping of the milk, summer and winter; and by all means keep that nasty fly out of the milk. Give your full attention for the general good, to the sewer discharges. I ask you to discard the practice of keeping whey barrels or tanks outside, since they are fly and bad bacteria breeders, and the source of unsanitary odors; to handle whey under shelter, and by all means pasteurize it to preserve it as a good animal food and prevent the spread of tuberculosis. Pay close attention to the neat and tidy appearance of the outside and inside premises. Then you will be a complete factor to manifest to the traveling and consuming public that milk, cheese and butter are produced under sanitary conditions, and the result, I am positive, will show up in your favor.

Besides having complied with the requirements of the Wisconsin dairy laws, without knowing it, and instead of the law being a hardship, it has proven a blessing, for you are admitting that you really are enjoying the improvements requested.

In conclusion, I would say a few words concerning the strained feeling of your cheese producers toward the national net weight law. United States legislation meant well for the people when this act became a law. It was urged by the honest merchant; and the enforcement of the same is pushed by the honest merchant. The paper of F. Downing, chief of weights and measures, has shown the need of such a law to successfully curb the sale of short weights and measures.

Of course I know the strained feeling of the cheese makers and dairymen of Southern Wisconsin regarding the net weight law, is only regarding the stamping of the net weight on each limburger and I can see that they are justified to a certain extent.

Gentlemen of this convention, a ditch never looks so wide after we jump it as before. Should the tariff reduction of three or four cents on imported cheese be restored, you could well afford the little extra labor this net weight law will cause you. The money that goes to foreign countries for cheese is lost to you producers; besides, the cheese coming in takes the place you could very well fill yourself, since you can double the production if needed; and the price paid for it before even the tariff was lowered, by the consuming public, was just when we compare the nutritious value of cheese compared with meats and other foods.

NET WEIGHT.

By W. C. OWEN, Attorney General.

The subject of net weight is one that the cheese interests of Wisconsin are vitally interested in. By "net weight" is meant the weight of a commodity minus the weight of all wrappers, cartons or other extraneous substances. The net weight of a Limburger cheese, for example, would be the actual weight of the cheese present inside the wrapper.

The question undoubtedly has arisen in your minds, why did congress and why have some eighteen of the state legislatures passed net weight laws demanding the placing of the net weight, net measure or numerical count on the outside of the package. The question of marking package goods has been agitated for a great many years. While the passage of the national pure food law which went into effect in 1906 was being agitated, a provision was inserted at that time providing for the marking of the net weight on packages. At that time certain interests had such a strong hold on congress that in place of an actual provision demanding that the net weight be placed upon packages, a substitute which turned out to be a joker was inserted. This substitute provided that if the package contained any statement as to the actual weight or measure, that such statement must be truthful. Of course very few manufacturers placed the weight upon the package as they were not compelled to do so by the terms of this provision. Since the passage of the national pure food law congressional committees have gathered much data concerning some of the evils and abuses that have arisen in the putting of foods in package form. Senator Nelson of Minnesota who was on one of these committees, in a speech before the weights and measures officials of Minnesota last year, stated that a whole room full of package goods had been gathered at various times during a period running over some eight or

ten years. One very noticeable feature revealed the fact that manufacturers resorted to a process of cutting down the size of the package. Take for example rolled oats. This breakfast food was formerly put up in packages that held two pounds net. A large figure 2 indicating two pounds was displayed on the outside of the package. After a large business had been drummed up the company cut down on the size of the package about two ounces and dropped the figure 2 from the side of the package. The change from two pounds to one pound fourteen ounces is not noticeable to the ordinary person. After all the packages had been reduced two ounces, the package was again cut down two ounces. This process was continued until today we have a package that weighs one and one-half pounds gross and retails for about the same price that the original package did a number of years ago. This is just one instance of the deception resorted to by the manufacturer. The same thing applies to canned goods, syrups, and all forms of confectionery.

A salesman for a large cracker house informed me that every time the management changed hands and a new manager was put in charge who desired to make a record for efficiency the size of the package was diminished. If a package contained 23 crackers it would be put down to 22. Now while one cracker does not seem to be a very large amount it means a great deal when the large output of some of our immense cracker houses is taken into consideration.

Some manufacturers have placed packages upon the market with a view of deceiving customers. They are made of such sizes as to give the customer the impression that they are one-half pound, 1 pound, 2 pound or 5 pound packages, whereas in fact they fall short of this amount by a few ounces. It has been the practice of manufacturers of breakfast foods to place from 14 to 15½ ounces into a package that to the ordinary eye will pass for pound size. Spices have been put up in three ounce packages which readily will pass for one-fourth of a pound, no weight of course being placed upon the pack-

age. Some manufacturers only partly fill the carton and the party purchasing the same has no way of knowing the amount the package contains until the same has been purchased and is opened at home.

Canned goods, such as peas, beans, etc., were formerly put up and sold in cans of 1 pound, 2 pound, 2½ pound and 3 pound sizes. When it became known that this was a violation of the law if such package did not contain this amount, the dealers then resorted to the practice of billing out such canned goods as No. 1, No. 2, No. 2½ and No. 3. People, however, still retained the impression that they were obtaining 1, 2, 2½ or 3 pounds.

What applies to canned goods also applies to the sale of lard in pails. Many people today are of the impression that when they buy a 5 pound pail of lard they are obtaining 5 pounds net. As an actual fact they are paying for about 12 ounces of tin and 4 pounds 4 ounces of lard. The packers are wise enough to bill such pails out as No. 3, No. 5 or No. 10. They do not guarantee them to hold net weight.

We find this same matter of deception in the sale of candy by the box. Some of the boxes that look as though they are pound sizes contain only 14 ounces of chocolates, whereas others are full weight. When chocolate creams retail at 60 cents a pound a difference of two ounces is a matter of ten cents.

Buttermakers have likewise resorted to the practice of putting out short prints and selling their butter by **print** but charging pound prices for the same. This practice is now about stopped inasmuch as merchants will not run the chances of buying these short prints. If people insist on the purchase of their butter by the pound, the dealer would soon find himself liable if he accepted short prints from the butter maker.

Flour was at one time sold gross weight, but this practice is now beginning to disappear. I understand that the large mills in Minneapolis put up their sacks both gross and net weight. In those states having stringent net weight laws the people receive full weight. Gross

weight in sacks of flour is given in states where no laws have as yet been passed. Several weeks ago a discovery was made that one of the large roller mills in the northern part of Wisconsin was putting but 48 to 48½ pounds of flour in 49 pound sacks. The output of this mill was 600 pounds a day. With an illicit gain of one-half pound per sack one can readily compute in dollars and cents the shortage. It would amount to a great many thousand dollars in the course of a year.

It has become a well known fact that practically all of the so-called quart bottles of beer are short. Instead of four such bottles making a gallon, five are required, and among the trade these bottles are known as fifths. Such bottles under our new law will have to be labeled to show tthe true amount they contain.

The manufacturers of extracts, such as vanilla and lemon, have resorted to various means of deceiving the eye. Instead of using the ordinary bottle they have resorted to the use of what are known as panel bottles with flat sides and edges made of heavy glass so that the contents of the bottle will be magnified. Many of the vinegar bottles on the shelves of the grocers have inverted bottoms for the purpose of deceiving the public.

I have thus given you briefly samples of a few of the abuses that have arisen in the sale of goods in package form. When we take into consideration that a very high percentage of the groceries we buy today are sold in packages and not in bulk, it becomes all the more necessary that legislation should be enacted to put a stop to some of these practices. People have a right to know the quantity contained in a package without going to the trouble of weighing the same.

For the above reasons great pressure was brought upon congress and upon many of the state legislatures to amend the pure food law. As a result our last congress passed a law providing that goods in package form shall be marked in such manner as to show the net weight, net measure or numerical count of the package. A clause providing for the appointment of a committee of three

whose duty it becomes to establish regulations and tolerances in the enforcement of this law was incorporated in the provisions of this statute. It is a well recognized fact that commodities do not retain their original weight and that packages cannot be put up of the same absolute weight. This committee must determine through investigation what tolerances were allowable and what tolerances shall be permissible for shrinkage. For example, experiments are now being conducted in the case of dried fruits, flour and dairy products in shipping the same from one part of the country to another, making a weighing before the article starts on its journey and re-weighing when it arrives at its destination. It is well known that such articles as raisins, dried apples, apricots, etc., change in weight rapidly. It is also known that such articles as flour are subject to very appreciable shrinkages. This data obtained has not as yet been put in bulletin form.

