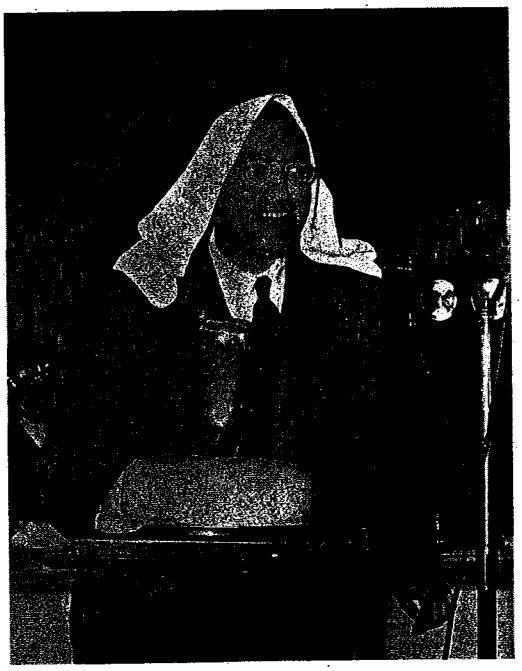
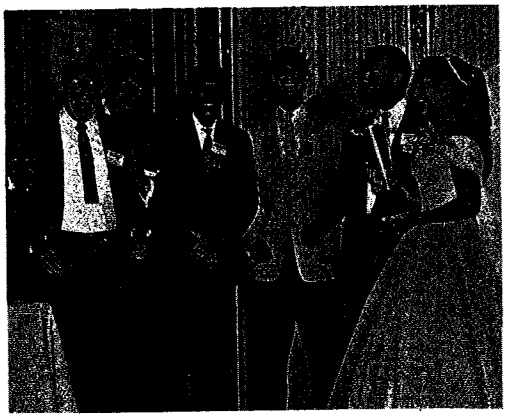
YESTERDAY, TODAY, TOMORROW

Collegiate Judging Contest Builds Dairy Leaders





Cover photos, right: Chicago 1958: All-winning Minnesota team hoists their coach, Dr. E. L. Thomas; San Francisco 1957: Max Baer gives a congratulatory hug to Dr. P. A. Downs, Nebraska coach, at a night of champions; left, Atlantic City 1939: contestants taste sample butter; Los Angeles 1949: Robert Rosenbaum peers into an upturned milk bottle protruding from a round of cheese in an effort to tell the future of the young contestants.

50 YEARS

of

THE COLLEGIATE DAIRY PRODUCTS

EVALUATION CONTEST: A Review

G. Malcolm Trout and Beatrice Prescott

Introductory

The first Collegiate Dairy Products Evaluation Contest was held in Springfield, Massachusetts, in 1916, in connection with the National Dairy Show, sponsored by the National Dairy Association. Nine Colleges were represented in the contest. Butter was the only product judged at that time, milk and Cheddar cheese being included a year later. Ice cream was added in 1926 and cottage cheese was introduced in 1962. These dates mark the beginnings of organized milk products quality evaluation as the program is carried on today.

From this initiation in 1916, the "Students Butter Judging Contest," as the contest was then known, has come a long way. Despite the frustrations and handicaps of a developing project, plus interferences of World Wars I and II, the Collegiate Dairy Products Evaluation Contest has compiled a phenomenal record of growth and industry participation. In 1956, at Atlantic City, 33 college and university teams, of three members each, participated in that outstanding and colorful event. That entry record has neither been broken nor tied. The closest approaches to it were the 30 teams entered in Chicago in 1958, and the 28 in Chicago in 1962. Notwithstanding a shortage of dairy and food students, team entries have averaged 22 during the past ten years.

Early History

The conception of the idea for holding a dairy products judging contest furnishes a benchmark worthy of note. *Hoard's Dairyman* (1913, p. 447) reported that the Official Dairy Instructors' Association (the name was changed four years later to the American Dairy Science Association) voted unanimously (75 members present) "for the organization of butter scoring contest conducted along lines similar to the student dairy cattle contest."

One must recall that the chief dairy product of commercial interest at that time was butter. In fact, at the very meeting when the unanimous vote was cast to inaugurate the contest, the Association likewise voted "for an 80% fat standard in salted and unsalted butter." Not surprising then, three years later, 1916, when the first dairy products judging contest was held, that the only product scored *was* butter. At that time the milk and ice cream industries were in their infancies.

Despite many handicaps the "Student's Butter Judging Contest" held in Springfield, Massachusetts, in October, 1916 was highly successful. *Hoard's Dairyman* (Nov. 10, 1916, p. 554) reports:

> *"Students from nine agricultural colleges competed in the first butter judging contest held at the National. The Massachusetts Society for the Promotion of Agriculture gave very liberal prizes for winning teams and individuals, and it was largely instrumental in making their contest possible."*

The prizes indeed were generous for the period. Cash prizes of $150, $100, $50 and $25 were awarded to the teams ranking first to fourth, respectively. Prizes for similar ranking individuals were $75, $50, $30 and $20.

The First ADSA Dairy Products Judging Committee

Carrying a contest to completion in 1916 without tried rules, precedent or previous contest experience must have been a harrowing experience for those directly involved in its administration. The dedication of a few men to a cause benefiting an evolving industry was evident. Those men, members of the earliest ADSA dairy products judging committee of record, were W.P.B. Lockwood, chairman, M. Mortensen, C.B. Lee, E.S. Guthrie, H.C. Mills and R.L. Lawry.

Credit must go to Prof. W.P.B. Lockwood, University of Massachusetts, Amherst, and to S.C. Thompson and William White, United States Department of Agriculture, Washington, D.C., who probably experienced the greatest difficulty in getting the contest under way in 1916, restaging it in 1917, and reinstating the event in 1919 after a near failure in 1917 and a lapse of two years due to World War I.

As chairman, Professor Lockwood took the initiative. He reported, in part, "I wrote to members of the committee relative to changing the methods, etc., for conducting the contest, but received few answers." This lackadaisical attitude on the part of some committee men in itself could have been defeating, but was inconsequential compared to the potential confrontation which existed in the distinguished memberships of rival or near-competing committees. Of the ADSA's 19 committees in 1917, 12 or 63% (not counting Lockwood's "Methods of Conducting Students Dairy Products Judging Contest") were concerned in one way or another with quality, standards, brands, marketing, score cards, etc., of milk and its derivatives. Membership on these committees comprised a "Who's Who" of the dairy leaders not only of that day but for all time.

Not surprising then that Professor Lockwood, in his annual report before the American Dairy Science Association meeting in 1917 (*J. Dairy Sci.* 1: 425-427), pointed out some of the problems confronting them:

> *"The students' judging contest for dairy products was carried on under adverse conditions this year . . . It cost more money to run our contest than to run the cattle judging contest . . . It would seem that the judging of dairy products deserves pretty nearly as good a place as the judging of cattle, and we can get it; but the attitude is not towards it; and we will have to create this attitude . . . When we find a high grade of butter, score it, discuss it and carry back to our institutions the ideas and standards that we will have to meet in our production . . . I believe manufacturers will put up a manufacturer's scholarship. Possibly a group of manufacturers, or interested men, may be persuaded to contribute a small amount each for its support."*

The Second Contest, Columbus, 1917

The second contest held in Columbus, Ohio, in 1917 was a near failure with only three teams entered, two outstate-Nebraska and South Dakota. The financial support of the Massachusetts Society for the Promotion of Agriculture was wanting, but the Massachusetts Society, yet enthusiastic about the contest, could not grant support of projects beyond the borders of Massachusetts. Funds had to be sought elsewhere. Despite low participation, the contest did yield some plus values, namely, that products other than butter could be included successfully in the judging and that some universities believed in the worthwhileness of the contest.

Team entries in the early contest

Team participation in the seven contests from 1916 to 1923, inclusive, averaged seven. Only once during that period did the number reach nine, that of the first contest. For the next six years, 1924 to 1929, inclusive, the number of team entries per year averaged nearly 13.

One must recall that from 1916 to 1929 the dairy products judging con-

tests were held in connection with the National Dairy Association's dairy cattle show. Since limited or no college funds were available then to defray team expenses, the number of team entries was small and those for judging products were even smaller. Often the dairy products judging teams were composed, in part, of one or more students from the dairy cattle judging team. Conveniently, the dairy products contest was held on another day from that of dairy cattle judging, to benefit such student participation.

Team entry from 1930

The affiliation of dairy products judging with the Dairy and Food Industries Supply Association in 1930 was the beginning of a new era in quality evaluation. No longer did the products judging event play a secondary role. Only once in the following 37 contests did team entries fall below 15 (1939, San Francisco). Team entry average from 1916-1929 was 9.6; that from 1930-71 was 21.9; and that for the 50 contests has been 18.6. Team participation by years is shown in table 5.

San Francisco 1939: National Farm and Home Hour, familiar to millions of listeners of NBC's Blue Network, broadcasts the Contest nationwide. Host Don Thompson, right, is joined by William White, contest superintendent, center.

Industry Participation

From 1916 to 1929, inclusive, the Contest was sponsored solely by the American Dairy Science Association and the United States Department of Agriculture with little or no help from the industry which the contest was designed to serve. For 14 years the dairy products judging event was held in connection with the National Dairy Show, largely a dairy cattle exposition, holding secondary interest to the dairy manufacturing students, although the then "new" dairy machinery was generally exhibited, more or less as a side event.

ADSA, DFISA and ADA co-sponsor contest

By the late twenties leaders in the young but fast growing dairy industry recognized the benefits being derived from the contest, and industry participation began. Dairy and Food Industries Supply Association, known then as Dairy and Ice Cream Machinery and Supplies Association, became a co-sponsor in 1930 and established its Dairy Industrial Research Program. Since that time all contests have been held concurrently with the Food and Dairy Expositions and/or with the conventions of the Milk Industry Foundation and the International Association of Ice Cream Manufacturers. In 1971, the American Dairy Association became a co-sponsor. Since then the contests have been sponsored jointly by the American Dairy Science Association, the Dairy and Food Industries Supply Association, and the American Dairy Association.

Cooperation of trade associations

The cooperation of the Milk Industry Foundation, the International Association of Ice Cream Manufacturers, the American Butter Institute, the National Cheese Institute and the American Cultured Products Institute must be recorded. While each or all of the five processor associations have cooperated fully over the years in the furnishing and presentation of awards, they now take a more active part in the planning and staging of the contest, the awards banquets and/or breakfasts. Today, the Collegiate Dairy Products Evaluation Contest enjoys full, industry-wide support.

Credit to those who envisioned industry support

Much credit is due a few farsighted people who dreamed of and diligently worked to initiate and achieve this industry-wide support. In 1928, Prof. P.S. Lucas, Michigan State University, conceived the idea of industry

participation and Prof. Robert B. Stoltz, Ohio State University, foresaw the need for Dairy Industrial Research. Together with Prof. Howard B. Gregory, Purdue University, Roberts Everett, DFISA, and a committee headed by K.W. Schantz, DFISA president, they made the plans and did the groundwork. The first DFISA-supported contest was held in Cleveland during the 1930 Dairy Industries Exposition and Conventions. Forty-one years later, the 50th Collegiate Dairy Products Evaluation Contest was held as an all-industry supported event of the 1971 Dairy Conventions in San Francisco. (No contests were held during World Wars I and II.)

In retrospect

Thus, the contest has now become a bond between the colleges and universities, young students majoring in dairy and food science and every branch of the industry--dairy and food industry supplier-equippers, dairy processors, dairy farmers and their cooperatives. The contest is manifest proof of the importance to the industry of milk and dairy products quality control, on the farm, through collection, processing, and distribution to the consumer. The dairy industry has long enjoyed first place among all food industries in its devotion to and insistence upon quality. In large part, this enviable position was established and is maintained by the Collegiate Dairy Products Evaluation Contest.

