ARTICLES

Accreditation and the drive for professionalism in agriculture[1]

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ABSTRACT

A brief review of the development and philosophy of accreditation and the portent of change with involvement is presented. Credentialing (certifying, registering, and licensing) of the individual graduate is discussed. The relationships of accreditation and credentialing to professionalism are examined. The nature of professionalism is described, and its importance to agricultural scientists is emphasized.

It is recommended that agriculture, through professional societies, emulate the American Chemical Society's program with:

1) **greater inputs into the professional curriculum of regionally accredited colleges and universities offering training in their professional area,**
2) **greater concern for the regional accreditation process as it applies to the subject matter area of an institution,**
3) **establishment of minimum credentials for admission to professional society membership, and**
4) **the establishment of a certifying procedure within each professional society for those professionals seeking such credentials.**

Additional index words: Credentialing, Certification, Registering, Licensing, Professionalism, Scientific societies, Government regulation.

IDENTIFYING and developing the credentials of professionals in all fields of agriculture are required because of today's instant communications; increasing public concern with the complex problems of food, natural resources, and the environment; and the exploding fund of knowledge. We urgently need to credential individuals at the time of graduation with bachelor and higher degrees, and to further identify those with additional training and experience as experts in given fields of agricultural science.

Accreditation in many forms is a basic part of credential identification for all professionals. Engineers, foresters, landscape architects, and veterinarians—all closely allied with colleges of agriculture—established their professional identity and credentials by accreditation, subsequent certification, and licensing through the auspices of one or several closely related professional societies. They have pioneered professional accreditation, which goes beyond regional accrediting that is also carried out at most institutions with colleges of engineering (4) and under which other disciplines and institutions are accredited. Kells (10) differentiated between the two: regional accreditation is that process dealing with the entire institution as opposed to special professional, or program accreditation.

There are some 45 different accrediting agencies in the USA. More than 35 of them are concerned with professional accrediting of a specific area or profession (18). Colleges of agriculture are accredited under the general institutional accrediting by the regional accrediting commissions.

The professional consciousness, so well manifested by the professions previously named, has only in recent years begun to stir in other professions which are associated with colleges of agriculture. With this growing awareness, there is an urge

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to develop an identity of the professions and to establish credentials for the qualified individual. Consequently, the question is raised, "Should the development of professionalism in the agricultural specialties retrace the route of the engineers and foresters, for example, by initiating professional accreditation for superimposition on regional accreditation, or is there a better, shorter route to a strong professional identity?"

The purposes of this paper are to review briefly the development and philosophy of accreditation, to consider the trends in coordination and control of accreditation, to examine the credentialing (certifying, registering, and licensing) of the individual beyond the baccalaureate degree, to ponder professionalism *per se*, and then to answer the foregoing question.

ACCREDITATION

Philosophy and Issues

Accreditation by the regional accrediting commissions *per se* ensures that certain procedures, processes, and standards are maintained at an institution. Accreditation seeks to ascertain whether an environment is established and maintained where learning *can* happen. But it does not absolutely guarantee that a graduate of an accredited institution is a top quality product. True, the graduate is a product of an approved knowledge factory; but further testing is required to ensure professional acceptability on all counts. Regional accrediting is concerned more with the *process* of training and education. Postgraduate requirements of certification, registration, and licensing focus on the *product* of the training and educational process.

The philosophy of accreditation (regional and professional), the mechanics, and the limitations are well covered in a source book (17) and by Kells (10). Faculty and administrators concerned with this subject and/or contemplating a visit for accrediting purposes would do well to study these sources.

Dickey and Miller (4) restated the Federation of Regional Accrediting Commissions of Higher Education (FRACHE) views of *regional* accreditation as, "a constructive process through which an institution clarifies its insights, gains increased perspective, and increases effectiveness." It deals with the process of the whole institution. In contrast to the regional accreditation of institutions as a whole, the more narrowly confined *professional* accreditation purports to accredit specific educational (professional training) programs *within* institutions. By definition, "Specialized or professional accreditation is a means of protecting the public against professional incompetency by assuring that professional education meets the needs of society and of the profession" (4).