I wish to say a few words in regard to the effect of the passage of this law upon the cheese industry of Southern Wisconsin. The passage of new laws creates new conditions to which we are obliged to adjust ourselves. In the past, I understand, it has been the practice in this brick and limburger cheese industry to mark on the outside of the box, containing the individual bricks or prints the gross weight and the tare of the box. Subtracting, we obtain the weight of the cheese which also includes the weight of the wrappers. I understand that it is impossible to make cheese of uniform weight as is the case in the manufacture of butter. If each package is to be marked there is only one way in which this can be done, which would be to put scales in the factory and weigh each individual cheese. The cheese of course would have to be weighed after being wrapped as it would be impossible to handle the unwrapped Limburger. It would be an easy matter, however, to obtain the weight of the wrappers placed on say sixty prints of Limburger and divide by sixty in order to obtain the weight of the wrapper placed about one cheese. A deduction could then be made for this before marking the wrapper.

I have written to Dr. L. A. Fischer of the Bureau of Chemistry, who is a member of the net weight committee called upon to establish tolerances, ond asked him what attitude the federal department would hold in regard to the marking of brick and Limburger cheese. I attempted to show him in my letter that Limburger cheese could not be made to hold out uniform in weight. I asked him if under such conditions anything could be done by his committee that would lessen the burden of marking such packages. He replied recently by sending me a letter containing a copy of the regulations that committee has drawn up and were about ready to suggest for adoption. He stated that while these regulations were not as yet final the chances were good that they would be adopted with but very few minor changes. I wish to read these regulations to you. They are as follows:

"The quantity of the contents shall refer to the food product exclusive of wrappers, packing, and other extraneous objects.

"The statement of the quantity of the contents shall be placed on the outside of the covering or container usually delivered to purchasers or to consumers, provided, that shipping case need not be marked if it contains packages each of which is marked as herein provided.

"To be plainly and conspicuously marked, the quantity of the contents shall be so placed on the package as to be readily seen, and shall not be a part of or obscured by any other legend or design. The statement shall be in terms easily understood and in distinct type, taking into consideration the size of the package.

"The quantity of the contents shall be stated in terms of the largest units contained in the package; for example, if the package contains one pound and a fraction of a pound, the contents shall be expressed in avoirdupois pounds and fractions thereof, or in pounds and ounces, and not in ounces.

"Statements of weight shall be interms of avoirdupois pounds and ounces, statements of liquid measure shall be in terms of the United States gallon of 231 cubic

inches at 68 degrees F. (20 degrees C.) and its customary subdivisions, such as gallons, quarts, pints, or fluid ounces. Statements of dry measure shall be in the United States standard bushel of 2150.42 cubic inches and its customary subdivisions, ½ bushel, peck, quart, pint and half pint. The use of the metric system is permitted.

"As a rule solids shall be marked in terms of weight, and liquids in terms of measure. However, where a definite trade custom exists, the package may be marked by weight or measure following the well recognized usage for that commodity. Viscous or semi-solid foods or mixtures of solids and liquids may be marked either by weight or volume, but the statement used shall be definite, such as 'weight 12 oz.,' or '12 oz. avoirdupois; 'volume 12 ounces'; or '12 fluid ounces.'

"The statement of quantity of contents by numerical count will only be permitted when it gives information as to the quantity of food product in the package and is not simply a numerical statement of the number of units."

From this you will see the attitude that the federal department takes is that each individual package contained in the box shall be marked. This you will see is the exact opposite of the practice you have followed in the past.

The question also has been put to me, whether packages of brick cheese, 4 or 5 in number, might not be paraffined and then without wrapping inserted into a carton or box, and the combined weight of the 4 or 5 cheeses placed on the outside thereof. Would this be in compliance with the terms of the law? It is my opinion that it would. I wish, however, to state that this is simply my opinion and what attitude the federal authorities would take on this question is another matter.

The whole question of net weight seems to hinge on the subject "What is a package?" For example, is a print of butter wrapped in a small thin wrapper a package? Would a brick of paraffined but unwrapped cheese

constitute a package? When chocolates are wrapped in paraffin paper and placed in a box, would each individual chocolate be considered a package and have to be marked, or would it simply be a question of marking the box? These are questions that we are called upon to answer.

The entire matter of the meaning of the term "package" as the same is used in the Wisconsin law, which takes effect September 4, 1914, has been submitted to the attorney general by the dairy and food commissioner and the following opinion from the attorney general has just been received:

"Under date of February 6th you direct my attention to the provisions of section 4601aa of the statutes and inquire whether the term 'closed receptacle' in contemplation of said statute is applicable to limburger cheese which, according to prevailing custom, is put up in individual units containing approximately one pound or two pounds, first wrapped in an especially prepared parchment paper and then wrapped with tinfoil. You state that a number of these individual units so wrapped, say one dozen or two dozen, are put into cases for shipping purposes; that in wholesale quantities this cheese may be sold in these cases, but in the usual retail trade the individual unit is sold from this shipping case in the tinfoil and paper wrapping. You also state that it is a common practice to sell butter in prints of about one pound. That these one pound prints may be either wrapped in parchment paper and put into a shipping case or they may be put into pasteboard cartons which are so manufactured that each carton can be closed. You inquire whether the parchment paper and tinfoil in which the cheese is wrapped and the parchment paper or carton in which the butter prints are placed are closed receptacles within the meaning of this statute.

The material part of said statute provides as follows:

"Any person, who by himself, or by his servant or agent, or as the servant or agent of another, shall manufacture or solicit or take orders for delivery, or sell, exchange, deliver or have in possession with intent to sell,

exchange or expose, or offer for sale or exchange any article of food within the meaning of section 4600 of the statutes which is misbranded within the meaning of this section shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not less than twenty-five dollars nor more than one hundred dollars, or by imprisonment in the county jail not less than two days nor more than sixty days.

"The term 'misbranded,' as used herein, shall apply: (1) to articles of food, or articles which enter into the composition of food, which, or the package or label of which shall bear any statement, design or device regarding such article or the ingredients or substances contained therein which shall be false or misleading in any particular;

(2) To articles of food in package form which do not bear plainly and conspicuously marked on the outside thereof the name and address of the manufacturer, packer or dealer;

(3) To articles of food in package form if the actual quantity of the contents be not plainly and conspicuously marked on the outside of the package in terms of weight, measure or numerical count; reasonable variations, however, shall be permitted from the stated weight, measure or numerical count, and the dairy and food commissioner shall establish tolerances for the same by rules and regulations; and

(4) To articles of food in package form if the contents of the package as originally put up shall have been removed in whole or in part and other contents shall have been placed in such package.

The term 'label,' as used in this section and in section 4601, or in any other section of the statutes, relating to the adulteration or misbranding of food, unless otherwise specifically described and provided therein, shall apply to any printed, pictorial, or other matter upon or attached to any package of a food product or any container thereof.

"The term 'package' as applied to articles of food shall

mean a closed receptacle of any kind in which an article of food is kept in stock and which with its contents is sold to the public.''

''The term 'receptacle' has a broad meaning. It is defined in Webster's New International Dictionary as 'That which serves or is used for receiving and containing something; a repository.' In the Century Dictionary and Cyclopedia, it is defined as 'That which receives or holds anything for rest or deposit; a storing place; a repository; a container; any place open or closed that serves for reception and keeping.' A 'container' is defined as 'That which contains.' That the term used in its broadest sense is evident from the fact that the phrase 'of any kind' follows the word 'receptacle.'

When butter or cheese is kept in stock and is intended to be sold in the package as you describe, I believe it is a closed receptacle or a package in contemplation of the statute in question. The package or receptacle is certainly 'closed' as the word is commonly used for the statute does not require the package to be sealed. A package may be closed without being sealed.

''It seems to me that any other construction of this statute would lead to absurdities as it would be an easy matter to change the container of articles of food so that they would not be closed receptacles and thus circumvent the law. Yours very truly,

(Signed) W. C. OWEN, Attorney General.''

GROWING AND CURING ALFALFA.

By Arthur Collentine, Monroe, Wis.

First Prize.

The following rules are based largely on conditions of soil and climate as would affect the average farm in Green county. Then too in making these rules I have included in most of them, where necessary, a test as well as a remedy for certain problems that might affect the beginner, thus making the rule self-explanatory as it were:

1. Do not sow alfalfa on your poorest soil as a starter, but rather select a piece of land that is high and dry and one that contains a reasonable amount of fertility.

2. Test your soil for acidity. As soil that is sour usually gives forth poor stands of clover or other legume crop. Another indication of an acid soil is the growing there of horse tail or sour grass. Probably the best test of an acid soil is the blue lithmus paper test which is done as follows: Procure some lithmus paper from a drug store or elsewhere and place same between soil to be tested and allow the paper to remain there for some time then remove. If upon examination red spots are found or the paper has been slightly discolored it is an indication that the soil is acid.