Industry leaders P. S. Lucas, left, and R. B. Stoltz.

Co-sponsor Responsibilities

Mr. Martin Framberger, American Dairy Association, Dr. G.G. Quackenbush and Mrs. Veda Keeton, United Dairy Industry Association, and Dr. Robert T. Marshall, University of Missouri, 1971 chairman of the ADSA Committee on Dairy Products Evaluation, worked out present arrangements for participation by each co-sponsor.

ADSA

The American Dairy Science Association, through its Dairy Products Evaluation Committee, is responsible for contest rules, handling entries, credentials, hotel reservations, etc. Since the contest superintendent is a member of the ADSA Committee, ADSA is indirectly responsible for conducting the contest in accordance with the rules. Also, the ADSA committee develops, and, when necessary, revises the Official Score Cards. These are known and used throughout the entire dairy industry as the "Standard Score Cards," and have aided in the establishment of uniform evaluation standards throughout the U.S. and Canada.

DFISA

Dairy and Food Industries Supply Association provides a $300 travel allowance for each team entered in the contest. This team grant is in lieu of the Dairy Industrial Research Fellowships which the Association awarded to contest winners from 1930 to 1967, inclusive, a period covering 38 years.

Also, Dairy and Food Industries Supply Association plans and stages the contest and, in Exposition years, furnishes the contest site. DFISA also cooperates with other associations in the presentation of awards and, through its members, furnished most of the needed equipment and supplies. And furthermore, from 1930 through 1970, DFISA provided the necessary funds and services now assumed by farmer supported UDIA associations.

ADA-DRINC

In 1971 and 1972 American Dairy Association - since 1973, Dairy Research, Inc. took over ADA's role - allocated the funds for staging and publicizing the contest, air-shipping the samples, providing secretarial and clerical help and all other expense items not furnished gratis by other organizations. The UDIA organizations also assist with staging the very impressive awards breakfast or awards banquet honoring the contestants and coaches, and shares with the other cooperating associations in the presentation of awards to winners.

USDA

From the beginning, the superintendent of the contest has been an official from the United States Department of Agriculture. In more recent years an assistant superintendent from USDA has also served.

The industry

The entire industry is an active participant in the contest. Dairy processors from all over the United States and Canada donate samples, which are air-shipped to the city where the contest is held. Supply people and processors furnish the many items of equipment and supplies needed by the judges and contestants or for proper handling of the samples. Companies and organizations give the services and pay the travel expenses of their employees who serve as judges or as superintendents. Dairy and food trade publishers promote the contest and, for 42 years, have furnished and distributed reprints of Dairy Industrial Research papers.

Judging program widely acclaimed

The wholehearted enthusiasm of the representatives of the various colleges, American Dairy Science Association, Dairy and Food Industries Supply Association, farmer-supported UDIA associations and the U. S. Department of Agriculture in staging the contest bespeaks the fine relationship which exists between the commercial and educational forces of a great industry.

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ADSA

UDIA

UNITED STATES DEPARTMENT OF AGRICULTURE
1862 AGRICULTURE IS THE FOUNDATION OF MANUFACTURES AND COMMERCE 1889

DAIRY AND FOOD INDUSTRIES SUPPLY ASSOCIATION

american dairy association

Dairy Industrial Research Fellowships

The enthusiasm for dairy products quality evaluation was given great impetus in 1930 by the establishment of six Dairy Industrial Research Fellowships by Dairy and Food Industries Supply Association. Each fellowship carried a stipend of $750, which was sufficient then for maintaining a graduate student for one year. During that time the recipient was required to study a problem pertaining to the dairy industry. Originally, the fellowship was awarded to the winning individual, but after a four-year trial period, 1930 to 1933, the fellowships were presented to the winning teams; the awardees being selected later by the dairy faculties of the universities represented.

Number of fellowships reduced

In 1938, the number of fellowships was reduced from six to three, but their values were increased periodically. Later, a proviso was attached to the number of fellowships awarded. Three fellowships, in amounts of $2,500, $2,350 and $2,200, were offered yearly for the first, second and third-place team standings, respectively, whenever 25 or more teams were entered during an Exposition year, or 21 teams in a year when no Exposition was held.

Meanwhile, government grants and loans for graduate studies were becoming more plentiful. Hence, the DFISA Fellowships became less necessary. And as college, hotel and travel expenses increased sharply, a greater financial burden was being placed upon the colleges for the training of teams and sending them to the contest. Accordingly, DFISA reduced the fellowships to two, but at the same time contributed $100 toward each team's expense. This action met with such deep appreciation by the students and coaches that in 1968 DFISA suspended the Fellowship program and increased its travel allowances to $300 per team.

Research Under the Dairy Industrial Fellowships

The completed theses, technical and popularized articles resulting from the research studies, indicated by the 107 fellowships granted under the direction of dairy and food scientists at the leading agricultural colleges and universities, and representing hundreds of thousands of dollars of research, have been outstanding contributions to the dairy literature. The great advancement of the dairy and food industries throughout the 1930s, 40s, and 50s was due in no small part to the DFISA Dairy Industrial Research Program. The basic research on many of the dairy processes and conveniences we take for granted today was accomplished by Dairy Industrial Research Fellows and the scientist under whom they worked.

Fellowships furnish a broad scope for learning

During the period 1930 through 1967, 107 Dairy Industrial Research Fellowships were awarded to as many individuals in 28 different colleges. Graduate studies under these fellowships were undertaken at 20 universities. Rules under which the research grants were made required that a Dairy Industrial Fellow pursue graduate work at an institution other than his own alma mater which had participated in the contest. Thus, a broader scope of learning and wider personal contacts were automatically provided in the research program.

Scientific papers

Virtually all the graduate studies under the fellowships up to World War II resulted in a scientific paper, published under the co-authorship of the fellow and his guiding professor. These are listed, by year of the fellowship grant, in Table 8.

Atlantic City 1948: Two Fellowship recipients who conducted the first U.S. research on dairy plant cleaning time studies and cleaned-in-place pipelines receive All Products Medals. They are William Shiffermiller, center, Ohio State, and Donald Moore, right, Michigan State. The other medal recipient is Donald Pflueger, Iowa State. Making the presentations are Dr. G. M. Trout, left, ADSA president, and John Mulholland, honorary DFISA president.

Devotion to Contest Heartening

Colleges

Long records of contest participation are held by many of the schools. A total of 50 United States and Canadian schools have entered the 50 contests held from 1916 to 1971. Five of those schools have entered 40 or more contests. Mississippi State University, with 40 contests to its credit, holds the longest, continuous entry record, having entered every contest since 1927; and Connecticut with 40 entries, has not missed since 1939. University of Nebraska has entered 44 of the contests, 35 of them with the same coach. Iowa, with 44 entries also, has missed only four contests since 1919. Ohio State University leads all schools with 48 entries, missing only the 1927 and 1970 contests.

Individuals

Several men have records of long contest participation. C.J. Babcock, P.A. Downs, G.M. Trout, and N.E. Fabricius were affiliated with the contest as official judge, superintendent, coach, and/or committee men for a total of 135 years.

The active participation for 31 years of C.J. Babcock, United States Department of Agriculture, 13 years as an official judge and from 1941 until his death in 1958 as Superintendent of the Contest, reflects the intrigued interest and loyalty of those associated with the contest.

To Dr. P.A. Downs of the University of Nebraska goes the unique credit and distinct honor of having coached and entered judging teams in every contest from 1924 to 1958, inclusive -- 35 years -- until his retirement from the University in 1959. No other coach has such a record of continuous, uninterrupted participation in the Collegiate Dairy Products Evaluation Contest. Professor Downs has the further distinction of having given 33 years of faithful, loyal, uninterrupted service to the Dairy Products Evaluation Committee, formerly known as the Committee on Judging Dairy Products, American Dairy Science Association, the committee formulating the rules for the Collegiate Students' International Contest in Judging Dairy Products.

Dr. G.M. Trout, Michigan State University, became vitally interested in the contest in 1924 when he coached his first of 13 dairy products judging teams. From 1937 to 1959 he was a member of the Committee on Judging Dairy Products, American Dairy Science Association, serving as Chairman

for 21 years. Thus, his active participation in the contest as a coach and committee member spanned 35 years. His obsession over the worthwhileness of the contest as an educational medium for improving the quality of dairy products and as a stimuli in developing dairy leaders is reflected in the high level of team participation during his chairmanship.

Dr. N.E. Fabricius served the contest for 34 years, as coach of the Iowa State University team from 1937 to 1946, as Official Butter Judge from 1947 to 1959 and as the first and only All Products Judge from 1960 until his death shortly after his last contest in 1970.

Sponsors

To give credit in detail to those in Dairy and Food Industries Supply Association and the American Dairy Association who gave unstintingly of their time and financial resources would call for a lengthy cataloging which must not be attempted in this brief history. A complete record would include officers, directors, committee men and staff members. It would include, too, everyone of the 400 companies comprising Dairy and Food Industries Supply Association and the thousands of members of the American Dairy Association. The support of their Associations' sponsorship of the contest is highly appreciated by the educational group and the entire dairy and food industry it serves.

The second milers

Out of deep appreciation and fairness to all, one must not let go unrecorded the special yeoman service rendered by Frieda Everett and Beatrice Prescott for over two-score years. Mrs. Roberts Everett carried the torch for effective publicity whereas Mrs. Prescott looked after the many details necessary to the staging of a successful contest all the way from the coaches' meeting to the Awards Dinner. The standing ovation accorded Mrs. Prescott by 350 student affiliates and college professors at East Lansing in 1971, bespoke their endearment for her outgoing personality and for her unquestioned love for "her boys" -- the fine young university men and women who make up the judging teams year after year -- that mere words fail to express. Truly, these two women have gone "the second mile."

Atlantic City 1948 (left photo): Coaches and judges tabulate score cards. From left, F. H. Herzer, E. N. Fabricius, J. Hoffman Erb, P. A. Downs, and E. O. Anderson; (right): DFISA president Ray Olsen addresses awards dinner. Sharing the head table are Ben Brown, left, president of the International Association of Ice Cream Manufacturers, and Roberts Everett, DFISA executive vice president.

Foundation Committees in Cooperation

The Collegiate Dairy Products Evaluation Contests, the dream of the Official Dairy Instructor's Association (parent of the American Dairy Science Association) in 1913, have been guided in the 50 contests from 1916 to 1971 by committees of ADSA and DFISA, working independently or together. The first ADSA committee was appointed prior to 1916; that of DFISA in 1928.

The ADSA contest committee inaugurated the contest and nurtured it during the 13-year growth period prior to 1930. Both ADSA and DFISA committees guided the contests from 1930 to the present.

The Score Card Committee

In the early period of the contest, another ADSA committee, the Score Card Committee, was of material aid in the development of the contest. The score card and judging committees worked separately, yet aided each other in the common goal of improving the quality of dairy products.

The personnel of the two ADSA committees furnish a roster of dairy leaders worthy of note. First, the Score Card Committee. This committee came into being in 1915, functioned for nearly two-score years and then was dissolved, having virtually completed its assignment. J.H. Frandsen was chairman of this committee for 16 years. During that time his committee included H.B. Ellenberger, M. Mortensen, S.C. Thompson, Ernest Kelly, W.P.B. Lockwood, W.W. Fisk, J.L. Sammis, B.W. Hammer, L.A. Rogers, O.F. Hunziker, J.A. Gamble, and A.C. Baer.

Following a five-year lag phase the Score Card Committee was reinstated in 1939, with added emphasis being placed on farm and dairy inspection. The new committee, composed of C.J. Babcock, chairman, L.H. Burgwald, A.D. Burke, C.L. Roadhouse and H.E. Ross remained intact from 1939 to 1942, was phased out during the war years, and was not reactivated.

