

U.S. Office of Personnel Management  
Office of Merit Systems Oversight and Effectiveness  
Classification Appeal and FLSA Programs

San Francisco Oversight Division  
120 Howard Street, Room 760  
San Francisco, CA 94105-0001

**Classification Appeal Decision**  
**Under section 5112 of title 5, United States Code**

**Appellant:** [The appellant]

**Agency classification:** Research Agronomist  
GS-471-14

**Organization:** [The appellant's organization]  
Agricultural Research Service  
U.S. Department of Agriculture

**OPM decision:** Research Agronomist  
GS-471-14

**OPM decision number:** C-0471-14-01

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Carlos A. Torrico  
Classification Appeals Officer

November 6, 2000  
Date

As provided in section 511.612 of title 5, Code of Federal Regulations, this decision constitutes a certificate that is mandatory and binding on all administrative, certifying, payroll, disbursing, and accounting officials of the government. The agency is responsible for reviewing its classification decisions for identical, similar, or related positions to ensure consistency with this decision. There is no right of further appeal. This decision is subject to discretionary review only under conditions and time limits specified in the *Introduction to the Position Classification Standards*, appendix 4, section G (address provided in appendix 4, section H).

## Decision sent to:

### Appellant:

[The appellant's address]

### Agency:

Director  
Human Resources Division  
Agricultural Research Service  
U.S. Department of Agriculture  
5601 Sunnyside Avenue  
Beltsville, MD 20705-5100

Director  
Office of Human Resources Management  
USDA-OHRM-OD  
U.S. Department of Agriculture  
J.L. Whitten Building, Room 402W  
1400 Independence Avenue, SW  
Washington, DC 20250

## **Introduction**

On June 29, 1999, the San Francisco Oversight Division of the U.S. Office of Personnel Management (OPM) received a classification appeal from [the appellant] whose position is currently classified as Research Agronomist, GS-471-14. However, he believes that his research duties and responsibilities warrant upgrading to the GS-15 level. [The appellant] works in the [appellant's organization] Agricultural Research Service (ARS), U.S. Department of Agriculture. We have accepted and decided this appeal under section 5112 of title 5, United States Code (U.S.C.).

## **General issues**

This appeal decision is based on a careful review of all information submitted by the appellant and his agency. In addition, to help decide the appeal, an OPM representative conducted separate telephone interviews with the appellant and his immediate supervisor, [name of appellant's supervisor], Research Leader. Telephone interviews were also conducted with two of the appellant's colleagues: (1) [name and location of colleague], Agricultural Economist, and (2) [name of colleague], who is the appellant's former supervisor (Research Leader) in the [appellant's work unit]. Both the appellant and his supervisor have certified to the accuracy of the appellant's official position description (number 1P536).

In the appeal file the appellant makes various statements about his agency's review of his position, and in particular the peer panel evaluation of his work conducted in April, 1999. By law, we must classify positions solely by comparing their current duties and responsibilities to OPM standards and guidelines (5 U.S.C. 5106, 5107, and 5112). Therefore, we can only consider his statements insofar as they are relevant to making that comparison.

## **Position information**

The appellant works as a research weed scientist in the [appellant's unit]. He performs independent and collaborative research with other scientists covering agronomic, biological, and economical studies on the management of weeds in conservation tillage cropping systems for dry land agriculture. The focus of his research is on the reduction of weeds (i.e., jointed goatgrass, downy brome, Russian thistle) in non-irrigated agriculture in the [geographic area] primarily in the cultivation of winter wheat. The appellant is responsible for developing new knowledge, concepts, and information on the biology, growth, ecology, competitiveness, and control methods for the most troublesome weeds in dry land crops, and in formulating economically feasible and improved weed management systems that can be applied by growers. He serves as team leader over multi-disciplinary long term projects to develop field management strategies for the control of various grass weeds, and to develop no-till spring cropping systems as an alternative to the traditional wheat-fallow cropping method. The appellant has led large scale field experiments encompassing a variety of related disciplines concerning integrated pest management and cropping systems research. These research efforts are in line with the ARS goals on reducing farmer dependency on pesticides and herbicides, developing technologies for conserving the soil, water, and air resources, and maintaining and increasing the productivity and

quality of crop plants. The appellant also supervises a small staff of three biological science technicians who support his research.

The appellant's position description, record information, and the results of our interviews furnish more information on his duties and how they are performed.