3. Soils that are acid should be corrected. Apply ground limestone at the rate of 100 pounds to the acre with a lime drill. Do this previous to sowing. Harrow the ground thoroughly so as to mix the lime with the top three or four inches of soil.

4. If your land is low and at times flooded or lacks good drainage use some system of drainage. For as one authority says, "Alfalfa does like wet feet."

5. Prepare a good seed bed. That is prepare your ground as you would for corn, being careful to have same free from lumps and in a finely pulverized state.

6. Sow good alfalfa seed. Any good northern variety that is free from foul weed seeds and which has a high germination test. Sow 16 to 24 pounds to the acre.

7. Sow with or without a nurse crop. Where nurse crop is used sow one bushel of barley to the acre removing same as hay preferably or where crop matures cut and thresh out of the shock. Where no nurse crop is sown alfalfa may be sown any time after spring frosts up to the middle of August.

8. Cut the following summer as soon as one-third of the field is in blossom. At this time upon careful examination a new shoot will be found just above the base of the plant. This shoot is the start of the next crop and so the superstructure of the plant should be cut above this shoot to give the next crop a chance to grow unhindered. Use these same tactics in removing the next crops, but remove no crop later than September first.

9. Cock and cap your hay to protect it from too much drying and also from rains.

10. Watch your neighbors who are successful growers of alfalfa. Study their methods and profit by their mistakes. Read authoritive farm periodicals and keep yourself well posted on this great legume crop.

RULES FOR RAISING AND CURING ALFALFA.

By Chas. J. Smith, Monroe, Wis.

Second Prize.

Written for the average farmer, who does not want to expend a large sum of money for up-to-the-minute machinery to use in sowing seed and for other work necessary to secure a good crop of well-cured alfalfa hay.

1. Selection of field. The first thing to consider is the field which is to be sown. Begin to prepare field the year before you wish to sow seed, by breaking a piece of well-manured pasture or hay land. Plant it to corn and cultivate it thoroughly so it will be free from weeds. The following spring sow alfalfa with barley as a nurse crop.

2. Procuring seed. The next is a proper selection of seed. It is a good plan to go to the different seed dealers and secure samples of the **very best** seed they handle, and

test it yourself, by placing some of the seed from each sample in separate plates. Put the seed between two pieces of flannel and cover with water, keep in a warm place. Select the seed that germinates quick and strong. You will find that good, bright, well ripened seed will be best.

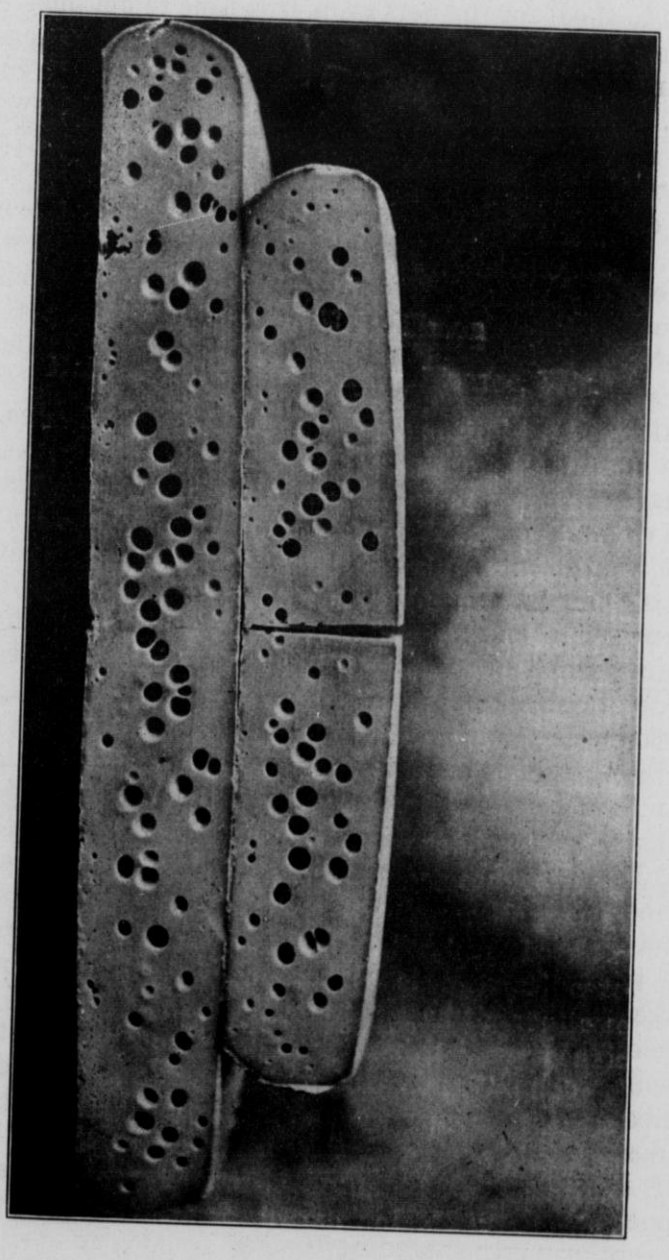
3. Preparing the field. As soon as the ground is in good condition to work run over the field with disk and keep the land dragged or cultivated until time to sow, that is, after small grain is sown and danger of freezing past.

4. Sowing. We use a common force feed seeder with grass attachment. Sow about fifteen to seventeen pounds alfalfa per acre with one bushel barley as nurse crop. Have found that, on land that is adapted to alfalfa, fifteen pounds properly sown and well cultivated will produce a good stand. If land is not adapted to alfalfa have some of soil analyzed by a chemist and apply what is lacking.

5. Covering seed. You will see by rule three, the ground has been thooughly cultivated and when you sow the seed it will lay just where it falls. We have found from experience the best way to cover seed is an eight shovel corn plow as it covers it well and does not throw it in ridges. To finish harrow the field twice.

6. Removing nurse crop. It is a common practice in this section to cut the nurse crop for hay when the crop grows too rank and becomes lodged. The writer has had good success by cutting with binder and threshed a fair yield and good quality of barley. The shocks should be hauled and stacked as soon as possible, to prevent alfalfa being smothered out. If weeds and foxtail interfere with growth of alfalfa we would clip early in September so as to give alfalfa a chance to grow before cold weather.

7. Cutting for hay. If the season has been favorable and you have been fortunate in getting a good stand, you will be ready to make hay the following year. One of the most important rules in making alfalfa hay is in knowing



THE OLD STANDBY.

when to cut it. You should keep close watch when it begins to shoot for the next crop, it is time to get busy. We believe more alfalfa is injured by cutting too soon, never cut more than three crops and do not pasture late in the fall. Our method is to cut around a piece as large as we can rake and cock the next day. We start cutting in the morning as early as possible using two mowers, by so doing can cut it much faster and it will cure out more even.

8. Raking. If it has been good hay weather we would rake the hay the next morning after cutting, commencing before the dew is quite off, to prevent losing leaves. We prefer the dump rake as it is faster, easier on team and does not break off so many leaves as the side rake. Start raking at one side of field, going back and forth, making fair sized windrows, when finished you will have a lot of long straight rows. Be sure to start raking before it is too dry as it cocks much better when just wilted.

9. Cocking the hay. After raking is finished it will save time and labor to bunch the rows with dump rake, then follow with a barley fork, rake around, pull out enough hay to properly top out cock. It is easier and faster to straighten up a bunch, than to gather up and cock the hay by hand. It is a good plan to cover cocks with caps as it protects the hay from sun and rain. If you do not use caps, we would make the cocks larger because a large cock will shed water better than a small one.

10. Hauling and storing in barn. The cocks should stand in field three or four days or long enough to become well cured. If damp under cock on ground, they should be turned out a while before hauling. Care must be taken not to haul while wet with **rain or dew.** Do not under any conditions haul while very damp, better let spoil in field than have heat in barn. When unloading in barn you should keep hay well scattered, have the outsides of mow higher than where the hay falls. If hay is left in mow, as it falls from carrier, it will heat in a short time. People make a bad mistake and run chances of fire by not properly spreading the hay.

By following a few of above rules coupled with some

good sound sense and plenty of muscle there is no excuse for any one not having a barn full of alfalfa hay. Thus ends the ten commandments on "alfalfa hay."

TO RAISE AND CURE ALFALFA.

By T. J. Barmore.

Third Prize.

1. Prepare the ground by applying a heavy coat of manure (and lime if the soil needs it.)

2. Plow deep, (in the fall is best), drag thoroughly.

3. If there are grass roots in the soil raise corn one year and plow again.

4. In April, sow about 1 bushel of barley per acre, as nurse crop, drag thoroughly after sowing, then sow 15 pounds of alfalfa seed, (broadcast will do, but by drill is better) then plank or drag with a light drag, being careful not to cover more than one-half inch. Roll ground if dry. If the soil needs inoculation, apply just before the last dragging letting the drag follow immediately.

