

ELVIN CHARLES STAKMAN AWARD

To honor E. C. Stakman, Professor Emeritus at the University of Minnesota, for his lifetime contributions and his dedication to scholarly leadership in biology and agriculture, education and the humanities, friends and students established a memorial in 1953, to be known as THE ELVIN CHARLES STAKMAN ENDOWMENT FUND.

The University of Minnesota has agreed to act as custodian of the Fund.

Nature and Purpose

The fund will be used for awards to be granted individuals of any country for outstanding research in cereal pathology. Each award will consist of a medal, a scroll, and a nominal monetary grant.

Nomination of Candidates

Nominations for the first award should reach St. Paul, Minnesota, by December 1, 1955. All nominations should include a brief statement of the nature and significance of the nominee's work, his publications, and supporting letters from at least two colleagues.

Nominations may be sent to the Chairman of the Awards Committee, who is the Head of the Department of Plant Pathology and Botany at the University of Minnesota; or nominations may be sent through regional representatives of the Awards Committee. Regional representatives to assist in the nomination of candidates are:

Australia	Dr. R. J. Noble Department of Agriculture G. P. O. Box 36 SYDNEY, N.S.W.
Canada	Dr. A. W. Henry Department of Plant Science University of Alberta EDMONTON, Alberta
Egypt	Dr. Tewfik Abdel-Hak Plant Disease Section Crop Protection Department GIZA
Europe	Dr. J. H. Western Department of Agricultural Botany University of Leeds LEEDS, York, England
India	Dr. P. R. Mehta Director of Plant Protection Ministry of Food and Agriculture Shajahan Road NEW DELHI

Japan Dr. H. Asuyama
Department of Plant Pathology
University of Tokyo
TOKYO

Mexico José Rodríguez, Ing.
Hegel 412-6
Col. Polonca
MEXICO DF

Pakistan Dr. S. J. Hasanain
University of Karachi
Department of Botany
Princess Street
KARACHI

South America Dr. J. Vallega
Division Inmunologia Vegetal
Central Experiment Station
CASTELAR, R. Argentina

Selection of Recipients

Recipients will be selected by the Awards Committee, consisting of five members:

- Head, Department of Plant Pathology and Botany,
University of Minnesota (Chairman) (J. J. Christensen)
- A senior staff member of the Department (Miss Helen Hart)
- Two alumni of the Department (D. G. Fletcher, J. G. Harrar)
- Dean, University of Minnesota, Institute of Agriculture (H. Macy)

First Award

It is proposed to make the first award at Cap and Gown Day convocation, University of Minnesota, in May of 1956.

(Old Timers will be glad to know that checks for the Endowment Fund are still coming in. There is no closing date for contributions.)

OLD TIMERS

"On April 30, at the University of Kentucky, Dr. W. D. VALLEAU was honored with a testimonial dinner attended by more than 400 people, from Kentucky and elsewhere, representing farmers, businessmen, bankers, burley tobacco warehousemen, tobacco manufacturers, seed growers, and research workers. As an acknowledgement of his many outstanding contributions, over the past 35 years, to agriculture and to the production of burley tobacco through his disease control and breeding studies he was presented with a Cadillac automobile."--Old Timers Lawrence Henson and E. M. Johnson

"Intensive research supervised by Dr. Valleau at the University's tobacco-research laboratory has resulted in production of varieties resistant to ... diseases. Tobaccomen have estimated that nearly 60 per cent of all burley now grown in the eight-state producing belt consists of root-rot resistant varieties developed by Dr. Valleau...Dr. Valleau cited the work of Drs. E. M. Johnson... as having 'contributed immeasurably to the success of the work we have done.'" --The Courier-Journal, Louisville. May 1, 1955

We assumed that such a celebration indicated Dorney Valleau's retirement, but such is not the case.

On March 10 was born Edna Judit Flores to Marco and Margarita FLORES, of Guatemala.

On April 18 was born Roger Carleton Wood to two very recent Old Timers, Elsa and ex-Ohioan Leon WOOD, of Brookings, South Dakota.

On May 2, the Guggenheim Foundation announced an award for research on virus diseases of orchids to Dr. Harry MURAKISHI (ace short-stop), who will carry on the work during sabbatic leave from the University of Hawaii.