The ADSA Contest Committee

The Committee on Collegiate Dairy Products Evaluation during the formative years prior to affiliation with Dairy and Food Industries Supply Association in 1930 consisted of W.P.B. Lockwood, M. Mortensen, E.S. Guthrie, S.C. Thompson, William White, J.H. Frandsen, R.B. Stoltz, H.W. Gregory and P.A. Downs, each of whom served from three to six years. Others

during that period serving from one to three years were C.E. Lee, H.C. Mills, R.L.Lang, C. Larson. A.M. Rudnick, H.F. Judkins, P.S. Lucas, J.R. Keithley, J.A. Gamble, J.C. Wright, V.D. Chappell and G.D. Turnbow.

During the first 10 years, 1916 to 1926, the committee chairmanships usually rotated yearly. While much progress was being made during this period, historians are forced to record that considerable floundering and lack of purposeful continuity prevailed. Prof. R.B. Stoltz, Ohio State University, became chairman in 1926. His was the first of three long-term chairmanships: Stoltz, 8 years; Gregory, 4 years; and Trout, 21 years.

During the tenure of Professor Stoltz' committee, which up to that time had served the period of longest duration, from 1926 to 1934, the visions of Professor Lockwood came to fruition in the form of more favorable conditions for scoring, incentives, financial support, and industrial fellowships. To Professors Stoltz' and Gregory's committee fell largely the responsibility of setting up a workable program between ADSA and DFISA for judging dairy products and for administering the research-fellowships provided by DFISA. To Professor Trout's committee fell the pleasant task of continuing the administration of the fellowship program, keeping in touch with the Fellows, making studies of certain phases of judging and working closely with DFISA in maintaining enthusiasm for the entire program. As a result, the Committees have kept in contact with many contestants, especially the Dairy Industrial Research Fellows, through the years and have compiled much information on the history, development, and influence of the contest. Twenty-three articles resulting from the ADSA Committee's studies have been published. For the record, these are:

(1) White, W., Downs, P.A., Mack, M.J., Fouts, E.L., and Trout, G.M. 1939. History and development of the students' National Contest in Judging of Dairy Products. *J. Dairy Sci.* 22: 375-387.

(2) Trout, G.M., White, E., Mack, M.J., Downs, P.A., and Fouts, E.L. 1939. The Dairy Industrial Fellowship Research Program. *J. Dairy Sci.* 22: 767-777.

(3) White, W., Downs, P.A., Mack, M.J., Fouts, E.L., and Trout, G.M. 1940. Correlation between grades on scores and grades on criticisms in the judging of dairy products. *J. Dairy Sci.* 23: 1-12.

(4) Trout, G.M., White, W., Downs, P.A., Mack, M.J., and Fouts,E.L. 1940. Official flavor criticisms of dairy products judged in the national contest. *J. Dairy Sci.* 23: 325-330.

(5) Trout, G.M., White, W., Downs, P.A., Mack, M.J., and Fouts,E.L. 1941. Official body and texture criticisms of dairy products judged in the national contest. *J.Dairy Sci.* 24: 65-70.

(6) Trout, G.M., White, W., Downs, P.A., Mack, M.J. and Fouts, E.L. 1941. An analysis of contestant judgments in the scoring of dairy products with a study of some factors which may affect them. *J. Dairy Sci.* 24: 649-658.

(7) Trout, G.M., Downs, P.A., Mack, M.J., Fouts, E.L. and Babcock, C.J. 1942. Percentage distributions of specific flavor scores of butter, cheese, milk and ice cream as designated

by dairy products judges. Rpt. 37th Ann. Meeting, Amer. Dairy Sci. Assoc., Michigan State College, East Lansing, 14 pp. (Mimeo). June, 1942.

(8) Trout, G.M., Downs, P.A., Mack, M.J., Fouts, E.L., and Babcock, C.J. 1942. The evaluation of flavor defects of butter, cheese, milk and ice cream as designated by dairy products judges. *J. Dairy Sci.* 25: 557-569.

(9) Trout, G.M., Downs, P.A., Mack, M.J., Fouts, E.L. and Babcock, C.J. 1943. Comparative standardization of butter, cheese, milk and ice cream flavor scoring. *J. Dairy Sci.* 26: 63-68.

(10) Trout, G.M., Anderson.E.O., Babcock, C.J., Downs, P.A. and Herzer, F.H. 1948. An analysis of the results of the 1947 Collegiate Students' International Contest in Judging Dairy Products. *J. Dairy Sci.* 31: 823-829.

(11) Trout, G.M., Anderson, E.O., Babcock, C.J., Downs, P.A. and Herzer, F.H. 1951. The Collegiate Students' International Contest in Judging Dairy Products--1916 through 1950. 24 pp. (Mimeo) 7 tables. Dairy and Food Industries Supply Association, Inc., 1145 19th St., N.W. Washington, D.C. 20036.

(12) Trout, G.M., Anderson, E.O., Babcock, C.J., Downs, P.A., and Herzer, F.H. 1954. Proficiency in judging dairy products as shown by an analysis of the contestant score cards. *J. Food and Milk Technol.* 17: 188-189.

(13) Downs, P.A., Anderson, E.O., Babcock, C.J., Herzer, F.H. and Trout, G.M. 1954. Evaluation of collegiate student dairy products judging since World War II. *J. Dairy Sci.* 37: 1021-1026.

(14) Anderson, E.O., Babcock, C.J., Downs, P.A., Herzer, F.H., and Trout, G.M. 1955. Student judging effective tool for industry training. *Amer. Milk Rev.* June, 1955, 4 pp.

(15) Babcock, C.J., Dowd, L.R., Downs, P.A., Thomas, E.L., Warren, F.G., Willingham, J.J., and Trout, G.M. 1957. University participation in the Collegiate Students' International Contest in Judging Dairy Products. (Annual Report). *J. Dairy Sci.* 40: 1639-1643.

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dairy products-judging contestants. II. What salaries do dairy products-judging contestants get after graduation? *J. Dairy Sci.* 41: 1826-1832.

(19) Babcock, C.J., Dowd, L.R., Downs, P.A., Thomas, E.L., Warren, F.G., Willingham, J.J. and Trout, G.M. 1959. Survey of dairy products-judging contestants. III. Dairy industry training in retrospect. *J. Dairy Sci.* 42: 715-723.

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(21) Trout, G.M., and Prescott, Beatrice. 1963. The Collegiate Students' International Contest in Judging Dairy Products, 1916 to 1962. 28 pp. 8 tables. (Multilith) Dairy and Food Industries Supply Assoc., 5530 Wisconsin Ave., Washington, D.C. 20015.

(22) Trout, G.M., and Prescott, Beatrice. 1964. The Collegiate Students' International Contest in Judging Dairy Products, 1916 to 1963. 30 pp. 8 tables. (Multilith) Dairy and Food Industries Supply Assoc., 5530 Wisconsin Ave., Washington, D.C. 20015.

(23) Trout, G.M., and Prescott, Beatrice. 1967. The Collegiate Students' International Contest in Judging Dairy Products, 1916 to 1966. 35 pp. 9 tables. 2 charts. (Multilith) Dairy and Food Industries Supply Association, 5530 Wisconsin Ave., NW, Washington, D.C. 20015.

DFISA and ADA committee publications

Dairy and Food Industries Supply Association and its committee have also published several articles on the contest. These are:

(1) DFISA, 1947. Collegiate Students' International Contest in Judging Dairy Products and Research Fellowship Program. (Press release)

(2) DFISA, 1949. Collegiate Students' International Contest in Judging Dairy Products and Research Fellowship Program. (Press release)

(3) Babcock, C.J., 1953. A tested basis for international uniformity in judging dairy products. XIIIth International Dairy Congress (*The Hague*) 3: 1567-1570.

(4) DFISA, 1970. Many two-year colleges train students for dairy and food industry careers. (Press release)

(5) DFISA, 1970. Collegiate Dairy Products Evaluation Contest partial directory of participants. (Press release)

Naturally, in a brief review of this kind, all the salient facts connected with the contests cannot be presented adequately. The tables and charts appended hereto give concisely the historical data associated with the Collegiate Dairy Products Evaluation Contest. An index of the tables and charts is presented on page 26.

Contemporary Committees

The Contest and Fellowship Committee of Dairy and Food Industries Supply Association, its oldest standing committee, has worked hand in hand with the American Dairy Science Association Dairy Products Evaluation Committee since 1928 to help develop and advance the Collegiate Dairy Products Evaluation Contest in all of its ramifications and influences. Recently, the farmer-supported United Dairy Industry Associations - ADA and DRINC - have joined these two old-time groups to further the best interests of the contest.

DFISA

In the past 30 years the DFISA Committee has had but five chairmen: R.J. Ramsey, Laboratories, Inc.; Al Woodruff, Mojonnier Bros. Co.; Fred Fleming, The DeLaval Separator Company; Charles Weinreich, Cherry-Burrell Corporation; and the present Chairman, Dan Roahen, CP Division St. Regis, who has served since 1966, and earlier as vice-chairman. Bert W. Taylor, Dairy-Pak Division, U.S. Plywood-Champion Papers, Inc., is the present vice-chairman.

Other members are: Ray J. Alberts, Potlatch Forests; George A.M. Anderson, The King Company; Clark Derleth, Kusel Dairy Equipment Co.; James E. Fike, Pennwalt Corporation; George L. Huffman, Ex-Cell-O Corporation; Robert Orrell, Drumstick Company; Otis Ross, National Pectin Products Co.; Vernon T. Smith, Germantown Manufacturing Co.; and Frederick Wegner, Stoelting Brothers Co. Some members of the Committee also serve as DFISA Associate Judges and assist the official judges of the various products; they are: Milk, Dan Roahen; Butter, Ray J. Alberts; Cheddar cheese, Frederick Wegner; Ice cream, Otis Ross. Bert Taylor also serves as an assistant superintendent.

ADSA

The American Dairy Science Association Dairy Products Evaluation Committee inaugurated and directed the early growth of the contest. Since 1930, the ADSA and DFISA committees have worked closely. The ADSA Committee's work throughout 40 years with the DFISA Contest and Fellowship Committee not only with the contest itself but also in the administration and guidance of the Dairy Industrial Research Fellowship program has been mutually a most satisfying experience and service. Many of the fellowship winners have been encouraged by the joint activities of these committees; and, thus, many have developed into distinguished educators, scientists and/

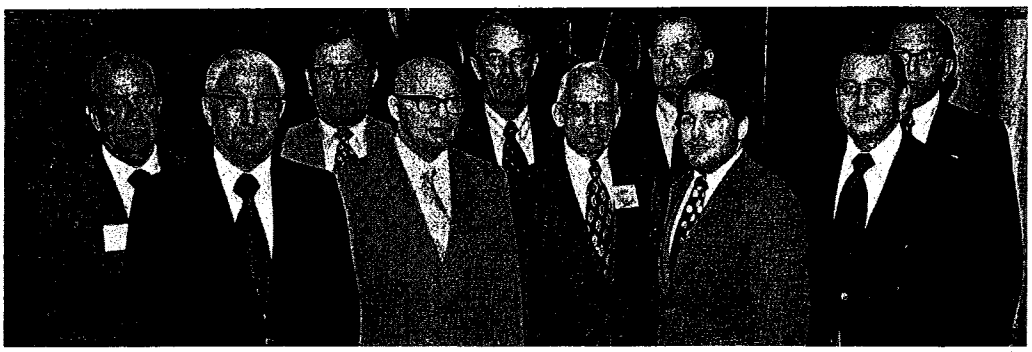
or leaders in the dairy and food industries. The high level of team participation in the contest reflects the existing wholesome relationship between the two committees. In the 13 contests held prior to 1930 the average number of college teams participating in the contest was 10, from 1930 to 1937, inclusive, the average number of teams was 17, and since then the average has been 24 teams.