5. Cut (with the nurse crop, for hay) whenever the little shoots appear on the alfalfa stem near the root. There should also be one more good crop the first year.

Never cut later than Sept. 15th any year as there should be a good crop left on the land for winter protection to the roots.

Never allow stock to run on alfalfa field in fall or winter. In cutting and curing alfalfa always cut as soon as the shoots appear on the stem near the root, but never before.

6. After cutting let alfalfa lay until wilted (on a bright day this is usually about three hours) then rake and bunch in medium sized bunches, **not broad but high,** and let stand two or three days to sweat, or cure. Some prefer to use caps but we have found that by bunching in this way, as soon as it is wilted, the bunches will not take water, even resisting quite severe storms, thus sav-

ing the expense of caps and extra labor.

7. Let stand in bunch two or three days, or until the stems are properly cured, usually about two or three days.

8. When the hay is properly cured or sweat out, but while it is still moist, haul and put in mow. Have sufficient help in mow to scatter each bunch evenly over mow, but avoid trampling as much as possible and you will have bright, green hay. Handling while moist saves the leaves which easily rattle off and are lost if handled dry. It is important to avoid trampling in the mow to make best class hay.

9. If field is infested with grass or weeds, work it up well with a spring tooth drag or cultivator, (never a disk), just after cutting. We prefer to do this after the second crop, as it is apt to be hot and dry then and a better time to kill the grass or weeds, (the alfalfa roots, go deeper and will not be injured) but it may be done after any crop.

10. In case the seed bed has been improperly prepared and a light crop follows, a top dressing of manure may be applied with benefit, in winter when the ground is frozen.

An application of Acid Phosphate as a top dressing, is beneficial to any crop and may be applied yearly with profit.

Note—These rules are compiled from our actual knowledge gained from ten years' actual experience and a study of Jos. E. Wing's writings.

Lincoln to Wisconsin Farmers.

My opinion of them (farmers) is that, in proportion to numbers, they are neither better nor worse than other people.

But farmers being the most numerous class, it follows that their interest is the largest interest. It also follows that that interest is most worthy of all to be cherished and cultivated—that if there be inevitable conflict between that interest and any other, that other should yield.

Unquestionably it will take more labor to produce fifty bushels of wheat from an acre than it will to produce ten bushels from the same acre; but will it take more labor to produce fifty bushels from one acre than from five? Unquestionably thorough cultivation will require more labor to the acre, but will it require more to the bushel?

No other human occupation opens so wide a field for the profitable and agreeable combination of labor with cultivated thought, as agriculture.

Population must increase rapidly, more rapidly than in former times, and ere long the most valuable of all arts will be the art of deriving subsistence from the smallest area of soil. No community whose every member possesses this art, can ever be the victim of oppression in any of its forms. Such community will alike be independent of crowned kings, money kings and land kings—From Abraham Lincoln's address at Milwaukee before the State Agricultural Society of Wisconsin, September 30, 1859.

Report of Factory Instructor.

By Peter Zumkehr.

Mr. Chairman, Ladies and Gentlemen: Once more I am called upon by your worthy president to come before this meeting as instructor. If I were to report all that I have seen and found in my travels from factory to factory, inside as well as outside, it would perhaps be enough to write a good sized book about. The time is limited and I will merely touch the most interesting points. Cleanliness is next to Godliness and perhaps it is right here where most of the cheese factory trouble will find its foundation. Milk is not always produced as clean as it should be, milk utensils in great many cases are neglected, it seems as if some people had a very limited idea about cleanliness. In the cheese factory where home made rennet is used, perhaps the making of same rennet belongs to the most important work of the cheesemaker, for it is impossible to make a high scoring cheese if poor rennet is used, even if the milk was of good quality and I dare say that there are many cheesemakers whose knowledge in making a good rennet is rather limited. The salting and curing of the cheese is also very important and I have seen it where the quality of the cheese was much lowered on account of lack of knowledge in salting and curing the cheese. Indeed the field of instruction is large, much has been done, extensive improvements have been accomplished, but much more remains to be done, and it will require the combined effort of cheese dealer, cheese maker and farmer. The buying and selling of cheese is also a source of much trouble, you may think that this has nothing to do with the work of the Instructor, nevertheless the Instructor's success hinges more on this point than on anything else, because if he has any complaint to make, regarding to unclean cans or unclean or unwholesome milk or unclean utensils in the factory, wrong methods employed in mak-

ing poor rennet, insufficient knowledge in pressing and handling the cheese in the curing process, the instructor will naturally base his plea on the poor quality of the cheese, and when the buyer pays for the cheese according to quality it will be found that the lower grades of cheese control the price. Where the same price is being paid for good and poor cheese, I hope that you will be able to see that it makes it very hard for the Instructor to prove his contention and to accomplish the necessary improvements, besides that kind of buying is a great injustice to the industry at large.

If we will only permit ourselves to look back and see what this Association has accomplished we will find:

1. That most of the cheese factories are new or remodeled, that they are as good as new and are sanitary equipped.

2. The general class of the cheesemakers has been brought to a higher standard.

3. What about the dealers, supposed to be the most intelligent class. Have they improved the method of buying? I am sorry that I must answer in the negative. I am at a loss to explain why they have not. A person nowadays may market almost anything, either grain or livestock and he gets paid for according to quality, only foreign cheese making an exception. You may send out your Instructor as long as you please. He may roam this country from one end to the other, preach cleanliness and urge for better education among the cheesemakers; not until you cheese dealers fall in line and pay for cheese according to its merits will we be able to reap the so much deserved harvest: Educated cheesemakers, up-to-the-minute cheese factories and curing rooms filled with No. 1 and not No. 2 cheese.

I thank you.

Use of Starters in Swiss Cheese Making.

By Hon. C. F. Doane, Washington, D. C.

During the past year the farmers, cheese makers and cheese dealers of Southern Wisconsin have found themselves face to face with an economic condition that is very naturally causing them considerable worry. With the price of farm products in general, and the price of feed in particular, constantly going up, the price of your Swiss cheese has, in the last year, gone off fully 25 per cent. I do not think that any of you felt or have felt in the past that, all things considered, the price of cheese was any too high and you very naturally feel that at the present time the price is much too low.

This condition has come from two causes: You had an unusual flow of milk in this section of the country the past summer. At the same time there was an unusually heavy make of cheese in Switzerland. Added to this the fact that the tariff on imported cheese has been reduced more than half allowing the very finest of the foreign product to be laid down in interior cities at a cost of 21 cents and you have a good explanation of the reason why our Swiss cheese is very low at the present time, as owing to the prejudice of consumers and the inferiority of our own product compared to the best of the imported, there is usually a difference of five cents or more per pound in the price which consumers are willing to pay.

It is not likely that the heavy make of cheese will continue in Switzerland, and you will not probably have as heavy a flow of milk for any succession of years as you had in Southern Wisconsin this year, but the low tariff has very likely come to stay and it is up to the men connected with the industry in the United States to put themselves on a little better basis than they have been

in the past. There are two things or two main points in which a very marked improvement in the industry can be made. The average quality of the product should be raised; in fact, we should look towards the time when a cheese as good as the best imported can be made every day in the year. At the present time a very small percentage of our product is as good as the imported and what is much worse cheese can be made in this country apparently only 4 or 5 months in the year. During the spring and fall most of our factories make a cheaper product such as brick and limburger and in winter are closed entirely. This has led to a short milking season and the quality of the cows has probably gone backward; certainly they have not improved under this system.

We understand very well, of course, that with our present knowledge and our present equipment, we can not hope to make fine cheese all of the time and for the entire year, but we believe that the intelligent use of starters will help very materially to bring about this condition. The Dairy Division of the Department of Agriculture has been working with starters for Swiss cheese for three years and we think that we have about gotten the problem solved. I have brought with me on this occasion pieces of six different cheeses for your inspection as we believe that you will be much more impressed with what I have to say if you can actually see what has been accomplished. You will note at once that these cheeses have too many eyes due probably to the fact that too heavy starters have been used, but I am assured by judges of good cheese in this audience that this is practically the only fault aside from the fact that they do not have enough salt, that would keep these particular cheeses from being classed with the best imported. These are winter-made cheeses and as you will see are made in very small sizes. They are made in a locality where absolutely nothing could be done towards making a Swiss cheese without the use of starters. Some of them are made from milk so gassy that starters were necessary to keep from making a pressler or nissler cheese. We

Work in Dairy Department, College of Agriculture, University of Wisconsin.

believe thoroughly that with milk of average quality such as is delivered to the Swiss cheese factories, we could make cheese as good as these every day in the year.