G. D. GEORGE, formerly artist and illustrator on the rust project at Minnesota, celebrated his 88th birthday in May.

Dr. Joseph A. RUPERT transferred his activities for The Rockefeller Foundation from Colombia to Chile in late April. There he is in charge of the initiation of the agricultural improvement program.

Safely ensconced in his home in Argentina, Alfonso Late Blight CASTRONOVO (Minn. M.S. 1954) boasts about his bravery in relation to a Minnesota blizzard of which we wrote him: "...it would not interfere with my happiness if I were in Minnesota." It reminds us of the little boy who, long after he met the bear, said, "Pooh, I wasn't afraid!"

Another exotic touch, from Old Timer H. S. RAO, of the Forest Research Institute at Dehra Dun, India: "My work here is cytology and genetics of tree species. Hitherto I worked at ground-level. I am soon getting a 25-foot adjustable ladder to carry out bagging and hybridization and protect them against monkeys, crows, squirrels, and humans..."

"Best wishes to all my colleagues in Minnesota" came in January from Dr. Alan GEMMELL (Minn. M.S. 1937) from the Biology Department, University

College of North Staffordshire, Keele, England.

Former assistant in the Department and prospective graduate student Lt. Roger G. LAMBERT (93d Sig. Bn) wrote from Ft. Huachuca, Arizona, that he had two thrills: Saw Cleveland and the Giants play baseball at Tucson; saw our M. F. KERNKAMP (not an Old Timer) in an Army training film!!!

In late winter, from Alexandria, Egypt, Dr. I. A. IBRAHIM (Minn. Ph.D. 1952) wrote, "I remember every one of the gang with the best memories and very often tell my students all about Minnesota, natives of Minnesota, scientists of the foaming tower of plant pathology and even foreigners that come to that part of the world where everybody likes to help." He was having virus trouble--one that attacked the 5th and 6th nerves which control the movements of the shoulder and arm. We hope the virus has been controlled and that he can wave to us when we visit the Mediterranean.

On March 24, Dr. Reiner BONDE (Minn. Ph.D. 1938) was elected to the Maine Chapter of Alpha Zeta as associate member. In the special initiation ceremony, his past was reviewed: a former barberian" and grain rust epidemiologist for Minnesota (and Iowa), a certified potato seed inspector for Minnesota, a past president of the Potato Association of America, and he was recently honored by Maine's potato growers for "25 years of outstanding service in potato research". Then last February, Bonde was nominated for the Hoblitzelle award--this award is made every two years on a national basis to the scientist who has made an outstanding contribution to agriculture.

A recent communiqué from Tom WYLLIE reveals his classified association with the Chemical Corps of the U. S. Army. He is Pvt. T. D. Wyllie, US 56259 338, 9766th T.S.U., Cml C, Camp Detrick, Frederick, Maryland

A card sans personal progress states that B. Bernarr VANCE now lives at 5 Treasure Lane, Treasure Island, St. Petersburg 6, Florida.

Dr. Albert LINCK of the Ohio State University, became Instructor and plant physiologist in the department. A native Buckeye (Portsmouth, Ohio), Al delves into the mysteries of Weed and Pea Physiology in the Tottering Tower Laboratories.

From "down under" (Australasia) returned Dr. I. A. WATSON to unearth genetic irregularities in P.g.t.

Dr. Arne GUSTAVSSON of the University of Lund, Sweden, has been sent here by the Swedish Government to study "cereal rusts" for six months -- imagine 180 days of thinking of nothing but rust!

The week of May 15 was the 100th anniversary of Michigan State College. One of the evening lectures given in the course of the celebration was presented by E. C. STAKMAN, entitled "The new view of man in his biological environment." MSC then presented ECS with a Centennial Award "in recognition of distinguished services which have contributed to the benefit of mankind."

From the University of South Korea journeyed Dr. H. S. KIM (Chief of Biochemistry) to study physiology of fungi with Dr. DeVay.

Four plant breeders from Turkey stayed for nine months to study methods of breeding plants for disease resistance.