As mentioned previously, R.B. Stoltz, Ohio State University, chaired the ADSA Committee from 1926 to 1934; H.W. Gregory, Purdue University, 1935-1937; and G.M. Trout, Michigan State University, from 1938 to 1959. G.M. Trout was followed by E.L. Thomas, University of Minnesota, 1959-1962; L.R. Dowd, University of Connecticut, 1963-1965; W.L. Slatter, Ohio State University, 1966-1967; Joseph Tobias, University of Illinois, 1968; R.T. Marshall, University of Missouri, 1969; and since 1970 E.W. Custer, Mississippi State University. Other present members of the Committee are R.J. Baker, South Dakota State University; C.J. Cosgrove, University of Rhode Island; D.D. Deane, University of Wyoming; R.T. Marshall, University of Missouri; E.T. McGarrahan, U.S. Food and Drug Administration; H.E. Meister, U.S. Department of Agriculture; N.F. Olson, University of Wisconsin, and E.L. Thomas, University of Minnesota.

Others serving on the committee for various periods since 1930 include William White, H.A. Bendixen, P.S. Lucas, R.W. Smith Jr., M.J. Mack, E.L. Fouts, E.O. Anderson, F.H. Herzer, F.G. Warren, J.J. Willingham, F.J. Doan, W.S. Rosenberger, and J.H. Gholson.

UDIA ASSOCIATIONS-ADA-DRINC

The staff heads and Board of Directors of these associations have given support to the planning and financing of the contest and the awards breakfast.



Official judges, 1973, from left, Ray Alberts, Bert Aldrich, John Ellingson, Everett Byers, Robert John, Otis Ross, Luther Elkins, Dr. George Muck, Fred Wegner and Ed Egermaier.

The Superintendents

S.C.Thompson, United States Department of Agriculture, superintended the first few contests and laid the ground work for the present contest. The Department recognized the value of the contest as a means of improving the quality of dairy products and maintaining a close liaison with the agricultural colleges. A member of the Department has superintended each of the contests since its inception. Following Mr. Thompson's death, William White became superintendent and gave 19 years of faithful and fully appreciated service. C.J. Babcock became superintendent in 1941 and served until his death in 1958. He was followed by L.H. Burgwald, 1958 through 1961, and Dr. Byron H. Webb, 1962 through 1965. Harold E. Meister, the present Superintendent, has served since 1966.

Los Angeles 1949 left: Superintendent Babcock and Mrs. Beatrice Prescott, secretary of the Contest and Fellowship Committee, prepare contest awards; Washington, D.C. 1961: Superintendent Burgwald, right, honors W. J. Leipis, top cheese judge; Montreal 1965: Superintendent Webb, right and DFISA President Fred King, center, present All Products bowl to Joseph Tobias.

Los Angeles 1967: Superintendent Meister, right, with team from Minnesota, from left, V. L. Grove, California Dairy Princess Mary Lou King, J. Goehle and G. Koenig.

The Official Judges

The Official Judges, who select the products to be judged and place an evaluation thereon, contribute materially to the success of the annual contest. As far as possible they, or their companies, provide many of the samples and since 1970 have paid all of their hotel, travel and other contest expenses.

Originally the name of the Official Judge was a closely guarded secret until after the contest was underway. But since 1932, attempts have been made to retain the same judges year after year. Their continuity of service has had a stabilizing influence in establishing quality standards.

The Official Judges have been selected from commercial and usually nonuniversity ranks, each having attained proficiency in his area. Those on butter have been Bert Aldrich, C.E. Eckles, L.S. Edwards, N.E. Fabricius, L.E. Gaylord, G.A. Gilbert, H.W. Gregory, O.S. Hagen, C.L. Pier, L.D. Reekie and H.D. Reynolds.

In the judging of Cheddar cheese, the list of official judges includes E.L. Aderhold, W.E. Ayers, C.W. Fryhofer, G.A. Gilbert, Robert Johns, L.H. Marlatt, J.W. Moore, G.N. Tobey, William White, and H.L. Wilson. The "dean" of cheese judging was Harry Wilson, who first judged the Cheddar cheese class in 1929 and, with two exceptions, was the official for the next 30 years.

The list of official milk judges has been comparatively short, including such authorities as C.J. Babcock, R.W. Bell, C.E. Clement, F.M. Grant, Ernest Kelly, D.S. Leete, Donald Pettee, R. J. Posson, and R. Whitaker. Babcock's long period of service contributed much in setting the standards for milk judging.

The ice cream judges have been Everett Byers, A.D. Burke, A.C. Dahlberg, J. Hoffman Erb, H.F. Judkins, W.H.E. Reid, P.H. Tracy, and C.S. Trimble. Throughout the years, two judges, A.C. Dahlberg and J. Hoffman Erb, predominated the field in the number of years of service.

The first official judge of cottage cheese, introduced in the contest in 1962, was C. Ashley Wilson of the Borden Company. He was assisted by Neil Angevine of Meyer Blanke and was succeeded by George Muck.

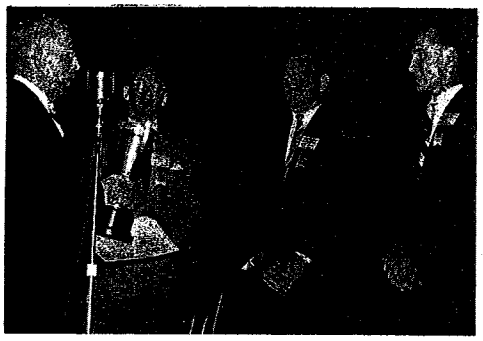
There has been only one All Products judge since establishment of the post in 1960. Dr. N.E. Fabricius was appointed and served faithfully

until his death following the 1970 Contest.

The current official judges are: butter, Bert Aldrich, Land O'Lakes Inc.; Cheddar cheese, Robert Johns, Kraft Foods; milk, Donald Pettee, retired; ice cream, Everett Byers, Jewell Foods Co.; and cottage cheese, George Muck, Dean Foods Co. As a check and balance and to lighten the load of work, each official judge may have an assistant, a DFISA associate judge and two coach judges.

One step toward extending the benefits of the contest to other branches of the food industry was taken in New Orleans in 1969 when clinics were held in the evaluation of orange juice and margarine.

Los Angeles 1949: Judge J. Hoffman Erb, bow tie, and contestants sample and record scores at ice cream freezers.



Boston 1953: Cheddar cheese judge H. L. Wilson, left, presents cheese cup to Cornell's W. Witter, B. Schlage, N. Dobert.

Trophies, Prizes, and Rules

Were it not for trophies, most contests would be quite empty. So it would have been with the Collegiate Dairy Products Evaluation Contest without the individual and team prizes and trophies.

In the first contest at Springfield in 1916, cash prizes for winning teams and individuals were provided by the Massachusetts Society for the Promotion of Agriculture. In the following early contests prior to affiliation with DFISA, awards, trophies and prizes were presented by various commercial dairy companies, organizations or individuals. Representative of these companies was the J.B. Ford Co., Wyandotte, Michigan, who, for years, furnished a large silver loving cup to a winning team.

Following affiliation and cosponsorship with DFISA in 1930, organization and continuity came into the system of awards. Then, trophies and prizes became secondary to the six fellowships awarded yearly by DFISA. Nonetheless, the trophies and prizes continued to furnish the glitter so necessary to personalizing achievement in bringing a contest to a successful conclusion.

Present Donors

The management of the contest is very much indebted to American Butter Institute, American Cultured Dairy Products Institute, International Association of Ice Cream Manufacturers, Milk Industry Foundation, National Cheese Institute, Dairy Remembrance Fund, Dairy and Food Industries Supply Association and United Dairy Industry Association for the butter, cheese, milk, ice cream and all products individual prizes and team trophies.

The cups awarded to top winning teams in each product and the silver bowl for all products are in high competition for permanent possession. They must be won three times by one university before they become its permanent possession and are retired from competition. Usually the names of many schools are engraved on a trophy before it becomes the permanent possession of an individual school. In order that the schools may have a constant reminder of their teams' victories, permanent plaques are awarded to those schools whose teams have placed first, second and third in each of the products and all products. In addition, a Coach-of-the-Year plaque is awarded to the coach of the team placing first in all products, and Dairy Remembrance Fund presents the Robert Rosenbaum Memorial Award to the individual taking first place in all products.

All of these prizes are presented at the impressive Awards Banquet,

or more recently, Awards Breakfast that has become an important event of the Exposition and Conventions week. Many of the state dairy and food associations join with the sponsors in hosting the teams and coaches.

Some recent rules changes

In 1962, out of fairness to those schools having low enrollments, the contest rules were changed to allow entry of one or two individual contestants when a full team of three was not available. Several schools have made use of this rule since then.

Another change in the contest of significance has been participation in the contest by women. This was a natural response as more and more women were enrolling in dairy and food science departments and were being accepted by the industry. At least one all-girl team has been entered in the judging event. The proficiency of women in judging dairy products has been demonstrated again and again. On two occasions girls have taken top honors in judging all dairy products.

In 1970, the Committee, with help from the DFISA Committee, conducted a survey among the two-year agricultural schools to determine the extent of their dairy and food science curricula. As a result, the contest rules were changed in 1971 to permit contest entry by teams from two-year agricultural colleges which meet certain criteria. So far none of them has entered a team, but interest is growing and several have sent students and faculty to attend the past two contests as observers. Results of the survey were distributed to the industry, which has benefitted from a better understanding and closer association with the two-year schools.

San Francisco 1939: Trophy winners, Iowa State College contest participants, from left, R. Nelson; Dr. N. E. Fabricius, coach; D. Sherman, O. Russell.

This we believe sincerely

The ultimate influence of the training in the judging of dairy products quality afforded by the contest, plus the encouraging stimuli of wider horizons to dairy graduates toward greater endeavor, is almost beyond comprehension. Since the inception of the contest in 1916, fifty contests have been held in 22 cities of the U.S. and Canada. (The contest was suspended in 1918 and from 1942 through 1946 due to World Wars I & II.) A total of 2809 contestants have actually competed in these events. Thus, these contestants and approximately 1000 alternates have had the opportunity to sample and compare cross-continent selection of major dairy products, view the Expositions, attend the annual Conventions of the Milk and Ice Cream Associations, and meet leaders of the dairy and food industry. Back of these spot-lighted young judges literally have been thousands of students trained in the evaluation of dairy products but who were not quite able "to make the team." Thus, the contest has served especially well in the institutions as an incentive and goal for the teaching of quality in dairy products. And many a leader in the dairy and food industries today owes his eminent position in large part to his training in quality evaluation and the incentive received by competing in the contest and participating in the Expositions and Conventions.

Data pertinent to the contest are presented in tables 1 to 9.

Table 1. College winning first place in the 50 Collegiate Dairy Products Evaluation Contests from 1916 to 1971* (Due to World Wars I and II, no contests were held in 1918, 1942 - 1946).