As was stated, these cheeses were made with starters. I know that the subject of starters is not a very familiar one or well understood by Swiss cheese makers because the use of starters in Swiss cheese making has never been talked about. Most of you have undoubtedly heard about their use in the making of butter and in the making of Cheddar cheese, but the few that have been tried with Swiss cheese making have been made up with ordinary lactic acid-forming bacteria and have made a poorer instead of a better cheese, and because of this largely it has been assumed that starters could not be successfully used in the making of Swiss cheese. To give you a better understanding of how starters may help, a short explanation is desirable. As far as we are concerned three kinds of bacteria are present or should be present in milk intended for Swiss cheese; first the bacteria which give the eyes and flavor must be there or we can not have good cheese; second, the bacteria which cause gas, and if not overcome give a presslor or a nissler cheese, are always present in the milk from different herds of cattle; third, to overcome these gas-forming bacteria another kind must be present or poor cheese is the result. It happens in many localities that the bacteria which gives the eyes and the flavor are not present naturally in the milk; therefore, people have come to the conclusion that Swiss cheese can be manufactured in a few localities only in the United States. Under winter conditions the bacteria which suppress or kill out the gas-forming bacteria, do not grow very well; therefore, you find it very difficult for most of the year to make a perfectly sound Swiss cheese. It is about these bacteria which suppress the bad gas-forming kind that I want to talk today.

The Swiss cheesemakers have always in the past used a starter unknowingly; otherwise, a good cheese would have been uncommon while a pressler or nissler would have been the usual thing. This starter is usually found

in the whey rennet. The bacteria which are responsible for this go under the common name of Bulgaricus and in Europe is called casei epsilon. Cultures of this bacteria have been recommended by different investigators and teachers of Switzerland for the making of good rennet but they have never been considered as necessary for the suppression of bad gas-forming types of bacteria in the milk. While you have been using starters unknowingly and unsystematically we have been finding out how the best use of this starter can be made. We have found out a number of things in connection with its use. We have found that the small amount used in your whey rennet is not nearly enough to take care of the gas-forming bacteria in bad milk; therefore, because of this when your milk has become particularly bad you have had difficulty with your cheese. I believe that most of you use about 4 to 5 pounds of whey rennet to the kettle of milk, which may be as much as 2,000 pounds. This is less than one-fourth of one per cent. We have found that this starter can be used in amounts as high as 2 per cent or at the rate of 40 pounds to 2,000 pounds of milk without in any way injuring the quality of the cheese. This quantity of a good sour starter will thoroughly kill out the gas-forming bacteria in the worst milk that is probably delivered to any Swiss cheese factory.

Again we have found that the cultures of bacteria responsible for this good starter are sometimes lost or become so weak as to be of little help with the cheese. You can usually determine this for yourself because under these conditions the dried rennet put into the whey gets to smelling bad and when this is used instead of having a good starter which will help you make a good cheese, you are adding a bad starter that would spoil good milk. Some apparatus for determining the acidity of the whey is a very good thing to use in this connection. A good whey starter should not have less than seven-tenths to eight-tenths per cent of acid. Perhaps most of the cheesemakers could learn to distinguish by the taste whether their starter had enough acid to be of any help.

When this culture is lost or when the cheesemaker is having trouble with his rennet, it can be renewed in two or three different ways. Probably the best plan would be to secure pure cultures if these are ever put on the market. The Dairy Division is ready to supply a limited number of these to the cheesemakers who care to secure them. A very good way to renew these cultures is to go to a cheese factory where they are having no trouble and secure enough whey to make up rennet for two or three days. Another way would be to take a piece of good cheese, grind it thoroughly, and add it to some boiled whey which has been allowed to cool down to the proper temperature. Good cheese always has large numbers of the right kind of bacteria and where these are added to the whey and allowed to grow 2 or 3 days a very good starter can be secured.

Again we have found that the reason that the cheesemakers cannot make good cheese in early spring and late fall and during the winter, is because the temperature conditions for growing this starter are not right. In the summer you put your jar containing whey and rennet above the fireplace or boiler. In the winter you keep it in the same place. You can see very quickly that the temperatures will not be the same; in fact, during this season of the year you do not expect your whey rennet to give you good results. This whey must be cured at not less than 100 degrees F. (30 degrees R.) to secure good results and if you allow the temperature to fall below this this kind of bacteria will not grow but the gas-producing kind in the dried rennet will grow and you are very likely to have a bad rennet. A good way to maintain the proper temperature is to have a box something like a fireless cooker in which this rennet can be kept and where the temperature will stay uniform much better than in any other place. A box like this can be built by any one. It should have walls 4 or 5 inches thick, packed with cork board or granulated cork or some similar substance, (good dry sawdust will do very well) and then have a good thick cover made in the same way. A cheesemaker

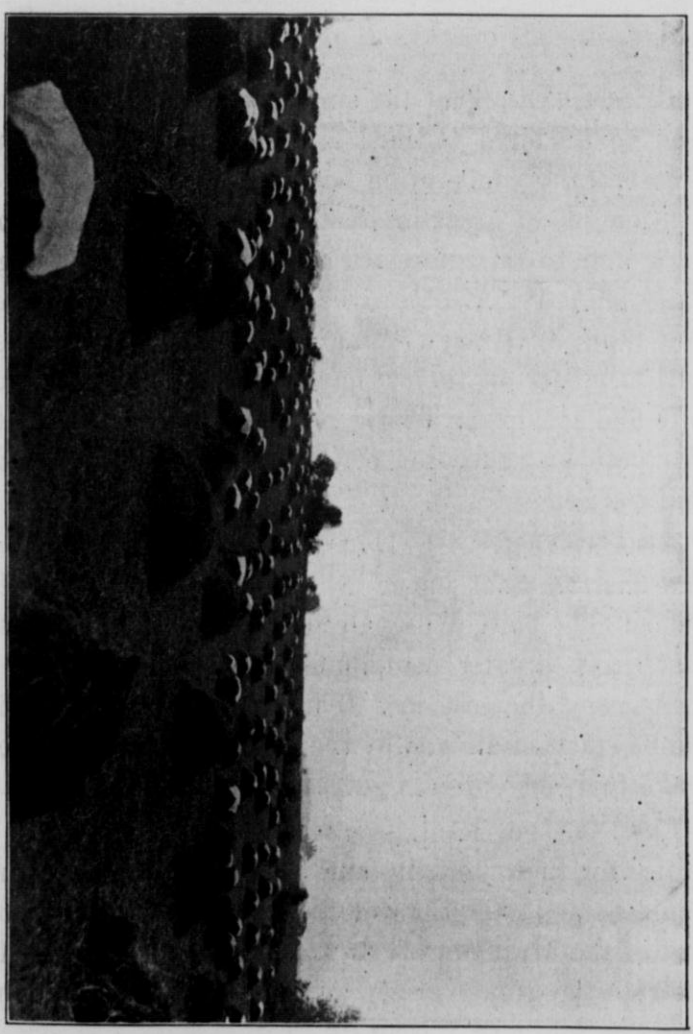
can learn to use this so that he can hold his whey within 8 or 10 degrees. This whey could be put in this box at 110 degrees and at the end of 12 hours should not be below 100 degrees, but if the cheesemakers are going to make a good quality of product in the cold months or even in the warm months much more attention must be paid to this whey rennet than has been given to it in the past by the majority of cheese makers. We believe that if the cheesemakers would dip the whey after the cheese is cooked instead of before, they would have much better success than they do at the present time because the high temperature of cooking suppresses for a short time the growth of the undesirable bacteria, but it has no such effect on the bulgaricus bacteria which form the acid and are the ones necessary for the making of good cheese. This will give the good bacteria a chance to get ahead of the other kind.

We have given this bulgaricus starter the very hardest kind of tests to prove its value. We have used it in factories where every sample of milk delivered by the patrons was badly gassy. We have used it in milk to which we had added cows' manure in large quantities to insure the milk being completely filled with gas-forming bacteria and it has done the work every time. We feel confident that if this starter is used intelligently and in sufficient quantities that there need never be another nissler or pressler cheese. We have used this rennet in a factory near Brodhead early in the spring and before it was thought possible to make a good cheese. We found in these tests that where the farmers delivered the milk once a day they allowed the night's milk to stand at such a warm temperature that it had begun to develop acid and because of this we could not make good cheese, but when we took this milk in twice a day and held the night's milk in a kettle with a slight cooling so that it had not started to form acid, we found no difficulty in making a thoroughly sound cheese. During this time the farmers were delivering milk that was badly gassy but our starter entirely overcame the gas-producing bacteria.