It has been said that people are usually "down on" what they are not "up on." For those not directly involved in accreditation, their concepts of the process may be compared to concepts gained by earlier generations on sex—"something picked up, learned from the kids on the street" (17). To understand accreditation, it is well to identify the guiding principles and the mechanics of the process *and* to clear up the myths (8, 11). Kirkwood (11) stated that consumerism has made accountability a catchword and that, basically, accountability is what accreditation is all about. Whereas evaluation of learning determines whether learning has been achieved, accountability seeks additionally to determine how efficiently if was achieved in terms of the cost in time, effort, and money (19). Accrediting, in these terms, is the accountability for stewardship of public trust and is another manifestation of the fundamental precept of democracy, liberty under law, or freedom circumscribed by self-imposed restraints (4). Kirkwood (11) has cited the myths surrounding accreditation and countered with the following positive statements: Accreditation is not necessarily an end in itself. Only if there is a continued striving for excellence at the heart of the accreditation program will it serve its intended purpose. It is a means to an end. Accreditation is a mechanism whereby an institution may take a systematic look at its operation. The mechanism encourages introspection. Such self-study does not stifle innovation nor reduce institutions to monotonous stereotypes. Accreditation is based on evaluation of institutions in light of stated purposes and objectives. The most difficult and crucial operation in preparing for an accreditation visit is to define and sharpen education goals (11). The accreditation process, in these terms, is then seen as a time-tested procedure recently heralded as a modern administrative technique, namely management by objective (MBO) (5). Although MBO deals with the individual and his supervisor, the process can be applied between an institution and an accrediting commission. They jointly review progress toward goals set by the institution. For an educational institution, the goals are directed toward socially and educationally desirable ends.

For those who disdain regional accrediting as a large, educational bureaucracy, Kirkwood (11)

pointed out that while the nine regional accrediting commissions service more than 1,400 institutions, the 2,000 to 3,000 people involved in the accreditation visits are, for the most part, the grass-roots people—the faculties, students, and trustees—rather than presidents of institutions. Furthermore, accreditation does not restrict an institution's acceptance of a student's transfer credits, and does not stipulate course and degree requirements. Such stipulation is the responsibility of the faculty and the board of trustees of an institution.

Haywood (8), in a more critical tone, disavowed the voluntary nature of accreditation—"about as voluntary as is summoning a doctor in the event of a heart attack." The role of accreditation in the USA has grown to the extent that virtually every institution and many programs of study are forced to seek accreditation (4). The impact of accreditation withdrawal was illustrated by the Parsons College experience (4). From an accredited status enrollment of 5,000, Parsons College declined to 2,500 immediately after losing accreditation, and then closed its doors—after nearly a hundred years—in 1973. Institutions may exist, but few thrive without accreditation. Admittedly, an institution does seek identity (as being one of *the* institutions) rather than meeting a minimum standard of acceptance (8).

The U.S. government, which allocates more than $5 billion annually in programs related to education, relies on accreditation as the screening device. Institutions receive grants or individuals obtain financial help on the condition that the individuals are attending a "reputable" school. Since Congress seeks accountability, it stipulates that grants may only go to schools or institutions with accreditation. Consequently, the federal government is much concerned with the nature and reliability of accreditation. A real alternative to voluntary accreditation is federal control (15, 21).

Kells (10) outlined the needs for reform in present accreditation systems—if these systems are to prevail. He stated that most faculty members and administrators do not understand how the self-study and peer assistance processes of accreditation really should work on their campuses. To them, accreditation means arbitrarily imposed, strictly enforced quantitative and procedural standards. He charged faculty and administration with naiveté and lack of confidence—reactions largely based on misimpressions of the accreditation process. As C. J. Quann stated (personal communication), to the majority of faculty and administrators, an impending accreditation review is something like a case of the measles—something to be endured with the consoling thought that, "We'll feel better when it is over." Thinking about accreditation processes naturally turns one to easily measurable items such as showerheads per 1,000 students, number of volumes in the library, and number of Ph.D.'s on the faculty rather than, for instance, "What is the amount of contemplation, mental exercise, or input required for 1 hour of credit?" How does one measure the level and intensity of "intellectual ferment" on a college campus (15)? The science of educational measurements has not been very exact. There is little consensus on what should be the nature of the finished product leaving an institution of higher learning (4).