Others came: Experiment Station Inspector (and Plant Pathologist) Dr. H. Rex THOMAS; Sugar beet pathologist and Honorary Old Timer Dr. G. H. COONS; Dr. Shosuke GOTO working on (censored) at Camp Detrick, Md; Dr. Martin TVEIT (with wife) retold his interesting past (with Chaetomium that is) in Minnesota, Norway, Sweden, and England; Frank STEVENSON (ex-clarinetist and ex-U. zea-ologist) with boss J. S. MITCHELL of Illinois; Larry (potato scab) SCHALL; Arden SHERF, now of Cornell; Merle MICHAELSON, flaxman at South Dakota; and Harold FLOR, flax rust gene-for-gene inventor.

Intercepted on the Thirdfloor Thoroughfare were Dr. J. C. RIKER of Wisconsin, Dr. QUISENBERRY of the USDA, Dave BEARD and C. S. GARRISON of the Forage and Range Section of the ARS, and Dr. THEIS of the Puerto Rico Experiment Station.

Added to the Fourthfloor Cellblock were Dick FREDERIKSEN and Roger LAMBERT, local products; Miss de la ISLA (Lu Lu) from Mexico; R. M. NATOUR from Jordan via Kansas; and T. MATSUSHIMA from Japan via beKnighted California. To the T. Tower from Beautiful Ohio came John KOTHEIMER to work on weeds.

Old Timer Hugh F. FITZPATRICK, Plant Pathologist with the Food Machinery and Chemical Corporation (Riverside, Calif.), traveled "east" to lake-spotted Minnesota and its plant pathologists.

After a long wait and much preparation, Dr. Carl EIDE embarked on a late-blight mission to Colombia and Mexico.

To Israel to serve, went newly-crowned and retired Old Timer Moses LEVINE, after some 40-odd years at Minnesota. His most recent assistant Bob HILDRETH finished his prelim about the same time and accepted a new assignment at La Limas, Honduras.

With Myrtle and an M.S. degree, Dave SMITH headed for Billings, Montana, and a biology teaching position.

Back to Alberta went Elmer J. (Bob) HAWN with family and a passed prelim.

J. J. CASTANO completed 11 months of work that culminated in a M.S. degree to return to the coffee plantations of his native Colombia.

Corn pathologist for the U.S. Dept. of Agriculture at Raleigh, North Carolina is the new job of Dr. Richard R. NELSON, centerfielder extraordinary and discoverer of 3-nuclei rust hyphal cells.

Seminar-chairman Leon WOOD was relieved of his duties as chairman upon (1) passing his prelim and (2) taking a job at Brookings, South Dakota.

Back to the **Big state (Texas)** went Herb MOHR after a short stay at Minnesota.

Italy's Dr. V. GRASSO left, returned, then left again--this time presumably for Italy. He spent some time at Pullman, Washington, to learn of s-e-x in the smuts.

Dick DEDOLPH, wife Lindy and new son Mike left the T. Tower for the University of Maryland, where he will pursue studies leading to a Ph.D. degree.

Maine and home was the destination of wooded-land owner Richard F. BURGESS, after several years study in the department.

Principal Secretary Mrs. Angus (Sybil) McQUEEN resigned after 3 years service to the staff.

Staff members sought wisdom (as well as imparted some) in other places: Forest pathologist Dave FRENCH attended a North Central Regional Oak Wilt Committee at Chicago, in addition to meetings at Midland, Michigan and Madison, Wisconsin.

Fungus physiologist Jim DEVAY participated in a symposium at the University of Illinois on physiology of parasitism.

Matt MOORE, Gene HAYDEN, and E. C. STAKMAN were involved in the Hard Red Winter Wheat Improvement Conference at Manhattan, Kansas, in January.

Barberrians R. U. COTTER, E. C. STAKMAN, Don STEWART and Thain STEWART, were at a Barberry Eradication Conference in Chicago that included a luncheon for ECS because of his retirement on May 31 as USDA Agent.

To East Lansing, Michigan went M. (for Milton) F. KERNKAMP and cohort Fred FROSHEISER (soybeans) for forage conferences.

Clyde CHRISTENSEN, in the summer session at Itasca, consorted with wood ticks, mosquitoes, mushrooms, and students in his annual teaching duties.