Our only trouble in the use of this starter is the danger of getting yeast into it which, of course, is likely to happen in any cheese factory with the whey rennet as it is now handled. We have thought best, because of this, to use a little can for our mother starter so made that it was impossible for the yeast to get into it. This can consists of two parts. The boiling whey is poured into the upper part and thoroughly kills out all yeast which may be present. After this is cooled to about 100 degrees it is allowed to run into the bottom part of the can which contains the pure cultures of acid-forming bacteria where it is thoroughly protected from all contact with the air. After standing 24 hours this can be drawn off in the proper quantity of whey which has been sterilized by boiling either with steam or by setting in a kettle of boiling water and which has been cooled to about 100 degrees. The rennet can then be added and this mother starter will insure the proper kind of whey rennet.

You probably would like to know how we get the eyes in these cheeses which I have with me and which I told you are winter made. We are working now on the problem of securing eyes in Swiss cheese and while we have not learned how to control the number of eyes we have learned how to secure them in any or every cheese made. The eyes are secured by grinding up a small piece of good cheese, not too old (3 to 4 months old) in whey, allowing it to grow at room temperature for 24 hours and adding this to the milk at the same time that the rennet starter is added. In the cheese I made at Brodhead and in a cheese made by the cheesemaker at the Five Corners factory, too much cheese starter was used and because of this it had to be run into cold storage to keep from bursting open from too rapid fermentation. This cheese all had good eyes but they had too many eyes which grew too fast. I do not like to advise you, with our present knowledge, on just how this starter for making eyes should be made up. I suggest that one-quarter of a pound of cheese in five pounds of whey for 2000 pounds of milk would be sufficient at least to start with and if I

were running a factory even with what little I know at the present time, I would certainly use this ground cheese starter in the spring and use it in lesser quantities in the summer. It is probable that in most of your factories you have the eye-forming bacteria already present but there are very few cheese comparatively which get enough eyes though I have seen cheese made in this locality without the use of any starter which had too many eyes. It is possible and even probable that it will be found to be necessary to control the temperatures during the first fe wdays of the cheese ripening to secure a proper number of eyes. Most of your factories are not provided with cold rooms and I am not sure but that sometime it will be found very desirable to collect the cheese from each factory every day as soon as it is pressed and take it to a central curing room where temperatures can be properly controlled. This may seem like a radical change from your present method of doing business, but if it will add five cents a pound to the value of your product by making it equal to the imported cheese, it certainly would be worth while to at least consider the proposition. I think that when a large portion of the product of our American factories equals the best of the imported cheese, there will be very little prejudice remaining on the part of our consumers and our domestic cheese will sell fully as well as the imported.



Alfalfa Field, South Bros. and Davis Farm.

Resolutions Passed at the Convention.

RESOLVED, That the sincere thanks of this Association be tendered to each and every one who by their presence and cooperation have helped to make this convention one of great interest and usefulness to its members, and to all interested in the welfare of the great dairy industry. Especially appreciated are the addresses and talks by Messrs. Wing and Doane, expert friends, and members on the various branches of the manufacture and sale of our cheese product and on the profitable production and feeding of the best grasses and foods to dairy stock.

Also, RESOLVED, That the fine selections in vocal and instrumental music by the Harmonie club, High School Glee club, Wegg Orchestra, and members of the cast, have greatly contributed to the enjoyment and pleasure of the sessions. That we highly commend the public spirit of all who by their financial aid have helped make this convention a success.

Last, but not least, the active officers deserve high praise for their untiring and public spirited work in organizing and carrying out the details of this gathering, and of the arrangement of the fine exhibits shown to illustrate the great variety and fine quality of the cheese made in Southern Wisconsin.

Respectfully submitted,

COMMITTEE ON RESOLUTIONS.

RESOLVED, By the Southern Wisconsin Cheesemakers' and Dairymen's Association that we decidedly dis-

approve of the recent immigrant act passed by the House of Representatives in so far as it excludes the immigrant who is unable to read and write in some language, from admission to this country, for the reason that the exclusion of such immigrants would deprive this nation of thousands of honest and industrious workers whose labor is greatly needed in this and every branch of business, and whose lack of education is their misfortune and not a crime.

We respectfully request our Senators to use their best efforts to defeat said Act insofar as it makes illiteracy a reason for exclusion of otherwise desirable immigrants.

Believing that the Buchanan Bill asking the repeal of the ten cent tax on the colored oleo and one-fourth cent tax on the uncolored oleo is detrimental to the great dairy interest, therefore, be it RESOLVED, that we pray our representatives do all they can to defeat its passage.

Der Gebrauch von „starters“ in der Fabrikation von Schweizerkäse.

Vortrag von Hon. C. F. Doane, Washington, D. C.

Während dem vergangenen Jahre sind die Farmer, Käser und Käsehändler einem ökonomischen Verhältnis gegenüber gestellt worden, das natürlicher Weise Allen besondere Bedrängnis verursacht. Im Vergleiche mit dem stets zunehmenden Preise der Farmprodukte und ganz besonders der Futterstoffe, ist der Preis eures Schweizerkäses im letzten Jahre um fünfundzwanzig Prozent gesunken. Ich glaube nicht, daß irgend einer von euch in den vergangenen Jahren gefühlt hat, daß wenn man Alles betrachtet, der Käsepreis zu hoch war und ihr fühlt natürlicherweise, daß in der jetzigen Zeit der Preis viel zu niedrig ist.

Dies Verhältnis ist die Folge von zwei Ursachen: Ihr habt im vergangenen Sommer in dieser Gegend ungewöhnlich viel Milch erhalten. Zu gleicher Zeit wurde in der Schweiz ungewöhnlich viel Käse fabriziert. Wenn ihr zu diesem die Tatsache hinzufügt, daß der Tariff auf importierten Schweizerkäs mehr als die Hälfte reduziert wurde, so daß das feinste des importierten Produktes in Inland Städten zum Preise von 21 Cents erhalten werden konnte, so habt ihr eine gute Erklärung für den Grund, warum unser einheimische Schweizerkäs jetzt einen niedrigen Wert hat und wegen dem Vorurteile der Konsumenten und der Minderwertigkeit unseres eigenen Produktes im Vergleiche mit dem besten importierten, ist gewöhnlich ein Unterschied von fünf Cents oder mehr per Pfund im Preise, den die Konsumenten bezahlen wollen.

Es ist nicht sehr wahrscheinlich daß diese vermehrte Käsefabrikation in der Schweiz andauernd sein wird und ihr werdet auch nicht für eine Reihe von Jahren soviel Milch erhalten wie dies im südlichen Wisconsin im letzten Jahre der Fall war, aber der niedrige Tariff wird wahrscheinlich fortbestehen, deswegen müssen sich die Leute, welche mit dieser Industrie in den Vereinigten Staaten in Verbindung stehen, auf eine bessere Basis stellen, als dies in den vergangenen

Jahren der Fall war. Es gibt zwei Sachen, zwei Punkte, in welchen eine bedeutende Verbesserung in dieser Industrie gemacht werden kann. Die durchschnittliche Qualität des Produktes muß erhöht werden; in der Tat müssen wir unsere Aufmerksamkeit darauf richten, daß mit der Zeit ein ebenso guter wie der beste importierte Schweizerkäs jeden Tag im Jahre in diesem Lande fabriziert werden kann. In der jetzigen Zeit ist nur ein sehr kleiner Prozentsatz unserer Produkte so gut, wie die importierten, und was noch schlimmer, ist das, daß in unserem Lande scheinbar nur vier oder fünf Monate lang Käse gemacht werden kann. Während dem Frühjahr und Herbst wird in unseren Käsereien ein minderwertiges Produkt, wie Brick und Limburger gemacht und im Winter sind dieselben ganz geschlossen. Dies hat zu einer kurzen Melksaison geführt und die Qualität der Kühe ist wahrscheinlich vermindert worden; ganz gewiß haben sie sich unter diesem System nicht verbessert.