All Products

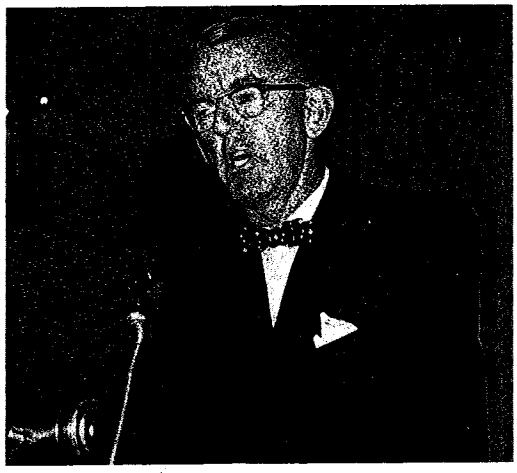
College	Year	Number
Ohio	1920 '21 '22 '29 '33 '34 '36 '37 '41 '52 '53 '64	12
Iowa	1924 '25 '26 '27 '28 '31 '39 '40 '48 '50	10
Illinois	1956 '59 '60 '61 '62 '65	6
Mississippi	1932 '35 '49 '51 '55 '71	6
South Dakota	1919 '66 '68 '69	4
Connecticut	1947 '57 '67 '70	4
Kansas	1930 '54	2
Minnesota	1958 '63	2
Pennsylvania	1923	1
Cornell(NY)	1938	1
	Total	48

Butter

Iowa	1919 '24 '27 '28 '36 '38 '39 '48 '50 '51 '54	11
South Dakota	1917 '20 '22 '25 '33 '68 '70 '71	8
Minnesota	1934 '40 '49 '58 '64 '67	6
Illinois	1959 '62 '63 '65 '69	5
Ohio	1921 '53 '56 '66	4
Connecticut	1941 '47 '57	3
Mississippi	1930 '31	2
Pennsylvania	1916 '23	2
Oregon	1926 '29	2
Tennessee	1935 '55	2
Purdue(Ind.)	1932	1
Nebraska	1937	1
Cornell(NY)	1952	1
Kansas	1960	1
Oklahoma	1961	1
	Total	50

Cheddar Cheese

Ohio	1919 '20 '21 '22 '23 '29 '52	7
Iowa	1925 '34 '50 '51 '55 '56	6
Michigan	1931 '32 '41 '48	4
Mississippi	1935 '40 '47 '49	4
Minnesota	1937 '58 '63 '67	4
Illinois	1959 '60 '65 '69	4
Connecticut	1961 '64 '66 '71	4
Tennessee	1927 '36 '54	3
Wisconsin	1933 '39	2
Cornell(NY)	1938 '53	2
Kansas	1930 '57	2
West Virginia	1928 '62	2
Nebraska	1917	1
Purdue(Ind.)	1924	1
South Dakota	1926	1
Utah	1968	1
Missouri	1970	1
	Total	49



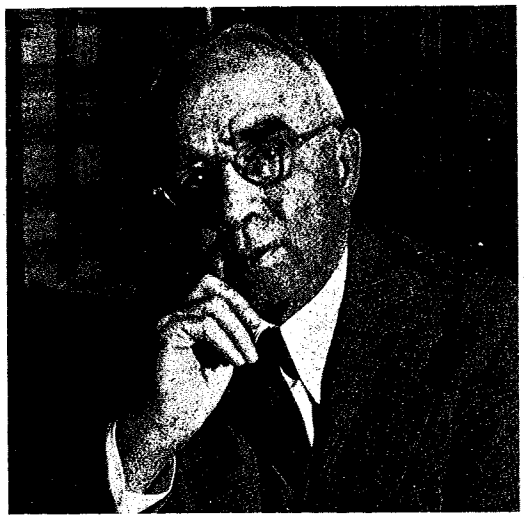
Montreal 1965: D. B. Goodwillie, left, recipient of a dairy industrial research fellowship while a college student, presides at awards banquet. He is director of the dairy products division, Canadian Department of Agriculture.

Chicago 1958: Red Grange, of football fame, right, and DFISA President D Colony, second from right, joined in honoring Michigan State's Contest te From left, coach J. M. Jensen, George Hawkins, Max Gonzenbach, Herb Mille David Siegmund and American Dairy Princess Carol Ralph.

Los Angeles 1949: Mississippi State won All Products honors under Prof. F. H. Herzer, left, who is joined by Mrs. Herzer and team members, from left, Sam Swett, Jack Stanley and Dee Graham, all cheese winners. U. S. Department of Agriculture officials, from right, are Contest Superintendent C. J. Babcock, Don Anderson and Herb Forrest.

Miami Beach 1947: Iowa State College won the Ice Cream Cup. From left, they are Ted Brunner, Prof. W. S. Rosenberger, Herluf Petersen, and Robert Anderson.

J. H. Frandsen of Amherst College, right, was one of the early pioneers on the contest committee of the American Dairy Science Association in the 1930s. He served with many others in loyal service to the contest.



Miami Beach 1947: C. J. Babcock, left, contest superintendent, and Prof. G. M. Trout, chairman of the committee on judging dairy products of the American Dairy Science Association, judge cheese samples. The All Products and Butter cups appear with them.

Milk

Ohio	1920 '21 '23 '29 '36 '38 '41 '53 '64 '67	10
Iowa	1926 '31 '39 '40 '48	5
Connecticut	1947 '50 '55 '65 '70	5
South Dakota	1917 '19 '28 '37	4
Minnesota	1958 '60 '66 '71	4
West Virginia	1925 '30 '61	3
Massachusetts	1922 '24	2
Kansas	1927 '49	2
Mississippi	1934 '51	2
North Carolina	1952 '54	2
Illinois	1933 '63	2
Tennessee	1935 '68	2
Oklahoma	1962 '69	2
Purdue(Ind.)	1932	1
Wisconsin	1956	1
Nebraska	1957	1
Cal. Polytechnic	1959	1
	Total	49

Ice Cream

Iowa	1926 '29 '39 '47 '49 '65	6
Ohio	1928 '34 '37 '53 '57	5
Massachusetts	1927 '33 '52	3
Cornell(NY)	1936 '38 '51	3
Connecticut	1940 '41 '60	3
South Dakota	1955 '64 '70	3
Mississippi	1932 '50 '71	3
Michigan	1961 '63	2
Tennessee	1948 '66	2
Cal. Polytechnic	1958 '68	2
Illinois	1930 '69	2
Vermont	1931	1
Nebraska	1935	1
Kansas	1954	1
Maryland	1956	1
Minnesota	1959	1
West Virginia	1962	1
Kentucky	1967	1
	Total	41

Cottage Cheese

Connecticut	1963 '70	2
Wisconsin	1962	1
Iowa	1964	1
Missouri	1965	1
South Dakota	1966	1
Nebraska	1967	1
Ohio	1968	1
Kansas	1969	1
Mississippi	1971	1
	Total	10

*Butter was the only product scored in the first contest in 1916. Milk and Cheddar cheese were introduced in 1917, but there were no all products ratings until 1919. Ice cream was introduced in 1926. Cottage cheese was introduced in 1962, but results were not included in all products ratings until 1963.

Table 2. College having highest individual contestant in the 50 Collegiate Dairy Products Evaluation Contests from 1916 to 1971.*

All Products

College	Year											Number
Ohio	1920	'21	'22	'29	'36	'37	'41	'52	'53	'61	'64	11
Iowa	1924	'26	'31	'39	'47	'49	'50	'51				8
Illinois	1930	'33	'56	'59	'60	'63	'65					7
Mississippi	1932	'38	'55	'71								4
Minnesota	1940	'54	'58									3
Connecticut	1957	'67	'70									3
Pennsylvania	1923	'25										2
Michigan	1948	'62										2
South Dakota	1919	'66										2
Massachusetts	1927											1
Nebraska	1928											1
Arkansas	1934											1
Cornell(NY)	1935											1
Utah	1968											1
Oklahoma	1969											1
											Total	48

Butter

Iowa	1921	'24	'25	'31	'36	'38	'39	'48	'52	'57	10
South Dakota	1917	'33	'34	'58	'64	'68	'70	'71			8
Minnesota	1940	'49	'56	'59	'67						5
Illinois	1961	'62	'63	'65	'69						5
Oregon	1922	'26	'27	'29							4
Mississippi	1928	'30	'55	'60							4
Pennsylvania	1916	'23									2
Maryland	1919	'20									2
Tennessee	1935	'50									2
Connecticut	1941	'47									2
Michigan	1951	'54									2
Ohio	1953	'66									2
Purdue(Ind.)	1932										1
Kansas	1937										1
										Total	50

Cheddar Cheese

Mississippi	1938	'40	'47	'49	'50	'63	'68	7	(Continued)
Ohio	1921	'22	'29	'35	'52			5	
Nebraska	1917	'32	'33					3	Cal. Polyt. 1959 1
Iowa	1925	'27	'51					3	Illinois 1960 1
Kansas	1930	'54	'56					3	Missouri 1970 1
Minnesota	1965	'66	'67					3	
Connecticut	1961	'64	'71					3	Total 49
Maryland	1919	'20						2	
Pennsylvania	1923	'48						2	
Michigan	1931	'41						2	
Tennessee	1936	'39						2	
Wisconsin	1937	'62						2	
Washington	1958	'69						2	
Purdue(Ind.)	1924							1	
South Dakota	1926							1	
West Virginia	1928							1	
Arkansas	1934							1	
Cornell(NY)	1953							1	
Georgia	1955							1	
Fresno St.Cal	1957							1	

Milk

Ohio	1917 '23 '25 '26 '29 '35 '36 '41 '53 '63 '64 '67	12
Iowa	1920 '24 '28 '39 '40	5
Michigan	1947 '51 '58 '59	4
Illinois	1933 '38 '60	3
Pennsylvania	1948 '52 '55	3
South Dakota	1919 '37 '69	3
Arkansas	1921 '34	2
Massachusetts	1922 '27	2
Kansas	1949 '57	2
Connecticut	1950 '61	2
Minnesota	1965 '71	2
Rhode Island	1966 '70	2
West Virginia	1930	1
Vermont	1931	1
Purdue(Ind.)	1932	1
North Carolina	1954	1
Wisconsin	1956	1
Cornell(NY)	1962	1

Ice Cream

Iowa	1939 '47 '48 '59	4
Mississippi	1938 '50 '64 '68	4
South Dakota	1926 '66 '70	3
Connecticut	1941 '49 '71	3
Cornell(NY)	1932 '35 '36	3
Michigan	1931 '33 '63	3
Massachusetts	1927 '28	2
Illinois	1934 '60	2
Minnesota	1940 '52	2
Ohio	1937 '55	2
West Virginia	1961 '62	2
Texas Tech.	1954 '65	2
Purdue(Ind.)	1929	1
Guelph	1930	1
Texas A & M	1951	1
Kansas	1953	1
Maryland	1956	1
Washington	1957	1
Cal. Polytech.	1958	1
Kentucky	1967	1
Louisiana	1969	1

Total 41

Cottage Cheese

Iowa	1963 '64	2
Nebraska	1967 '69	2
Wisconsin	1962	1
Illinois	1965	1
South Dakota	1966	1
Ohio	1968	1
Washington	1969	1
Mississippi	1971	1

Total 10

*Butter was the only product scored in the first contest in 1916. Milk and Cheddar cheese were introduced in 1917, but there were no all products ratings until 1919. Ice cream was introduced in 1926. Cottage cheese was introduced in 1962 but results were not included in all products ratings until 1963.

Table 3. Summary of colleges winning first place in the Collegiate Dairy Products Evaluation Contests, 1916 to 1971.