SPORULATING SPORTS NEWS

Spring was the time of sore muscles for many of the aging graduate and staff members this year. Softball was of greatest concern especially since it proved to be a season of defeats for PP even though John Tuite improved beyond all expectation. The one game that appeared to be in the bag for PP after the usual five innings fell apart as the legs and arms of H. Bissonnette degenerated under the additional two innings of play. Even with a poor season, this softball year brought back many sore muscles that most of last year's players thought were gone forever.

According to Tuite and Hawn, the best way to prepare for your prelim is to play golf on the day you take your exam. It is rumored that Tuite was so relaxed he kept dozing off during his exam. Bob Hawn played one of his lowest golf games that day but apparently increased his scoring in his prelim the next day.

Fishing has been rather poor of late but not for Dr. John Rowell. After seeing the nice batch of brown trout he caught early one morning it would be nice to see how he does it.



TUESDAY SEMINAR

Tuesday seminars proved to be both interesting and entertaining for the spring quarter. Few people slept, and those that did tossed uneasily in the cancerous fumes of Dr. Butler's cigars. Question time at the commencement of each session was a little trying for all. Preceded by much scuffling of abstracts and jostling into seclusion, it usually culminated in an inquisition of the questioner.

The entrance of Dr. Stakman always ensured an interesting discussion, and the back row book was laying even odds on a 'Stake contribution' within one minute forty-five seconds. It was however these discussions that made the seminars worthwhile, as there is an unfortunate tendency for people to present a paper by merely repeating what is contained in their abstracts. Controversial topics were avidly seized upon, and at one meeting there seemed danger of open hostilities breaking out between Dr. Stakman and Dr. Clyde Christensen. Both had considerable experience with the overwintering of *Taphrina*, but their conclusions were not compatible. Finally a truce flag was flown, the speaker was brought from under the table, (English not being his native tongue, he had been under the impression that a lynching was imminent), and the seminar resumed order.

Topics discussed were primarily concerned with survival and spread of pathogens, and the seminar was unanimous to the point of agreeing that most pathogens seemed to manage to do both. A paper on physiology of bacteria aroused some interest, but when the speaker pointed out that "survivor curves are exponential, and when plotted on a logarithmic scale the resulting curve is a straight line," several members crept out murmuring about a wrong room number. One skeptic disputed the use of the term gene with regard to bacteria but was beaten down by the geneticists. He continued to mutter angrily that geneticists probably had fairies at the bottom of their gardens also, but to no avail.

We were shown by means of an excellent slide just what a potato tuber looked like, although Dr. Eide assured us he had seen them before in the days when the potato project was affluent.

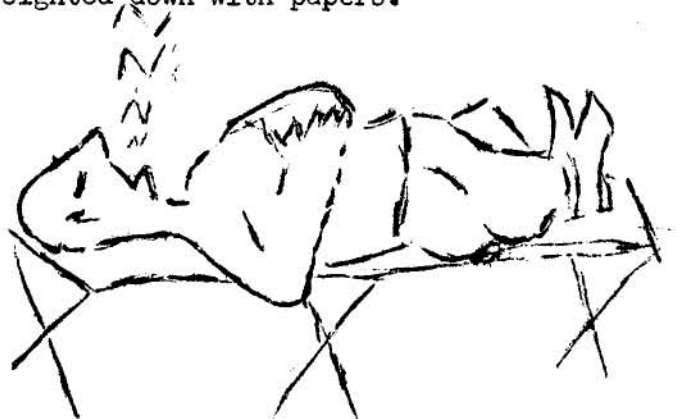
Imaginations were strained when Dr. Stakman asked us to visualize a strain of Erwinia amylovora that was both an excellent saprophyte and an excellent parasite, and that could attack all plants. It is understood that the potato project is now following up the idea in the hope of a Geneva conference and a vast international grant.

Dr. J. J. Christensen was, as usual, merciless in following up a query, and many a time was the seminar exhorted to "look it up by next time." This caused a certain amount of bitterness and resentment, as those who looked up the points in question were never later quizzed!