Wir können wohl begreifen, daß mit unserem gegenwärtigen Wissen und jetzigen Ausstattung wir nicht hoffen können, zu aller Zeit, das ganze Jahr über, feinen Käs zu produzieren, wir glauben aber, daß durch einen intelligenten Gebrauch von Gährungsvermittlern (starter), wir viel dazu beitragen können, dies zu erreichen. Die Dairyabteilung des Ackerbaudepartementes hat seit drei Jahren Versuche gemacht mit Gährungsvermittlern für Schweizerkäse und wir glauben, daß wir dieses Problem fast gelöst haben. Ich habe bei dieser Gelegenheit Stücke von sechs verschiedenen Käsen zu eurer Besichtigung mitgebracht, da ich glaube, daß sie besser überzeugt werden von dem, was ich sagen werde, wenn Sie in Wirklichkeit sehen, was wir erreicht haben. Sie werden sofort bemerken, daß diese Käse zu viele Löcher haben, was wahrscheinlich davon herrührt, daß zu starke „starters" gebraucht wurden, aber ich habe mir von Abschätzern von gutem Käse in dieser Versammlung versichern lassen, daß dies mit Ausnahme des Salzmangels, der einzige Fehler ist, warum derselbe nicht dem besten importierten Käse gleichgestellt werden kann. Diese Käse sind alle im Winter gemacht worden und in kleinen Größen. Sie wurden in einer Lokalität gemacht, wo absolut kein Schweizerkäse fabriziert werden könnte ohne den Gebrauch von „starters". Etliche derselben wurden von Milch gemacht, die so gasig war, daß „starters" notwendig waren um zu verhüten, daß „Preßler" oder „Nißler"-Käs daraus entstanden wäre.. Wir sind überzeugt, daß mit Milch von der durchschnittlichen Qualität, wie man sie in den hie-

Swiss Cheese Industry in the State of Wisconsin.

Cow Testing Equipment.

ſigen Schweizerkäſereien erhält, das ganze Jahr über ebenſo guter Käs, wie dieſer, gemacht werden könnte.

Wie ſchon bemerkt, wurden dieſe Käſe mit „ſtarters" gemacht. Ich weiß, daß das Thema „ſtarter", oder wie ſchon einmal geſagt, Gährungsvermittler, ein kein ſehr bekanntes iſt bei den Schweizerkäſern, weil der Gebrauch derſelben nie beſonders gelehrt wurde. Ohne Zweifel haben die Meiſten von Euch von dem Gebrauche derſelben bei der Butter- und Cheddarkäs-Fabrikation gehört, aber die wenigen, welche in der Schweizerkäs-Fabrikation angewandt wurden, wurden mit Milchſäure erzeugenden Bakterien gemacht und ergaben anſtatt einen beſſeren einen ſchlechteren Käs; und gerade deswegen wurde angenommen, daß „ſtarters" nicht erfolgreich gebraucht werden könnten bei der Herſtellung von Schweizerkäs. Zum beſſeren Verſtändnis, wie „ſtarters" helfen mögen, iſt eine kurze Erklärung notwendig. Was dieſe Sache betrifft, ſo müſſen drei Sorten von Bakterien in der Milch ſein, aus der Schweizerkäs hergeſtellt werden ſoll; zuerſt die Bakterien, welche Augen und Geſchmack erzeugen, ſonſt erhalten wir keinen Käs; zweitens, die Bakterien, welche das Gas erzeugen und die, wenn ſie nicht überwältigt werden, Preßler oder Nißler Käs geben, dieſe Sorte Bakterien ſind immer in gemiſchter Milch von verſchiedenen Herden vorhanden; drittens, um dieſe Gaserzeugenden Bakterien zu überwältigen, müſſen noch andere Bakterien vorhanden ſein, ſonſt iſt das Reſultat ein ſchlechter Käs. Nun kommt es in manchen Gegenden vor, daß die Bakterien, welche Augen und Geſchmack erzeugen, nicht naturgemäß in der Milch vorhanden ſind; deswegen haben manche Leute angenommen, daß Schweizerkäs nur in gewiſſen Lokalitäten der Vereinigten Staaten hergeſtellt werden könne. Während dem Winter wachſen Bakterien, welche die Gas erzeugendenBakterien unterdrücken oder töten, nicht ſehr gut; deswegen findet man es ſchwierig im größten Teil des Jahres einen vollſtändig geſunden Schweizerkäs herzuſtellen. Laſſen ſie mich nun über dieſe Bakterien, welche die ſchlimmen, Gas erzeugenden, unterdrücken, ſprechen.

Die Herſteller von Schweizerkäſe haben immer unbewußt in der Vergangenheit einen „ſtarter" gebraucht; ſonſt wäre ein guter Schweizerkäs etwas ungewöhnliches, aber ein Preßler oder Nißler das Gewöhnliche geweſen. Dieſer „ſtarter" wird gewöhnlich in dem Molkenlab (whey rennet) gefunden. Die Bakterien, welche für dies verantwortlich ſind, ſind gewöhnlich unter dem Namen „Bulgaricus"

bekannt und in Europa nennt man sie „casei epsilon". Kulturen dieser Bakterien wurden von verschiedenen Forschern und Lehrern in der Schweiz rekommandiert um einen guten Rennet zu machen, sie wurden aber nie für notwendig erachtet zur Unterdrückung der schlechten Gas erzeugenden Typen von Bakterien in der Milch.

Während ihr nun unbewußt und unsystematisch „starters" gebraucht habt, haben wir versucht auszufinden, wie dieselben am Besten verwendet werden können. Und hier haben wir Verschiedenes ausgefunden, das in Verbindung mit dem Gebrauch derselben steht. Wir fanden, daß der kleine Betrag, welchen ihr in eurem Molkenlab gebraucht, nicht genügend ist, um die Gas entwickelnden Bakterien in schlechter Milch zu unterdrücken; deswegen habt ihr auch, wenn eure Milch besonders schlecht war, Schwierigkeiten bekommen mit eurem Käs. Ich nehme an, daß die meisten von euch vier bis fünf Pfund Molkenlab auf den Kessel mit Milch gebraucht, welcher bis zu 2000 Pfund enthalten mag. Das ist weniger wie ein Viertel von einem Prozent. Wir fanden aus, daß dieser „starter" in Beträgen von so hoch als zwei Prozent oder im Verhältnis von vierzig Pfund auf 2000 Pfund Milch gebraucht werden kann ohne die Qualität des Käses in irgend einer Weise zu schädigen. Diese Quantität eines sauren Gährungsvermittlers wird die Gas erzeugenden Bakterien in der schlechtesten Milch töten, die möglicherweise an eine Käserei abgeliefert wird, in der Schweizerkäse fabriziert wird.

Im Weiteren haben wir ausgefunden, daß die Bakterien-Kulturen, welche für diesen guten „starter" verantwortlich sind, manchmal verloren gehen oder so schwach werden, daß sie dem Käse wenig helfen. Sie können das gewöhnlich selbst bestimmen, weil unter diesen Verhältnissen das getrocknete Lab, welches der Molke zugefügt wird, einen schlechten Geruch annimmt und wenn dasselbe gebraucht wird an Stelle eines guten „starters", welcher guten Käs erzeugt, setzen sie einen schlechten „starter" zu, der gute Milch verderbt. Ein Apparat zur Bestimmung des Säuregehaltes der Molke ist ein gutes Ding in diesem Zusammenhang.

Ein guter Molkenstarter sollte nicht weniger wie sieben bis acht Zehntel eines Prozent Säure enthalten. Vielleicht könnten die meisten Käser lernen durch den Geschmack zu unterscheiden, ob der „starter" genug Säure enthält, um von Nutzen zu sein. Wenn die Kultur verloren geht, oder der Käser Unannehmlichkeiten mit seinem Lab hat, so kann dieselbe auf drei verschiedene Wege erneuert werden.

Der beſte Weg wäre vielleicht der, ſich Reinkulturen zu verſchaffen, wenn ſie auf den Markt gebracht würden. Die Dairyabteilung iſt bereit eine beſchränkte Anzahl ſolcher an Käſer zu liefern, welche dieſelben wünſchen. Ein guter Weg um dieſe Kulturen zu erneuern, iſt nach einer Käſerei zu gehen, wo keine Störung vorhanden iſt und dort ſoviel Molken zu bekommen als notwendig iſt, um Lab für zwei oder drei Tage zu machen. Ein anderer Weg wäre, ein Stück guten Käs zu nehmen, denſelben gut zu verreiben, und zu etwas gekochter Molke zuzuſetzen, welche auf die richtige Temperatur abgekühlt wurde. Guter Käs hat immer eine große Zahl richtiger Bakterien und wenn dieſe der Molke beigefügt werden und man ihnen erlaubt zwei oder drei Tage zu wachſen, kann ein ſehr guter „ſtarter" erhalten werden. Wir haben im Ferneren ausgefunden, daß die Urſache warum die Käſer im frühen Frühjahr, ſpäten Herbſt und den Winter über keinen guten Käs machen können, darin liegt, daß die Temperaturverhältniſſe zum Wachstum dieſes „ſtarters" nicht die richtigen ſind. Im Sommer ſtellt ihr euer Gefäß mit Molke und Lab über den Feuerplatz oder Dampfkeſſel. Im Winter befindet ſich derſelbe am gleichen Platz. Ihr könnt nun ſchnell einſehen, daß die Temperatur nicht die gleiche iſt; in der Tat erwartet ihr in dieſer Saiſon des Jahres nicht, daß euer Molkenlab gute Reſultate ergibt. Dieſe Molke muß bei einer Temperatur von nicht weniger als 100 Grad F. (30 Grad R.) gereift oder behandelt werden, um gute Reſultate zu erzielen und wenn ihr der Temperatur erlaubt, unter dieſen Punkt zu fallen, wird dieſe Sorte Bakterien nicht wachſen, aber die Gas erzeugenden Bakterien werden im trockenen Lab wachſen und ihr werdet dann wahrſcheinlich ein ſchlechtes Lab erhalten. Ein guter Weg die richtige Temperatur zu erhalten iſt der, eine Kiſte, ähnlich einem feuerfreien Kochofen aufzuſtellen in dem das Lab aufbewahrt wird und in einer beſſeren Temperatur erhalten werden kann, wie anderswo.