Year	Butter*	Cheddar cheese	Milk	Ice cream	Cottage cheese	All products	Number of teams entered
1916	Pa.	-	-	-	-	-	9
1917	S. D.	Nebr.	S. D.	-	-	-	3
1918	(No contest due to world War I						
1919	Iowa	Ohio	S. D.	-	-	S. D.	7
1920	S. D.	Ohio	Ohio	-	-	Ohio	5
1921	Ohio	Ohio	Ohio	-	-	Ohio	8
1922	S. D.	Ohio	Mass.	-	-	Ohio	9
1923	Pa.	Ohio	Ohio	-	-	Pa.	7
1924	Iowa	Purdue	Mass.	-	-	Iowa	10
1925	S. D.	Iowa	W. Va.	-	-	Iowa	10
1926	Ore.	S. D.	Iowa	Iowa	-	Iowa	13
1927	Iowa	Tenn.	Kans.	Mass.	-	Iowa	14
1928	Iowa	W. Va.	S.D.	Ohio	-	Iowa	15
1929	Ore.	Ohio	Ohio	Iowa	-	Ohio	15
1930	Miss.	Kans.	W. Va.	Ill.	-	Kans.	17
1931	Miss.	Mich.	Iowa	Vt.	-	Iowa	16
1932	Purdue	Mich.	Purdue	Miss.	-	Miss.	18
1933	S. D.	Wis.	Ill.	Mass.	-	Ohio	17
1934	Minn.	Iowa	Miss.	Ohio	-	Ohio	19
1935	Tenn.	Miss.	Tenn.	Nebr.	-	Miss.	17
1936	Iowa	Tenn.	Ohio	Cornell	-	Ohio	18
1937	Nebr.	Minn.	S. D.	Ohio	-	Ohio	17
1938	Iowa	Cornell	Ohio	Cornell	-	Cornell	23
1939	Iowa	Wis.	Iowa	Iowa	-	Iowa	14
1940	Minn.	Miss.	Iowa	Conn.	-	Iowa	21
1941	Conn.	Mich.	Ohio	Conn.	-	Ohio	22
1942-46	(No contest due to World War II)						
1947	Conn.	Miss.	Conn.	Iowa	-	Conn.	19
1948	Iowa	Mich.	Iowa	Tenn.	-	Iowa	26
1949	Minn.	Miss.	Kans.	Iowa	-	Miss.	18
1950	Iowa	Iowa	Conn.	Miss.	-	Iowa	26
1951	Iowa	Iowa	Miss.	Cornell	-	Miss.	23
1952	Cornell	Ohio	N. C.	Mass.	-	Ohio	28
1953	Ohio	Cornell	Ohio	Ohio	-	Ohio	23
1954	Iowa	Tenn.	N. C.	Kans.	-	Kans.	26
1955	Tenn.	Iowa	Conn.	S. D.	-	Miss.	26
1956	Ohio	Iowa	Wis.	Md.	-	Ill.	33
1957	Conn.	Kans.	Nebr.	Ohio	-	Conn.	21
1958	Minn.	Minn.	Minn.	Cal(Poly)	-	Minn.	30
1959	Ill.	Ill.	CalPoly	Minn.	-	Ill.	24
1960	Kans.	Ill.	Minn.	Conn.	-	Ill.	25
1961	Okla.	Conn.	W. Va.	Mich.	-	Ill.	21
1962	Ill.	W. Va.	Okla.	W. Va.	Wis.	Ill.	28
1963	Ill.	Minn.	Ill.	Mich.	Conn.	Minn.	24
1964	Minn.	Conn.	Ohio	S. D.	Iowa	Ohio	22
1965	Ill.	Ill.	Conn.	Iowa	Mo.	Ill.	25
1966	Ohio	Conn.	Minn.	Tenn.	S. D.	S. D.	19
1967	Minn.	Minn.	Ohio	Ky.	Nebr.	Conn.	22
1968	S. D.	Utah	Tenn.	CalPoly	Ohio	S. D.	25
1969	Ill.	Ill.	Okla.	Ill.	Kans.	S. D.	18
1970	S. D.	Mo.	Conn.	S. D.	Conn.	Conn.	25
1971	S. D.	Conn.	Minn.	Miss.	Miss.	Miss.	16
							938

*Butter only, 1916; all products, 1919; ice cream, 1926; and cottage cheese, 1962, but not included in all products until 1963.

Table 4. School participation in the Collegiate Dairy Products Evaluation Contest, 1916 to 1971, inclusive.*

Standing as to number of contests entered.	School	No. contests entered out of total of 50.
1	Ohio	48
2	Iowa	44
3	Nebraska	44
4	Connecticut	40
5	Mississippi	40
6	Kansas	39
7	Michigan	39
8	Minnesota	37
9	South Dakota	35
10	Pennsylvania	33
11	West Virginia	33
12	Massachusetts	32
13	Purdue(Ind.)	31
14	Illinois	31
15	Oklahoma	29
16	Texas Tech	29
17	Tennessee	29
18	Wisconsin	29
19	Cornell(NY)	27
20	Georgia	22
21	Maryland	18
22	Virginia	17
23	North Carolina	15
24	Washington	15
25	Missouri	15
26	Clemson (SC)	14
27	Oregon	13
28	Texas A&M	12
29	California Poly.	12
30	New Hampshire	11
31	Vermont	11
32	Rhode Island	10
33	Kentucky	9
34	Utah	9
35	Wyoming	9
36	Guelph (Ont.)	9
37	California Univ.	6
38	Colorado	6
39	Rutgers (N.J.)	6
40	Louisiana	6
41	Arkansas	6
42	New Mexico	3
43	Auburn (Ala.)	3
44	Idaho	3
45	Fresno (Cal.)	3
46	Florida	2
47	Arizona	1
48	Quebec	1
49	Tuskegee (Ala.)	1
50	Brigham Young (Utah)	1
	Total**	938

*Contests were not held during World War I, World War II, 1918, and 1942 to 1946, respectively.

**Includes entering of two individuals instead of full team by two schools in 1964 and one school in each of years 1965, 1968 and 1969.

Table 5. Location of the Collegiate Dairy Products Evaluation Contests, 1916 to 1971.

Number of contest	Year	Organization with whom affiliated	Location	Number of entries*
1	1916	National Dairy Assoc.	Springfield, MA	9
2	1917	" " "	Columbus, O	3
	1918	(No contest - WWI)		
3	1919	National Dairy Assoc.	Chicago	7
4	1920		Chicago	5
5	1921		St. Paul	8
6	1922	" " "	St. Paul	9
7	1923		Syracuse	7
8	1924		Milwaukee	10
9	1925	" " "	Indianapolis	10
10	1926		Detroit	13
11	1927		Memphis	14
12	1928	" " "	Memphis	15
13	1929		St. Louis	15
14	1930	Dairy & Food Industries	Cleveland	17
15	1931	Supply Assn.	Atlantic City	16
16	1932		Detroit	18
17	1933	" " "	Chicago	17
18	1934		Cleveland	19
19	1935		St. Louis	17
20	1936	" " "	Atlantic City	18
21	1937		New Orleans	17
22	1938		Cleveland	23
23	1939	" " "	San Francisco	14
24	1940		Atlantic City	21
25	1941		Toronto	22
	1942-46	(No contests WWII)		
26	1947	Dairy & Food Industries	Miami Beach	19
27	1948	Supply Assn.	Atlantic City	26
28	1949		Los Angeles	18
29	1950	" " "	Atlantic City	26
30	1951		Detroit	23
31	1952		Chicago	28
32	1953	" " "	Boston	23
33	1954		Atlantic City	26
34	1955		St. Louis	26
35	1956	" " "	Atlantic City	33
36	1957		San Francisco	21
37	1958		Chicago	30
38	1959	" " "	Miami Beach	24
39	1960		Chicago	25
40	1961		Washington, D.C.	21
41	1962	" " "	Atlantic City	28
42	1963		Dallas	24
43	1964		Chicago	22
44	1965	" " "	Montreal	25
45	1966		Atlantic City	19
46	1967		Los Angeles	22
47	1968	" " "	Chicago	25
48	1969		New Orleans	18
49	1970		Houston	25
50	1971	" " "	San Francisco	16
			Total*	938

*Includes five entries of less than full teams.

Table 6. Winners of the Dairy and Food Industries Supply Association Fellowships and the schools to which they were assigned for graduate study 1930 - 1966*

College or University	Name of winner at school where undergraduate work was taken.	Year**	Name of Fellow assigned to school for graduate studies	Year**
1. University of Arkansas	Niven, Charles F.	1934		
2. University of California			Homberger, R. E.	1931
			Speckman, R. A.	1967
3. California State Polytechnic College	Lord, Donald E.	1959		
4. Clemson University (S. C.)			Simmons, James C.	1956
5. The University of Connecticut	Gibson, G. L.	1932	Freeman, Robert	1935
	Kosikowski, Frank V.	1938		
	Marland, Richard E.	1941		
	Tobie, Alan F.	1947		
	Hunt, Roger W.	1949		
	Parkin, Willis E.	1950		
	Gray, Frederick D.	1951		
	Lucas, Edmund	1953		
	Clark, Warren	1955		
	Geishecker, Edward P.	1957		
	Pierpont, Peter F.	1958		
	Hutchison, Bruce R.	1962		
6. Cornell University (NY)	Tomlinson, Albert S.	1936	Cantley, R. W.	1932
	Brereton, John G.	1937	Chilson, William H.	1933
	Ludington, V.	1938	Niven, Charles F.	1934
	Charlap, Henry N.	1952	Ford, Mark	1935
			Naylor, H. Brooks	1937
			Kosikowski, Frank V.	1938
			Tobie, Alan F.	1947
			Kleyn, Dick H.	1952
			Miller, Norbert L.	1956
			Rabe, Gerald O.	1966
7. University of Guelph (Ontario)	Goodwillie, D. B.	1930		

*Some schools may have won more Fellowships than indicated in these tabulations. For one or more reasons, the Fellowships were sometimes forfeited in which case they were re-awarded to the next highest standing individual or team. From 1930-1933 Fellowships were awarded to individual winners. Since 1934 they have been awarded to schools of winning teams, with faculty making selection of Fellow.

**Years given are those in which Fellowship was won.

1/ Finished work started by R. F. Germann of Kansas State University.
2/ Finished work started by W. H. White of Mississippi State University.
3/ Finished work started by T. J. Goodwin of Mississippi State University.

Table 6 (con't)

Winner		Assignment	
8. University of Illinois			
Ross, O.E.	1930	Haradine, C.E.	1931
Corbett, W.J.	1933	Gibson, G.L.	1932
Miller, Norbert L.	1956	Brown, Howard W. 1	1934
Siebert, Scott E.	1960	Smith, Hiram P.	1935
Crater, Patricia L.	1961	Wilson, C. Ashley	1938
Rossi, Samuel E.	1962	Hollender, Herbert A.	1939
Alwes, Marvin L.	1963	Moore, Donald R.	1948
Cluskey, Frederick J.	1964	Lackey, George R.	1961
Eitenmiller, Ronald R.	1965		
Perlmutter, R.M.	1967		
9. Iowa State University			
Ause, O.H.	1931	Ross, O.E.	1930
Brown, Howard W.	1934	Shepherd, Sidney	1932
Ford, Mark	1935	Hostetler, P.	1933
Wilson, C. Ashley	1938	Slatter, Walter L.	1934
Russell, Ocrel M.	1939	Warner, James N.	1935
Sandine, William E.	1950	Harris, William C.	1937
Anderson. Delmar L.	1951	Ludington, V.D.	1938
McAnelly, John K.	1953	Graham, Dee M.	1949
Reikens, James A.	1955	Blackburn, Claude J.	1951
Sherman, William P.	1960	Lusas, Edmund L.	1953
		Clark, Warren S.	1955
		Madsen, Fred M.	1962
		McGilliard, M.L.	1967
10. Kansas State University			
Hostetler, P.	1933	Leach, H.J.	1931
Chilson, William H.	1933	Loney, B. Edgar, Jr.	1960
Byers, E.L.	1934	Cole, Dennis H.	1965
Vell, Donald C.	1954		
11. University of Massachusetts			
Shepherd, Sidney	1932	Brockschmidt, J.H.	1931
MacCurdy, Robert D.	1937	Hunt, Roger W.	1949
		Charlap, Henry N.	1952
12. Michigan State University			
Dowd, L.R.	1930	Goodwillie, D.B.	1930
Haradine, C.E.	1931	Long, John H.	1932
Babel, Fred J.	1934	Larson, Richard A.	1936
Openlander, H.F.	1936	MacCurdy, Robert D.	1937
Moore, Donald R.	1948	Marland, Richard E.	1941
Miller, Herbert L.	1958	Shiffermiller, W.E.	1948
Madsen, Fred M.	1962	Milkie, Robert C.	1953
McGilliard, M.L.	1967	Wales, Charles S.	1954
		Sapp, Charles W.	1955
		Wynn, John D.	1956
		Pierpont, Peter F.	1958
		Sherman, William P.	1960
		Rossi, Samuel F.	1962
		Miller, Kenneth B.	1964
		Perlmutter, R.M.	1967

Table 6 (con't)