Kells (10) said there is vacillation and lack of general agreement between the regional accrediting commissions on how tough to be with the institutions and how to be tough. This situation provides a strong impetus for the U. S. Department of Health, Education, and Welfare (HEW) Office of Education to establish a separate federal mechanism of accreditation to determine the eligibility of institutions across the USA for federal funding. Federalizing accreditation would create a bureaucracy nobody wants.

Development of Accreditation

Dickey and Miller (4) reviewed the history of accreditation, starting with the attempt by K. C. Babcock in 1911 to identify those colleges and universities which were able to prepare students adequately for graduate work. (The storm of protest this classification generated showed that institutions—like professors—were reluctant to be publicly rated.) In 1913, the North Central Regional Accrediting Association was organized for the purpose of accrediting institutions as a whole. In 1932, the several engineering societies initiated the first professional accreditation via the Engineers Council for Professional Development (ECPD) (18). The American Society of Forestry established professional accreditation for foresters in 1936. Kaufert (9) provided an excellent history of forestry's development of accreditation. Because of forestry's similarities to agriculture, some cogent comparisons are provided. Accreditation of landscape architecture began in 1939 under the auspices of the American Society of Landscape Architecture through its Council on Education's Architectural Accreditation Board (1).

In 1949, a National Commission on Accrediting (NCA) was established to assist in reducing duplica-

tion, streamlining accrediting processes, etc. (4). In 1958, the National Defense Education Act stipulated grants could only be made to accredited public or non-profit institutions offering degrees. In 1965, the Commissioner of Education was empowered to accredit programs. There are now 21 federal agencies that utilize accredited status granted by non-governmental agencies as a basis for dealing with educational institutions (4), and the situation grows more complicated with every new federal use of accreditation.

The Report on Higher Education (16), known as the "Newman Report," was published in 1971 with the approval of the Secretary of HEW. It called for a revision in the roles of accrediting agencies and charged them with domination by "guilds of each discipline." Specifically, the report recommended: 1) tighter federal control of non-governmental accrediting groups, if not abolition of specialized accreditation, 2) separation of the establishment of eligibility for federal funds from accredited status, and 3) new federal legislation to deal with the restrictive practices of non-profit organizations. The proposed legislation would give power to a federal agency to investigate, and act upon, violations involving specialized accrediting agencies (4).

More recently (18), the major organizations involved in voluntary accreditation—NCA, FRACHE, and the newly created Council of Specialized Accrediting Agencies—merged to form a single, national, voluntary, accreditation organization: The Council on Post-Secondary Accreditation (COPA), which became operational in 1975. COPA is a non-governmental organization intended to foster and facilitate the role of accrediting agencies in promoting and ensuring the quality and diversity of American post-secondary education.

Dickey and Miller (4) considered the professions and accreditation, cited as exhaustive review of the literature on this subject, and reported that the experts on this subject all question the privileges society has tacitly granted to professions in exercising control over their own destinies. "The criticism of scholars, government officials, and even members of the professions suggests change in the role of professional groups in society. The implication for accreditation is that the professions will be called upon to share the responsibility for accrediting educational programs to prepare their future members" (4).

These predictions stem from three theses: 1) accrediting agencies are engaged in processes that have a substantial bearing on the public interest; 2) there is evidence that these agencies do not give primary consideration to the public interest, but favor the interest of their members or member institutions; and 3) therefore, the federal government should become more involved to ensure that accrediting groups operate in the public interest. The 1972 Annual Report of the Executive Director of NCA dealt with these theses in depth (3).

Change in Accreditation

The foregoing review indicates that professionally sponsored accreditation will most surely be changed in the future. Some speculation on that change is necessary before answering the question of whether agriculture should opt for professional accreditation as practiced by the engineers, for example, in addition to the present regional accreditation.

A survey of peers in colleges of agriculture indicated they almost unanimously eschewed professional accreditation for agriculture. Several felt the professional accreditation, which has worked for engineering with rather few departments or sub-subject-matter areas, would be inadequate for broad and diverse sub-subject-matter areas in agriculture. For instance, horticulture might conceivably have as many sub-subject-matter areas as all of engineering.[3] And a greater diversity of subject matter offerings results from diversity of climate and growing conditions—for example, contrast Maine, Mississippi, Montana, and California. A similar climatic impact on engineering subject matter is lacking. Some suspicion and resentment prevailed about "pressure tactics," "professional blackmail," "snow-jobs," and "tail-wagging-the-dog," where professional accreditation had on occasion been self-serving. It was apparent that these administrators of agricultural instruction favored some federal referee to curb such tendencies.