Eine ſolche Kiſte kann irgend jemand machen. Die Wände ſollten vier bis 5 Zoll dick ſein und mit Korkbrettern, granuliertem Kork oder einer ähnlichen Subſtanz belegt werden, (gutes trockenes Sägemehl iſt gut), und dann mache man einen ebenſolchen Deckel. Ein Käſemacher kann lernen dieſe Kiſte ſo zu gebrauchen, daß er ſeine Molke im Bereich von acht bis zehn Grad erhalten kann. Die Molke kann bei einer Temperatur von 110 Grad in dieſe Kiſte getan werden, und nach Ablauf von 12 Stunden ſollte die Temperatur nicht

weniger wie 100 Grad betragen; wenn aber die Käſer in den kalten, ja ſelbſt in den warmen Monaten ein gutes Produkt erhalten wollen, ſo müſſen ſie dieſem Molkenlab mehr Aufmerkſamkeit widmen, als dies in der Vergangenheit von der Mehrzahl derſelben getan wurde. Wir glauben, daß wenn die Käſer die Molke, nachdem der Käſe eingeweicht wurde, ausſchütten würden anſtatt vorher, ſie beſſeren Erfolg haben würden als es gegenwärtig der Fall iſt, weil die hohe Temperatur des Kochens eine kurze Zeitlang das Wochstum der unerwünſchten Bakterien unterdrückt; dies hat aber keine ſolche Wirkung auf die bulgaricus Bakterien, welche die Säure erzeugen und welche diejenigen ſind, die guten Käs machen. Das gibt den guten Bakterien eine Gelegenheit die der anderen Sorten zu überwältigen.

Wir haben dieſen Bulgaricus „ſtarter" der härteſten Probe unterworfen um ſeinen Wert zu beweiſen. Wir haben denſelben in Käſereien angewandt, wo jede Milch, die von den Lieferanten gebracht wurde, ſehr ſchlimm gasig war.

Wir gebrauchten denſelben bei Milch, der wir Kuhmiſt zuſetzten und zwar in großen Quantitäten, damit wir verſichert waren, daß die Milch vollſtändig mit Gas erzeugenden Bakterien geſchwängert war und er hat jedes Mal ſeine Arbeit getan. Wir ſind überzeugt, daß wenn dieſer, „ſtarter" mit Intelligenz und in genügenden Quantitäten gebraucht wird, es keinen Preßler oder Nißler Käs mehr geben wird. Wir haben denſelben in einer Käſerei bei Brodhead früh im Frühjahr angewendet und bevor erwartet wurde, einen guten Käs zu erhalten. Wir fanden bei dieſen Proben aus, daß wo die Farmer ihre Milch nur einmal im Tag ablieferten und die Abendmilch in einer ſo warmen Temperatur hielten, daß ſie anfing Säure zu entwickeln, wir deswegen keinen guten Käs herſtellen konnten. Nahmen wir aber dieſe Milch zweimal im Tage und behielten die Abendmilch in einem Keſſel, in leichter Abkühlung, ſo daß ſich keine Säure entwickelt hatte, dann hatten wir keine Schwierigkeit durchwegs guten Käs zu machen. Während dieſer Zeit lieferten die Farmer Milch, die ſehr ſchlimm gaſig war, aber unſer „ſtarter" überwand die Gas erzeugenden Bakterien.

Unſere einzige Unannehmlichkeit beim Gebrauche dieſes „ſtarters" iſt die Gefahr, daß Hefe in denſelben gerät, was ſehr leicht in einer Käſerei paſſieren kann mit dem Molkenlab, wie dasſelbe jetzt behandelt wird. Deswegen haben wir gelehrt eine kleine Kanne für unſeren Mutterſtarter zu gebrauchen, die ſo gemacht wird, daß un-

möglich Hefe hinein geraten kann. Diese Kanne besteht aus zwei Teilen. Die kochende Molke wird in den oberen Teil geschüttet und alle Hefe, welche darin enthalten sein mag, wird vollständig abgetötet. Nachdem dieselbe auf 100 Grad abgekühlt ist, wird ihr erlaubt in den unteren Teil zu fließen, welcher Reinkulturen von Gas erzeugenden Bakterien enthält und wo sie von der Luft absolut abgeschlossen ist. Nachdem sie 24 Stunden gestanden hat, wird sie in eine passende Quantität Molke geschüttet, welche entweder mit Dampf, oder indem sie in einen Kessel mit siedendem Wasser gesetzt wurde, sterilisiert und dann bis auf 100 Grad abgekühlt worden ist. Das Lab kann dann zugesetzt werden und dieser Mutterstarter wird die richtige Sorte Molkenlab versichern.

Sie möchten nun wahrscheinlich gerne wissen, wie wir die Augen in den vor ihnen liegenden Käsen erhielten und von denen ich ihnen sagte, daß es Winterkäse seien. Wir arbeiten jetzt an dem Problem, Augen im Schweizerkäs zu erhalten und obschon wir noch nicht gelernt haben die Zahl der Augen zu kontrollieren, so haben wir doch gelernt wie man dieselben in irgend einem, ja jedem Käs erhalten kann. Die Augen kann man erhalten, wenn man ein kleines Stück guten Käs, der nicht zu alt ist (3 bis 4 Monate alt), zerreibt mit Molke, ihn dann in Zimmertemperatur vierundzwanzig Stunden wachsen läßt und dann der Milch zufügt, zu gleicher Zeit wo der Labstarter zugesetzt wird. In dem Käse, den ich in Brodhead und in einem Käs, den der Käser bei den „Five Corners" machte, wurde zu viel Käsestarter gebraucht, deswegen mußte derselbe in einen Käsekeller gebracht werden, um zu verhüten, daß derselbe wegen zu schneller Gährung barst. Diese Käse hatten alle gute Augen, aber zu viele, und welche zu schnell wuchsen.

Ich gebe ihnen nicht gerne, bei unserem jetzigen Wissen Auskunft darüber, wie dieser „starter" für Augenerzeugung gemacht werden soll. Ich schlage vor, daß ein Viertel Pfund Käs in fünf Pfund Molken für 2000 Pfund Milch genügend sein werden, um wenigstens damit anzufangen und wenn ich eine Käserei betreiben müßte mit meinem geringen gegenwärtigen Wissen, so würde ich sicherlich diesen zerriebenen Käsestarter im Frühjahr und in kleineren Quantitäten im Sommer gebrauchen.

Es ist wahrscheinlich, daß in euren Käsereien diese Augen erzeugenden Bakterien vorhanden sind, aber es sind zu wenige Käse, welche genug Augen haben, obschon ich Käse in dieser Gegend gesehen

habe, die ohne „ſtarter" zu viel Augen hatten. Es iſt möglich und ſogar wahrſcheinlich, daß es für notwendig gefunden werden muß, während den erſten Tagen des Käſe-Reifens die Temperatur zu controllieren, um eine genügende Anzahl Augen zu erhalten.

Die meiſten eurer Käſereien ſind nicht mit einem Kühlraum verſehen und ich glaube faſt, daß zu einer Zeit es wünſchbar erſcheinen wird, den Käs von jeder Käſerei jeden Tag und ſobald er gepreßt iſt, nach einem zentral gelegenen Behandlungsort zu bringen, wo die Temperatur gehörig kontrolliert werden kann. Das mag wie eine radikale Aenderung in unſerer gegenwärtigen Geſchäftsmethode erſcheinen, wenn es aber fünf Cents zum Werte eines Pfundes Käſes beiträgt und ihn dem importierten Käs ebenbürdig macht, ſo wäre es gewiß Wert dieſe Propoſition wenigſtens zu betrachten. Ich denke, daß wenn eine große Portion der Produkte unſerer amerikaniſchen Käſereien dem beſten importirten Käs gleichgeſtellt werden könnte, ſehr wenig Vorurteil bleiben würde von Seiten der Konſumenten und unſer einheimiſche Käs würde ſich gerade ſo gut verkaufen wie der importierte.

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