	Winner		Assignment	
13.	University of Minnesota			
	Sorenson, C.M.	1933	Ause, O.H.	1931
	Josephson, Donald V.	1934	Carithers, R.L.	1933
	Freeman, Robert	1935	Roberts, W.M.	1936
	Rivers, Philip W.	1936	Brereton, John G.	1937
	Naylor, H. Brooks	1937	Cluskey, Frederick J.	1964
	Mykleby, R.W.	1940		
	Blomster, Galen G.	1963		
	Rabe, Gerald O.	1966		
	Speckman, R.A.	1967		
14.	Mississippi State University			
	Quinn, J.D.	1930		
	Whitfield, B.H.	1931		
	Long, John H.	1932		
	Carithers, R.L.	1933		
	Harris, William C.	1937		
	Graham, Dee M.	1949		
	Gilmore, Thomas E.	1950		
	Blackburn, Claude J.	1951		
	Smallwood, Robert T.	1954		
	Barton, L.B.	1955		
	Simmons. James C.	1956		
15.	University of Missouri			
	Cole, Dennis H.	1965	Heinz, James V.	1965
16.	University of Nebraska			
	Kelley, Martin F.	1930	Whitfield, B.H.	1931
	Meridith, P.W.	1932	Eitenmiller, Ronald R.	1965
	Warner, James N.	1935	Lavicky, Francis	1966
	Larson, Richard A.	1936		
	Rippen, A.L. 2/	1939		
17.	North Carolina State University			
			Sandine, William E.	1950
			McAnelly, John K.	1953
			Smallwood, Robert T.	1954
18.	The Ohio State University			
	Homberger, R.E.	1931	Quinn, J.D.	1930
	Brockschmidt, J.H.	1931	Meridith, P.W.	1932
	Charles, Donald A.	1932	Spicer, W. Delmar	1933
	Slatter, Walter L.	1934	Rippen, A.L. 2/	1935
	Smith, Hiram P.	1935	Openlander, H.F.	1936
	Adams, Joseph	1936	Henry, David	1937
	Roahen, Dan C.	1937	Vell, Donald C.	1954
	Shiffermiller, W.E.	1948	Geishecker, Edward P.	1957
	Kleyn, Dick H.	1952	Miller, Herbert L.	1958
	Milkie, Robert C.	1953	Crater, Patricia L.	1961
	Miller, Kenneth B.	1964		
19.	Oklahoma State University			
	Wynn, John D.	1956	Lord, Donald E.	1959
	Loney, B. Edgar, Jr.	1960		
	Lackey, George R.	1961		

Table 6 (con't)

Winner		Assignment	
20. Oregon State University		Raistakka, Donald A.	1957
21 The Pennsylvania State University			
Bradley, H.A. 1/	1930	Bradley, H.A. 1/	1930
Snyder, Walter E. 3/	1939	Josephson, Donald V.	1934
		Rivers, Philip W.	1936
		Russell, Ocrel M.	1939
		Mykleby, R.W.	1940
		Parkin, Willis E.	1950
22. Purdue University (Ind.)			
Cantley, R.W.	1932	Dowd, L.R.	1930
		Sorenson, C.M.	1933
		Babel, Fred J.	1934
		Flake, J.C.	1935
		Adams, Joseph	1936
		Blomster, Galen G.	1963
23. South Dakota State University			
Spicer, W. Delmar	1933		
Henry, David	1937		
Sapp, Charles W.	1955		
Heinz, James V.	1965		
Lavicky, Francis	1966		
24. University of Tennessee			
Flake, J.C.	1935		
Roberts, W.M.	1936		
25. Texas Technological College			
Wales, Charles S.	1954	Barton, L.B.	1955
26. The University of Vermont			
Leach, H.J.	1931		
27. Washington State University			
Raistakka, Donald A.	1957		
28. University of Wisconsin			
Hollender, Herbert A.	1939	Kelley, Martin F.	1930
		Charles, Donald A.	1932
		Corbett, W.J.	1933
		Byers, E.L.	1934
		Tomlinson, Albert A.	1936
		Roahen, Dan C.	1937
		Snyder, Walter E. 3/	1940
		Gilmore, Thomas E.	1950
		Anderson, Delmar L.	1951
		Gray, Frederick D.	1951
		Reikens, James A.	1955
		Seibert, Scott F.	1960
		Hutchison, Bruce R.	1962
		Alwes, Marvin	1963

Table 7. Summary of winners of the Dairy and Food Industries Supply Association Fellowships and the schools to which they were assigned, 1930-67.*

Fellow	From	Assigned to
1930		
O.E. Ross	Ill.	Iowa
D.B. Goodwillie	Guelph	Mich.
J.D. Quinn	Miss.	Ohio
H.A. Bradley 1/	Pa.	Pa.
L.R. Dowd	Mich.	Purdue
M.F. Kelly	Neb.	Wisc.
1931		
O.H. Ause	Iowa	Minn.
R.E. Homberger	Ohio	Cal.U.
C.E. Haradine	Mich..	Ill.
B.H. Whitfield	Miss.	Neb.
H.J. Leach	Vt.	Kan.
J.H. Brockschmidt	Ohio	Mass.
1932		
J.H. Long	Miss.	Mich.
P.W. Meridith	Neb.	Ohio
R.W. Cantley	Purdue	Cornell
G.L. Gibson	Conn.	Ill.
S. Shephard	Mass.	Iowa
D.A. Charles	Ohio	Wisc.
1933		
W.J. Corbett	Ill.	Wisc.
P. Hostetler	Kan.	Iowa
W.H. Chilson	Kan.	Cornell
R.L. Carithers	Miss.	Minn.
C.M. Sorenson	Minn.	Purdue
D. Spicer	S.D.	Ohio
1934		
W.L. Slatter	Ohio	Iowa
D.V. Josephson	Minn.	Pa.
E.L. Byers	Kan.	Wisc.
Fred J. Babel	Mich.	Purdue
Howard W. Brown	Iowa	Ill.
Chas. H. Niven	Ark.	Cornell
1935		
A.L. Rippen 2/	Neb.	Ohio
J.C. Flake	Tenn.	Purdue
H.P. Smith	Ohio	Ill.
Mark Ford	Iowa	Cornell
R. Freeman	Minn.	Conn.
J.N. Warner	Neb.	Iowa
1936		
Joseph Adams	Ohio	Purdue
A. Tomlinson	Cornell	Wisc.
Richard Larson	Neb.	Mich.
Philip Rivers	Minn.	Pa.
W.M. Roberts	Tenn.	Minn.
H.F. Openlander	Mich.	Ohio
1937		
Dan C. Roahen	Ohio	Wisc.
Will. C. Harris	Miss.	Iowa
R.D. MacCurdy	Mass.	Mich.
Brooks Naylor	Minn.	Cornell
J.G. Brereton	Cornell	Minn.
David Henry	S.D.	Ohio
1938		
V.D. Ludington	Cornell	Iowa
C.A. Wilson	Iowa	Ill.
F.V. Kosikowski	Conn.	Cornell
1939		
Ocrel M. Russell	Iowa	Pa.
H.A. Hollender	Wisc.	Ill.
Walter E. Snyder 3/	Pa.	Wisc.
1940		
Dorrance Anderson**	Iowa	Mich.
John A. Bierkan**	Conn.	Cornell
Raymond W. Mykleby	Minn.	Pa.
1941		
Fred W. Carver**	Ohio	Pa.
Richard E. Marland	Conn.	Mich.
P.J. Smeltzer**	Mich.	Ill.
1947		
Alan F. Tobie	Conn.	Cornell
1948		
W.E. Shiffermiller	Ohio	Mich.
Donald R. Moore	Mich.	Ill.
1949		
D.M. Graham	Miss.	Iowa
Roger W. Hunt	Conn.	Mass.

Table 7 (con't)

	From	Assigned to
1950		
William E. Sandine	Iowa	N.C.
T.E. Gilmore	Miss.	Wisc.
Willis E. Parkin	Conn.	Pa.
1951		
C.J. Blackburn	Miss.	Iowa
F.D. Gray	Conn.	Wisc.
Delmar Anderson	Iowa	Wisc.
1952		
Dick H. Kleyn	Ohio	Cornell
Henry N. Charlap	Cornell	Mass.
1953		
Robert C. Milkie	Ohio	Mich.
Edmund L. Lusas	Conn.	Iowa
John J. McAnelly	Iowa	N.C.
1954		
Donald C. Vell	Kan.	Ohio
R.T. Smallwood	Tx.Tech.	Mich.
Chas. S. Wales	Tx.Tech.	Mich.
1955		
L.B. Barton	Miss.	Tx.Tech.
J.A. Reikens	Iowa	Wisc.
Chas. W. Sapp	S.D.	Mich.
Warren S. Clark,Jr	Conn.	Iowa
1956		
Norbert L. Miller	Ill.	Cornell
James C. Simmons	Miss.	Clemson
John D. Wynn	Okla.	Mich.
1957		
E.P. Geishecker	Conn.	Ohio
D.A. Raistakka	Wash.	Ore.
1958		
Herbert L. Miller	Mich.	Ohio
Peter P. Pierpont	Conn.	Mich.
1959		
Donald E. Lord	Cal.Poly	Okla.
1960		
Scott E. Seibert	Ill.	Wisc.
William P. Sherman	Iowa	Mich.
B.E. Loney, Jr.	Okla.	Kan.
1961		
Patricia L. Crater	Ill.	Ohio
George R. Lackey	Okla.	Ill.
1962		
Samuel E. Rossi	Ill.	Mich.
Fred M. Madsen	Mich.	Iowa
Bruce R. Hutchison	Conn.	Wisc.
1963		
Galen G. Blomster	Minn.	Purdue
Marvin L. Alwes	Ill.	Wisc.
1964		
Kenneth B. Miller	Ohio	Mich.
Fred. J. Cluskey	Ill.	Minn.
1965		
Ron R. Eitenmiller	Ill.	Neb.
Dennis H. Cole	Mo.	Kan.
James V. Heinz	S.D.	Mo.
1966		
Francis Lavicky	S.D.	Neb.
Gerald O. Rabe	Minn.	Cornell
1967		
M.L. McGilliard	Mich.	Iowa
R.M. Perlmutter	Ill.	Mich.
R.A. Speckman	Minn.	Cal.

*Years given are those in which Fellowship was won. **Military Service before starting or completion of work.

1/ Finished work started by R.F. Germann, Kansas, 1930.
2/ Finished work started by W.H. White, Mississippi, 1935.
3/ Finished work started by T.J. Goodwin, Mississippi, 1939.

Table 8. Publications resulting from research projects of the Dairy and Food Industries Supply Association Fellows, by years, 1930-67.

1930

1. Ross, O.E. Why does a tallowy flavor develop in strawberry ice cream? Ice Cream Trade Journal, July, 1933.
2. Goodwillie, D.B., and Trout, G.M. Factors other than bacteria that influence the body and flavor of granulated buttermilk. The Milk Dealer, Feb. and March, 1933.
3. Quinn, J.D., and Burgwald, L.H. High short holding and low long holding. Milk Plant Monthly, Feb., 1933.
4. Bradley, H.H., and Dahle, C.D. How freezing and hardening affect the texture of the ice cream. The Ice Cream Trade Journal, Nov.,1933.
5. Dowd, L.R. Some factors affecting the efficiency of pasteurization of milk. American Creamery and Poultry Produce Review, Jan. 18,1935.
6. Kelly, Martin F., and Price, Walter V. A study of the manufacture of cottage cheese. National Butter and Cheese Journal, Feb. 10 and 25, 1933.