While some 40 professional associations assert the right to accredit programs within institutions and seek recognition from NCA, there are many professional areas of training that still rely upon the accrediting by the regional accrediting commissions of the institutions *per se* to serve these needs. Foremost among those who have anguished over the adequacy of this route have been the chemists. Sanders (20) provided an excellent review of this controversial question. It is suggested that what he has said for chemists and the American Chemical Society (ACS) might apply in large part to agricul-

[3]Personal communications in 1976 from L. P. Carter, G. O. Hall, C. E. Lindley, P. R. Poffenberger, A. E. Ritchie, Magnar Ronning, and R. S. Wheeler.

tural scientists—especially those whose training requires a great deal of chemistry. He stated that the U. S. Supreme Court has already ruled that chemistry is a profession. (Apparently the Supreme Court in its infinite wisdom has made the same discovery for chemists that is now being made by many concerned with agriculture.)

Ehrle and Creager (6), with the endorsement of the American Institute of Biological Sciences (AIBS) Education Committee, the AIBS/CUEBS (Commission on Undergraduate Education in the Biological Sciences) National Task Force of Two-Year College Biologists, and CUEBS argued strongly against professional accreditation by the 44 major professional societies within AIBS and by the numerous other professional societies with biomedical, agricultural, or other biological orientation. Obviously, they had no enthusiasm for going the route of the engineers.

CREDENTIALING

Definitions

Sanders (20) provided definitions that will be helpful in following the ACS credentialing processes beyond the baccalaureate degree. Indeed, these definitions are a reliable and useful guide in all discussions of credentialing.

Certification is a voluntary procedure by which a non-government organization attests to the professional qualifications of specific individuals. The organization is usually a professional society or separate board concerned with the individual's specialized field of work. To become certified, the person must prove that minimum standards of professional education and/or experience have been met. Usually, applicants for certification also must pass one or more qualifying examinations. Certification is a form of peer recognition of an individual's professional ability. An example of a certified professional is a certified public accountant.

Registration is a procedure similar in some respects to certification as it requires that the individual meet specified standards of professional education and/or experience. The person usually also must pass a qualifying examination. And registration gives the individual added professional recognition. In contrast to peer recognition in certification, registration is performed by a government agency. Thus, it has legal standing. An example of a registered professional is a registered nurse (R.N.). Both certification and registration are usually voluntary.

Licensing is a compulsory procedure by which the state grants qualified individuals the right to practice their profession or occupation. To be licensed, a person must meet minimum standards of education and/or experience, generally, by passing a state examination. Because he or she is licensed, the individual has legal standing and is allowed to carry out functions that are otherwise prohibited or illegal. A physician, for example, is a licensed professional.

Accreditation is a procedure by which a non-government agency determines that a program of study or an institution meets prescribed standards, or is meeting its stated goals. The institution may, for example, be a college, a university, or a hospital. Normally, the term "accreditation" is not applied to individuals.

Certifying, registering, licensing, and accrediting are "regulating" processes, idiomatically collectivized to "credentialing."

In contrast to the engineers' route to credentialing, ACS does not formally and periodically accredit chemistry departments; but through a committee on professional training which acts on behalf of ACS, it has established guidelines for professional education in chemistry at the baccalaureate level. The committee also evaluates and approves chemistry education programs offered at colleges and universities. Chemists must have certain credentials in order to gain membership in the ACS. Several organizations of chemists have carried on a certification program of members for many decades. For example, the American Institute of Chemists has "certified" about 1,700 members of its 7,500 total membership. Those thus certified require a renewal after 5 years (G. W. Stacy, personal communication).

It appears that professional societies within the area of agricultural sciences might well emulate chemistry with: 1) greater inputs into the particular professional curriculum of regionally accredited colleges and universities offering training in their professional area, 2) greater concern with the regional accreditation process as it applies to the subject matter area of an institution, 3) establishment of minimum credentials for admission to professional society membership, and 4) the establishment of a certifying procedure within the society for those seeking such credentials. The Institute of Food Technology has rather closely followed this pattern under the auspices of its Education Committee (J. V. Spencer, personal communication).