Matt Moore's thirst for knowledge always seemed to increase in inverse proportion to other people's hunger for food, and he thus usually managed to have the last word. It was generally agreed that he must have a sadistic streak which he fortifies by eating in his office immediately before seminar.

Despite the fact that the meetings never completed their schedules, all papers but one were presented. This proved somewhat of a surprise for the people at the end of the list, and there was a high price being paid for obscure references written in Russian and Swahili just before the last meeting.

There is no doubt though that the seminars fulfilled their purpose. Everyone left with a splitting headache and arms weighted down with papers.



LOCALS

On May 31 Dr. Stakman served his last day as Agent of the U.S. Department of Agriculture by virtue of attaining the age of 70 on May 17. Severance of administrative duties does not mean there will be loss of interest on his part. Long live Puccinia graminis! Or is it proper for plant pathologists to drink to this?

Master of Science degrees went to Bob Olien, Don Olmsted, and Dave Smith of Minnesota, to Roy Wilcoxson of Utah, Elsa (Jackson) Wood (now of South Dakota), and H. A. Mohamed of Egypt.

Ph.D. degrees were conferred upon Mary Ann Swaebly and Fred Frosheiser. In addition, nine passed a prelim recently: John Tuite (New York), Gene Hayden (Rhode Island), Bob Hildreth (Wyoming), Harry Schroeder (Kansas), H. A. Mohamed (Egypt), K. D. Palaria and S. Singh (India), and F. M. Turk (Pakistan).

A son to Stephen and Christine Liu, a daughter to the Roberts, a boy for the Woods, and a girl for the Kommedahls. How many prospective plant pathologists are among these newborn babies?

It was learned in round-about fashion that Botanist Howard Ehrlich and Mary Ann Swaebly are married.

John Rowell moved to the Tottering Tower during March and has assumed the responsibilities of a new USDA position. John is studying the properties of new systemic fungicides, particularly those which have some promise of controlling wheat stem rust, and is planning to use radioisotopes to trace their translocation in plants. Facilities for employing tracer techniques will be ready in a few months. Members of the Department now have available chromatography apparatus, serological equipment (including a small-animal room), and in the near future, a radiation lab.

WINTER-SPRING PUBLICATIONS

Gastronovo, A. 1954. Studies on the inheritance of resistance to *Phytophthora infestans* in potatoes. *American Potato Journal* 31: 397-403.

Christensen, C. M. 1955. Grain Storage Studies. XVIII. Mold invasion of wheat stored for sixteen months at moisture contents below 15 per cent. *Cereal Chemistry* 32: 107-116.

Christensen, J. J., and J. E. DeVay. 1955. Adaptation of plant pathogen to host. *Annual Review of Plant Physiology* 6: 367-392.

Christensen, J. J., and L. Wood. 1955. Barley stripe, net blotch, spot blotch --Why do these diseases vary over the years? *Minnesota Farm and Home Science* Vol. 12, No. 3, pp. 16-17.

Drescher, R. F., and C. M. Christensen. 1955. Performance of Paper Machine Wet Felts. III. Experimental plugging of felt strips in the laboratory. *Tappi* 38: 115-120.

Eide, C. J. 1955. Minnesota farmers help to predict late blight. *Minnesota Farm and Home Science*, Vol. 12, No. 3, p. 20

Fridlund, P. R., and T. H. King. 1955. The occurrence and distribution of the X-disease virus of *Prunus* in Minnesota. *Plant Disease Reporter* 39: 545-546.

Hart, Helen. 1955. Complexities of the wheat stem rust situation. *Cereal Chemistry* 13: 1-14.

Koo, F. K. S., M. B. Moore, W. M. Myers, and B. J. Roberts. 1955. Inheritance of seedling reaction to races 7 and 8 of *Puccinia graminis avenae* Eriks. and Her at high temperature in three oat crosses. *Agronomy Journal* 47: 122-124.

Myers, W. M., F. K. S. Koo, M. B. Moore, and B. J. Roberts. 1955. Breeding oats for stem rust resistance. *Minnesota Farm and Home Science* 12: 6-7.

Rowell, J. B. 1955. Segregation of sex factors in a diploid line of *Ustilago zae* induced by alpha radiation. *Science* 121: 304-306.