1931

7. Ause, O.H., and Macy, H. The relation of Oospora lactis to the keeping quality of butter. American Creamery and Poultry Produce Review, Dec. 12, 1934.
8. Homberger, R.E., and Cole, W.C. Some factors affecting lactose crystallization as related to sandy ice cream. The Ice Cream Review, Nov., 1933.
9. Hardine, C.E. Inversion of sucrose in the manufacture of sweetened condensed milk and its effect upon color of finished product. National Butter and Cheese Journal, Oct., 1933.
10. Whitfield, Benjamin H., Davis, H.P., and Down, P.A. The effect of milk upon metals and metals upon milk. The Milk Dealer, Nov. and Dec., 1934 and Jan., 1935.
11. Leach, H.J., and Martin, W.H. The effect of a surface cooler on flavor, cream line and evaporation loss. American Creamery and Poultry Produce Review, Nov. 22, 1933.
12. Brockschmidt, J.H., Mach, M.J., and Frandsen, J.H. How to make high butterfat ice cream; a study of the factors involved in making the richer type of product. Ice Cream Field, Dec. '33 & Jan.'34.

1932

13. Long, John W., Huffman, C.F., and Duncan, C.W. A study of the vitamin D requirements of calves when natural milk furnished the sole source of the antirachitic factor. Milk Plant Monthly, July, '36.
14. Meridith, Perry W., and Stoltz, R.B. Bottled concentrated milk, a lower priced fresh milk for the consumer. The Milk Dealer, 2/35.
15. Cantley, Robert W. Comparison of skimmed milk powder media with standard nutrient agar for bacterial counts on milk. The Milk Dealer, Sept., 1935.
16. Gibson, G.L. Sandiness: its causes and prevention. Ice Cream Field, May and June, 1935.
17. Shepard, Sidney, and Olson, H.C. The relationship between changes in the number of bacteria and in the scores of butter held at 32°F. National Butter and Cheese Journal, Sept. 25, 1935.
18. Charles, D.A., and Sommer, H.H. Causes and practical methods for control of sedimentation in homogenized milk. Milk Plant Monthly, April, 1935.

1933

19. Corbett, W.J., Frazier, W.J., and Price, W.V. A gas defect of cream cheese. The Milk Dealer, Dec., 1935.
20. Hostetler, Pius H. Effects of preservatives on results of fat test studies. Confectionery and Ice Cream World, Aug. 7, 1936.
21. Chilson, William H. What causes most common off flavors of market milk? A study of the oxidized flavors of market milk. Milk Plant Monthly, Nov. and Dec., 1935.
22. Carithers, Robert L., and Combs, W.B. Drum vs. spray process day milk in ice cream. The Ice Cream REview, March, 1936.
23. Sorenson, C.M. Studies on milk mold Oospora lactis. American Creamery and Poultry Produce Review, Feb. 12, 1936.
24. Spicer, W. Delmar, and Burgwald, L.H. Use of hydrogen ion determination on young cheese in predicting acid development in Cheddar cheese during storage. National Butter and Cheese Journal, Nov. 10, 1935.

1934

25. Slatter, Walter L. Changes in the acetylmethylcarbinol plus diacetyl content of butter. National Butter and Cheese Journal, Oct. 25 and Nov. 10, 1936.
26. Josephson, D.V. and Dahle, C.D. The importance of the fat globule membrane in the freezing of ice cream. The Ice Cream Review, Jan., 1937.
27. Byers, E.L., and Price, Walter V. The influence of salt on the composition and quality of brick cheese. National Butter and Cheese Journal, July 25, 1937.
28. Babel, F.J. Significance of laboratory tests in the control of ice cream. The Ice Cream Trade Journal, Sept., 1936.
29. Brown, W.H. This matter of mix. Ice Cream Field, July and Aug. 1937.
30. Niven, Charles F. and Sherman, J.M. The hemolytic streptococci of milk. J. Infect. Dis. 92: 190-201. 1938; The Milk Dealer, Aug., 1938.

1935

31. Rippen, A.L., and Burgwald, L.H. The value of acidifying milk and cream cans from the standpoint of the effect upon quality. (Abstract) J.Dairy Sci. 24: 525, 1941. The effect of acidified cans on the quality of dairy products and on the phosphatase value of cream and butter. Milk Plant Monthly, Nov., 1941.
32. Flake, J.C., and Parfitt, E.H. Some causes for the deterioration in 10 days at 15.5° C. of salted butter made from sour cream. J. Dairy Sci. 21: 545-551, 1938. Studies of butter keeping quality. American Produce Review, May 10, June 14, and July 12, 1939.
33. Smith, Hiram P., and Tracy, P.H. Consumers' preference for ice cream. Confectionery and Ice Cream World, Feb. 25, 1938.
34. Ford, Mark, and Knaysi, George. A method of counting viable bacteria in milk by means of microscope. J Dairy Sci. 21: 129-141, 1938. A direct microscopic method for counting viable bacteria in milk. Milk Plant Monthly, May, 1938.
35. Freeman, Robert, and Anderson, E.O. Sonic vibration of ice cream mixes. Proc. 36th Ann. Conv. International Association of Ice Cream Manufacturers. Vol. 2, Prod. and Lab. Council pp. 126-132, 1936.
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Table 9

COLLEGES PARTICIPATING IN THE COLLEGIATE STUDENTS' INTERNATIONAL CONTEST IN JUDGING DAIRY PRODUCTS BY YEAR 1916-71

(Year in which team was entered in contest with team winning first place in judging All Products designated by 1)

College	'16	'17	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34	'35	'36	'37	'38	'39	'40	'41
1 Auburn																									
2 Arizona																									
3 Arkansas					+												+	+	+						
4 Brigham Y.U.																									
5 Calif. U.								+		+				+									+		
6 Calif. Poly																									
7 Clemson																									
8 Colorado																									
9 Conn.	+						+			+	+			+	+	+	+	+	+	+	+	+		+	+
10 Cornell	+		+				+									+	+	+	+	+	+	1		+	+
11 Florida																									
12 Fresno																									
13 Georgia												+	+					+							
14 Guelph														+	+					+		+			+
15 Idaho																									
16 Illinois														+	+	+	+	+	+	+	+	+		+	+
17 Iowa			+	+	+	+		1	1	1	1	1	+	+	1	+	+	+	+	+	+	+	1	1	+
18 Kansas										+	+	+	+	1	+	+	+	+	+	+	+	+	+	+	+
19 Kentucky																									
20 Louisiana																+					+				
21 Maryland			+	+			+									+				+		+		+	+
22 Mass.	+					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+
23 Michigan									+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+
24 Minnesota					+	+									+	+	+	+	+	+	+	+	+	+	+
25 Miss.											+	+	+	+	+	1	+	+	1	+	+	+	+	+	+
26 Missouri																									
27 Nebraska	+	+	+		+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
28 N. H.	+						+				+													+	
29 N. Mexico																						+	+		
30 N. C.										+	+	+													
31 Ohio	+	+	+	1	1	1	+	+	+	+		+	1	+	+	+	1	1	+	1	1	+	+	+	1
32 Oklahoma												+	+				+	+	+			+			
33 Oregon						+		+	+	+	+	+	+	+											
34 Penn.	+				+		1	+	+	+	+			+	+			+		+		+	+	+	+
35 Purdue			+	+		+		+	+			+	+	+		+	+	+	+	+	+	+		+	+

College	'47	'48	'49	'50	'51	'52	'53	'54	'55	'56	'57	'58	'59	'60	'61	'62	'63	'64	'65	'66	'67	'68	'69	'70	'71	Total
1 Auburn							+	+		+																3
2 Arizona												+														1
3 Arkansas																								+	+	6
4 Brigham Y.U.																									+	1
5 Calif. U.			+								+															6
6 Calif. Poly										+	+	+	+	+		+			+	+	+	+	+		+	12
7 Clemson								+	+	+		+	+	+	+	+	+	+	+		+	+		+		14
8 Colorado	+	+								+	+		+			+										6
9 Conn.	1	+	+	+	+	+	+	+	+	+	1	+	+	+	+	+	+	+	+	+	1	+	+	1	+	40
10 Cornell	+	+		+	+	+	+	+	+	+		+		+		+		+	+	+						27
11 Florida	+												+													2
12 Fresno											+										+				+	3
13 Georgia		+		+	+	+	+	+	+	+		+	+	+	+	+	+	+		+		+	+	+		22
14 Guelph							+												+			+	+			9
15 Idaho			+								+					+										3
16 Illinois	+	+	+	+	+	+				1		+	1	1	1	1	+	+	1		+	+	+	+	+	31
17 Iowa	+	1	+	1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+		+		44
18 Kansas		+	+	+	+	+	+	1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		39
19 Kentucky				+		+			+				+					+	+	+	+			+		9
20 Louisiana															+	+						+	+			6
21 Maryland	+	+		+	+	+	+	+	+	+		+														18
22 Mass.	+	+	+	+	+	+	+	+		+		+		+		+										32
23 Michigan	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+		+	+	39
24 Minnesota		+	+	+	+	+	+	+	+	+	+	1	+	+	+	+	1	+	+	+	+	+	+	+	+	37
25 Miss.	+	+	1	+	1	+	+	+	1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	1	40
26 Missouri									+	+	+	+	+		+	+	+	+	+		+	+	+	+	+	15
27 Nebraska	+	+	+	+	+	+	+	+	+	+	+	+			+	+	+		+	+	+	+	+	+		44
28 N. H.		+		+	+	+	+	+		+																11
29 N. Mexico			+																							3
30 N. C.		+		+	+	+	+	+	+	+		+	+	+			+									15
31 Ohio	+	+	+	+	+	1	1	+	+	+	+	+	+	+	+	+	+	1	+	+	+	+	+		+	48
32 Oklahoma		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		29
33 Oregon											+			+							+			+	+	13
34 Penn.	+	+		+		+	+	+	+	+	+	+	+	+		+	+	+	+			+		+		33
35 Purdue	+	+		+	+	+		+	+	+		+	+	+		+		+	+							31

Table 9 (cont'd)

College	'16	'17	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34	'35	'36	'37	'38	'39	'40	'41	'47	'48	'49	'50	'51	'52	'53	'54	'55	'56	'57	'58	'59	'60	'61	'62	'63	'64	'65	'66	'67	'68	'69	'70	'71	Total
36 Quebec																						-																				+							1
37 R. I.																																+			+		+		+		+	+	+	+	+	+				+		10
38 Rutgers															+					+				+										+	+		+													6
39 S. D.	+	+	1	+	+	+			+	+	+	+	+			+	+	+	+		+	+	+		+	+								+	+	+		+			+	+	+	+	+	1	+	1	1	+	+	35
40 Tennessee											+	+	+	+				+	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+		+			+		+	+	+	+		+		+		29
41 Tex. A&M																							+		+	+	+	+	+	+	+						+		+			+						+		12
42 Tex. Tech.																					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	29
43 Tuskegee																																																	+		1
44 Utah St. U.																												+			+					+						+		+		+	+	+		+	9
45 Vermont	+														+	+						+		+	+		+		+		+		+		+														11
46 Virginia													+		+									+	+		+		+	+	+	+	+	+	+			+	+	+	+	+							17
47 Washington																												+		+	+		+	+	+	+	+		+	+	+					+	+	+	+	15
48 W. Va.					+	+		+	+	+	+	+	+	+	+	+	+					+				+		+		+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+		33
49 Wisconsin								+						+		+	+	+	+	+	+	+	+	+	+	+			+	+	+				+	+	+	+		+		+	+			+	+	+	+	29
50 Wyoming																																				+	+		+			+	+			+	+		+	+	9
TOTAL	9	3	7	5	8	9	7	10	10	13	14	15	15	17	16	18	17	19	17	18	17	23	14	21	22	19	26	18	26	23	28	23	26	21	33	24	30	21	25	24	28	25	22	22	19	18	25	16	25		938

NOTES: A contest was not held in 1918 due to World War I and from 1942 to 1946 inclusive due to World War II.

1 Indicates team took first place in Judging All Products

Fig. 1. Growth of the Collegiate Dairy Products Evaluation Contest, 1916 to 1971.