PROFESSIONALISM

Credentialing of Professionals

"One sign of progression towards maturity in a profession is an increasing concern with the qualifications of its members." Gagné's treatise (7) on the qualifications of professionals provides guidelines useful to scientific societies in agriculture. These societies are concerned with the same ques-

tion that engineers, foresters, and others answered in the Thirties by going for professional accreditation. The accrediting professional societies may still have the best answer for establishing and maintaining a professional image; but today there are some differences in circumstances.

Now, there are the regional accrediting commissions that have enjoyed a fair measure of success—even though they are criticized in some quarters. And accreditation of universities by the regional accrediting commissions route is less costly than by other means. Furthermore, the expenses of institutional accrediting visits are borne by the universities rather than the individual departments of a given college. A college of engineering with five departments would be charged about $3,000 for the accreditation visit, and the visit will then serve for 2 to 6 years depending on the rating received (C. W. Hall, personal communication). To establish a national program for professional accreditation, such as in engineering, may require an annual budget of more than $400,000.

Several of the agricultural societies (entomologists, plant pathologists, animal scientists, agronomists, plant and soil scientists, and horticulturists) are now moving toward a certification program—or have one on-stream—for their professionals (14). This certification is built upon the assumption of an adequate process of training in the Land Grant colleges and universities—and perhaps other institutions with regional accreditation. A further check of credentials by the respective society will probably be carried out to ascertain the eligibility of the applicant for certification. This process resembles the credentialing of engineers who have received the baccalaureate degree from an engineer's ECPD-accredited institution. Upon receipt of the B.Sc. degree in engineering, the engineer graduate may take an examination of basics; and, passing this is awarded the "Engineer in Training" (EIT) credential. With 4 more years of engineering experience, and having passed a second exam, the engineer becomes a "Professional Engineer" (P.E.) from the state in which the examination was administered (C. W. Hall, personal communication).

The Resident Instruction Committee on Policy, Resident Instruction Section, Division of Agriculture, National Association of State Universities and Land Grant Colleges, has recommended the inclusion of the teaching program and extension in the periodic research reviews of subject matter conducted by USDA's Cooperative State Research Service in concert with the experiment stations of the respective colleges of agriculture. Surely here is an excellent opportunity for an introspective review of the teaching program.[4,5] This review would augment the regional accreditation process and is similar to the evaluation in ECPD accreditation of engineering programs and departments: instructors are interviewed, course outlines and examinations are reviewed, and students are interviewed. The review process could be further elaborated.

The University of Georgia is now launching an "exit examination" requirement in the major field of study for a baccalaureate degree.[5] A complication to this procedure is the absence of standardized examinations in the agricultural disciplines. Students may be bewildered over the instructional intent. Unless the instructional intent is clearly understood by the faculty and the student, measurement of student mastery of the 4-year training is capricious, or worse (13). Wheeler[5] recommended construction of examinations on a national scale through the auspices of the professional societies such as agronomy, horticulture, etc., to surmount this difficulty.

Accreditation, whether following the route of the professional society or only the regional accrediting commission, is just *the first step* in the credentialing of an individual. It would appear from past results that either route can—and does—deliver qualified graduates. To provide and promote further credentialing for these graduates is a responsibility of the professional societies and the local, state, and federal registering and licensing agencies. Further, credential renewal and continuing education will be of enduring concern throughout the career of the professional.

In times past, the need for professional identity was not so critical and, more to the point, was not sympathetically recognized by the scientific societies. But professional societies in agriculture and directors of resident instruction in colleges of agriculture must now work quickly, vigorously, and cooperatively to prepare for the credentialing of professionals in agriculture and to recognize agricultural scientists as professionals. With the raging controversies on every question of food—its production and processing—and every question of the environment, the qualified agricultural scientists must have their credentials in order so that the public can depend on their work (2). One cannot judge by the decibels, or the fervor, of the speaker's voice whether he is qualified to speak on a subject.

[4] C. E. Lindley, personal communication.
[5] R. S. Wheeler, personal communication.

Definition of Professional

Lippitt (12) defined a professional as anyone who specializes in a job and does it better than anyone else. For agricultural scientists, the "job" involves activities essentially intellectual, requiring academic education and often internship training. Lippitt pointed out that the term "professional" has a loose connotation today. For instance, there are professional football, basketball, and baseball players, and golfers. There are professional rug cleaners, barbers, auctioneers, well diggers, chimney sweeps, and garbage collectors.