THURSDAY NIGHT SEMINAR

Schroeder, H. W. 1955. Antagonistic action of *Helminthosporium sativum* and *Gibberella zeae* to infection by *Tilletia* spp. causing bunt of wheat. *Phytopathology* 45: 288.

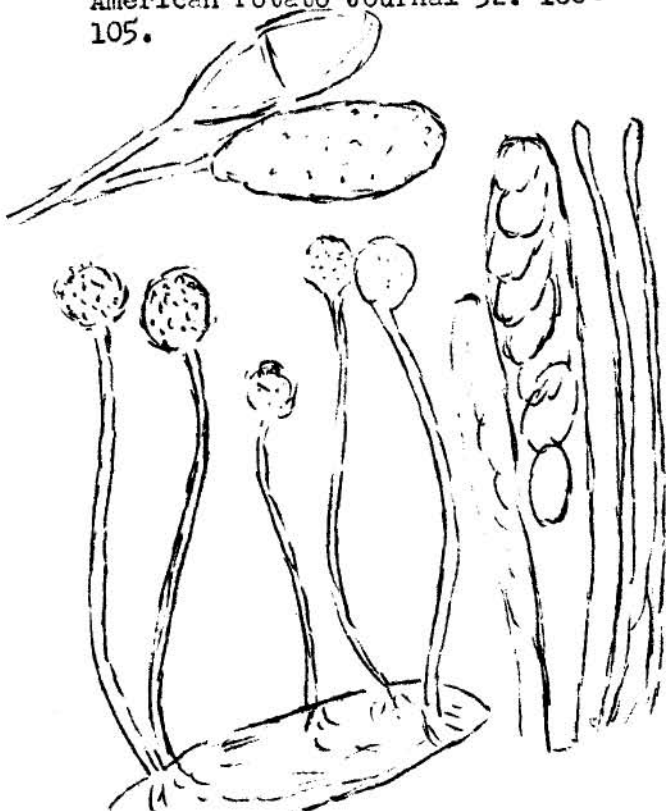
Stakman, E. C. 1955. Progress and problems in plant pathology. *Annals of Applied Biology* 42: 22-33.

Thomas, H. L., and M. F. Kernkamp. 1955. The use of heritability ratios and correlation coefficients for measuring combining ability with smooth bromegrass, *Bromus inermis* Leyss. *Agronomy Journal* 46: 553-556.

Tuite, J. F., and C. M. Christensen. 1955. Grain Storage Studies. XVI. Influence of storage conditions upon the fungus flora of barley seed. *Cereal Chemistry* 32: 1-11.

Tveit, M., and M. B. Moore. 1954. Isolates of *Chaetomiums* that protect oats from *Helminthosporium victoriae*. *Phytopathology* 44: 686-689.

Wallin, J. R., C. J. Eide, and H. D. Thurston. 1955. Forecasting potato late blight in Minnesota. *American Potato Journal* 32: 100-105.



Thursday night seminar suffered an agonizing reappraisal when certain members ^{1/} pleaded for more diversity. They claimed that research reports with their excessively long discussions curtailed the review of current and important literature. This was followed by an intellectual free-for-all, but their opinion in general was well received, and a virtual blackout on research reports was put into effect for 1 month. In addition, chairman Kishun Paharia was encouraged to rule with an iron hand in order to prevent verbosity, redundancy and monology. Amen!

Despite the serious charges of the reformers, recent seminars were not unproductive--over 40 pieces of literature and 2 books were reviewed, 2 guests gave talks and 2 movies (scientific) were shown.

Unfortunately or fortunately, there is not enough room to give the details of all these happenings. Just a few of the more interesting events will be mentioned. Bill Roberts presented some results on the study of the relationship of temperature to the reaction of oat stem rust. Bill demonstrated the localized effect of temperature by obtaining different pathogenic reactions on different parts of the same leaf by incubation of these different parts at different temperatures. Italian Dr. Grasso revealed to us, in detail, his method of obtaining good germination and subsequent fruiting of ergot sclerotia. He produced excellent samples to prove his case. Forest pathologist Ralph Anderson (who is so busy travelling these days, he is considered a guest) brought us up to date on the status of *Hypoxylon* canker of aspen and the losses in this area from oak wilt (surprisingly small). Interesting was Roy (Utah) Wilcoxson's report on his morphological studies of resistance in wheat to stem rust. Former Austin athlete Dick Nelson gave us further evidence of heterocaryosis in P.g.t. using urediospore color as a marker. Tranzschel's law was so amply demonstrated by Neil Anderson (Minn.) that Miss Dossdall has dropped it from her prelim questions. Booming George Papavizas ably enlightened us on some aspects of invasion of wheat seed in storage by Asp. candidus.