A more detailed definition of an academically derived profession was offered by Lippitt:

1) It is supported by a body of specialized knowledge.
2) It requires academic and internship preparation of its members.
3) It requires continuous in-service growth of its members during their career.
4) It affords a life career and permanent membership.
5) It formally establishes standards of training and performance for members of the profession through their organization.
6) Its members constitute a strong, closely knit professional organization.

Agricultural Scientists as Professionals

Over the years, directors of resident instruction appear to have been preoccupied with recruitment of bright young scholars and with their training as able agricultural scientists. The measure of their success has been the results, the accomplishments, and leadership that have established American agriculture second to none. But the trademark of these scientists has not been too well identified. It has long been recognized that doctors, dentists, architects, and certain engineers should be identified as to their competency to serve the public because their services are related to health, safety, and the general welfare. But suddenly, food in all its ramifications and environment are a part of the public interest in health, safety, and general welfare. Confusion and controversy have broken out on every side and consumerism reigns supreme. The time to identify the product of the colleges of agriculture is at hand.[6] Credentials of agricultural scientists—more specifically of agronomists, plant and soil scientists, horticulturists, animal scientists, entomologists, plant pathologists, and other specialists—must be put in order and made available for public inspection (2).[7] Accreditation by whatever agency is only the first step in a credentialing process that will have unique characteristics in each specialty. Agricultural sciences are only a part of the grand parade of professions now clearly emerging in the public eye. "We will have professional status only to the extent that we create it for ourselves" (12).

SUMMARY

A review of the literature reveals that accreditation *per se* is a complex and consuming subject. Accreditation is presently in a state of flux. Nearly 40 accrediting agencies of professional societies—or groups of societies—now seek recognition by the NAC. The regional commissions on accrediting serve more than 1,400 universities. Greater coordination of accreditation by the professional, society-sponsored agencies, and by the regional accrediting commissions is needed. To meet this need, accrediting may become a function of the federal government. Even so, recipients of the baccalaureate degree offered under either route of accreditation may be equally well trained. The advantages and disadvantages of each system of accreditation and, indeed, the philosophy of accreditation *per se* are worthy of further con templation.

From the review of the literature, extensive contacts with local colleagues in all departments of Washington State University's College of Agriculture, and from contacts with fellow directors of resident instruction in other colleges of agriculture, it is apparent that the present procedure for regional accreditation is generally accepted as quite satisfactory for colleges of agriculture—if properly approached by the respective institution. It is much less costly than professional accreditation; but even so, more time and effort should be put into the process of regional accreditation by the faculty and administrators and by the respective professional societies. Accreditation is not a spectator sport. Colleges of agriculture should give wholehearted attention to the accrediting process when visitations are scheduled on campus and a strong positive attitude of introspection should be established for administrators, faculty, and students so the *maximum beneficial results* of the accreditation visit are realized. As an aid to the accreditation process, the professional agricultural societies should decide what basic core of courses and training is necessary for a curriculum in their subject matter area and recognize those institutions that provide that curriculum. The American Chemical Society has set a good example.

[6] G. B. Brain, L. P. Carter, D. S. Metcalfe, and A. E. Ritchie, personal communications.

[7] J. C. Engibous, personal communication.

The credentialing process goes far beyond accreditation. Colleges of agriculture should promote development and identity of agricultural scientists through the initiative of societies of the agricultural scientists. Professional accreditation of the many and varied departments and programs in agricultural sciences does not appear necessary, does not warrant the costs involved, and deals with only the first part of credentialing, namely, training for the baccalaureate degree.

Professional societies of agricultural scientists should be encouraged to establish their identity by setting minimum credentials for membership and providing a system of certification or registry for those who seek further identity. Agricultural societies should be encouraged, as a minimum accreditation activity, to follow the pattern of the Education Committee of the Institute of Food Technologists, namely, 1) to establish a minimum core curriculum for graduates in their subject matter professional area, 2) to arrange for a representative of their education committee to conduct site visitations periodically, and 3) to establish professional eligibility requirements for membership in their respective societies. It would be better for scientific societies of agriculture to emulate the practices and policies of ACS toward professionalism.

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