^{1/} Names on file.

El señor Eide, South American bound, showed slides on the results of different methods of testing resistance to muskmelon wilt. Oshima of Japan (who knows Japanese agriculture nearly as well as JJC) gave results which indicated that certain "doggone" viruses of red clover may predispose the plants to winter killing. Dr. H. Rex Thomas (Experiment Station inspector) spoke on the various aspects of experiment station work and gave helpful advice to students on presentation of research results. The length of Dr. Thomas' talk was controlled by an ingenious timer of Matt B. Moore; this delicate instrument is extremely sensitive to long or even short boring talks. When this occurs the speaker is warned by a stopping down of the aperture of the optical system of this gadget; anywhere from a f8 to f16 is considered critical, and at f22, f32 the speaker has obviously overextended his time. Finally heavy-snores-accompanied-by-head-drop never fails to discourage even the most difficult of cases.

In the literature review, a variety of material was heard, which included such topics as: Are scientists different? (yes), studies on conflict among primitive organisms, a twice-reviewed article on the effect of H. sativum on amino acid contents of wheat roots, Hooke's original drawings, paint failure, nematology, use of McBee card system, man's development due to cerebral stimulant (non-alcoholic), a Ph.D. thesis on Ceratocystis, fungi over the ocean, fungi that attack stored rice in Japan, and danger and use of phosphorus containing insecticides, et cetera.

A short history of such old timers as Guy Bisby, Dorney Valteau, E. M. Johnson, and Lawrence Henson was given. J.J.C. told of Valteau's orders to tobacco plant handlers: If you chew don't spit, and if you spit don't chew.

During the hot torrid weather, seminar continued through its regular schedule under heartless Paharia, despite cries for adjournment. There were such aids as iced lemonade, watermelon, and electric fans (also one hand-fan wielded by Korean Dr. Kim).

Martin Tveit reported on some of his work on Chaetomium done in England and at Waksman's laboratory (New Jersey). He was able to demonstrate that certain isolates of this fungus produce a substance which is translocatable and protects varieties of oats susceptible to H. victoriae.

Former General-College Instructor, Frank Stevenson, Old Timer now in Indiana, took advantage of a captive audience to discuss at some length aspects of his corn work done in Florida. OT Fred Davies pleasantly related some of the applications of fungi and bacteria to industry and the conditions under which an industrial scientist works. He reminded us that 8 A.M. is starting time in industry. Well!

A research report was given by Matt Moore on sparrow trapping on the experimental plots (latest figures are 3500 sparrows, one parakeet, two skunks, various grackles, several redwing blackbirds, some starlings and one Seleucidis melanoleucus). Incidentally, Matt hasn't changed, as Bill Roberts reported a field trip to Rosemount (30 miles) with MBM, in which they started out at 9 A.M. and got there by 1 P.M. John Rowell (now a rust man, but still a fisherman) reported considerable improvement in inoculation of rusts by use of oils as a suspending medium. We were enlightened by that historian and railroad hobbyist, C. J. Eide, on the expansion of western United States. Assisting him (more or less) was another historian E.C.S.

Other items of interest were Kommedahl's report on the economic importance of weeds (he says they are) and a review of an article concerned with an evaluation of teachers. The latter subject as might be expected was a source of controversy. ECS defended the right of the teacher to teach without interference and criticism from students until a 5-year cooling-off period has expired.

Some of Colombia's agriculture, plant diseases, topography, etc., was described by Senor Orjuela with the assistance of slides and JJC. There were other numerous reports on literature ranging from wire-tapping to late blight forecasting, which, due to limited space, remains unwritten.