### **Series, title, and standard determination**

The agency has classified the appellant's position in the Agronomy Series, GS-471, and he does not disagree. We concur with the agency's determination. As described in the series definition of the GS-471 classification standard (dated February 1961, and republished in HRCD-7, July 1999), like the appellant's job positions in that series involve the performance of professional and scientific work in the field of agronomy. This includes the application of the fundamental principles of plant, soil, and related sciences, to the improvement, production, management, and utilization of field crops, and to the development and use of weed controls and plant regulators. Because the appellant is engaged in research activities in the field of agronomy, the proper title for his position as specified in the standard is *Research Agronomist*.

Because the appellant's primary function is to perform scientific research in the field of agronomy, it is evaluated by application of the grading criteria in Part I of the Research Grade-Evaluation Guide (dated June 1964, reissued in HRCD-7, July 1999). As previously mentioned, the appellant also supervises three biological science technicians. However, in order for his position to be titled and evaluated as "supervisory" by application of the General Schedule Supervisory Guide (GSSG), the supervisory duties must occupy at least 25% of the position's time. Our review disclosed that the appellant spends only about 5%-10% of his time supervising the technician staff, therefore the position is not considered supervisory. Our evaluation of the appellant's research assignments follows.

### **Grade determination**

The Research Grade-Evaluation Guide (RGEG) is used across series lines to determine the grade levels of research positions. Part I of the RGEG is used to evaluate positions at GS-11 through GS-15 that are engaged in basic or applied research in the sciences, when the functions involve the personal performance, as the highest level function and for a substantial portion of the time, of professionally responsible research. The appellant spends from 90% to 95% of his time performing such research. Part I includes four factors that are considered and rated separately, with the total point value then being converted to a grade level by use of the grade determination chart provided in the RGEG.

Each factor is evaluated at one of five degree levels. Three of these levels (A, C, and E) are defined in the RGEG. An intermediate level (B or D) may be assigned when a position is evaluated between levels A and C or levels C and E, respectively.

#### **Factor I: The research situation, or assignment**

This factor deals with the nature, scope, and characteristics of the studies being undertaken by the employee. It is intended to reflect the situation or assignment in the current job, rather than a

summation of the employee's assignments over a long period of time. While we recognize that the appellant has led or been involved in various weed science research projects at the installation for many years, particularly the Integrated Pest Management (IPM) project dating from 1984 to 1994, in applying this factor to his position we have primarily focused our analysis on projects performed over the last five years, i.e., from 1995 to the present.

As described on page 18 of the RGEG, at Degree C the scientist is responsible for formulating and conducting a systematic research attack on a problem area of considerable scope and complexity. Problems of this scope must be approached through a series of complete and conceptually related research studies carried out by the scientist or by a team led by the scientist. Complexity is such that problems are typically difficult to define, require unconventional or novel approaches, require sophisticated research techniques, and/or present other features of more than average difficulty. Research studies of this scope will result in a series of publishable contributions to knowledge that will: (1) answer important questions in the scientific field, account for previously unexplained phenomena, and/or open significant new avenues for further study; (2) represent an important contribution to the validation or modification of scientific theory or methodology; (3) result in important changes in existing products, processes, techniques, or practices; and/or (4) be definitive of a specific topic area.

At Degree E (page 19) three types of research situations are described. The second situation describes responsibility for attacking basic research problems which have been recognized as exceptionally difficult and unyielding to research analysis so that their solution would represent an advance of great significance. The appellant's projects do not involve basic research and therefore the second situation does not apply to his position. The third situation involves team leadership with substantial supervisory responsibility in attacking problems of such scope and complexity as to require subdivision into separate phases of which several are characteristic of Degree D. As previously noted, the appellant spends no more than 5% to 10% of his time formally supervising three biological science technicians who perform principally support work rather than independent research. Monitoring of the technician staff does not require the appellant to exercise substantial and continuous supervisory responsibility coupled with team leadership as envisioned in situation three.

The first Degree E situation involves responsibility, ordinarily as a team leader, for formulating and guiding a research attack on problems in applied research which have been recognized as critical obstacles to progress or development in areas of exceptional interest. The solution of such problems would represent a major advance, opening the way for extensive further development.

The difficulty and complexity of the appellant's research meets but does not exceed Degree C. Since 1995 and 1996 the appellant has devoted most of his research efforts to two principal projects: (1) studying the potential for an integrated Spring cropping system for the semi-arid wheat-fallow region of the [geographic area], and (2) testing strategies for integrated jointed goatgrass management in the [geographic area]. The first project includes research techniques and tests findings developed from the previous IPM project, and is being conducted near [name of town and state]. The second research effort is being conducted at three sites near [names of towns and states].

The [name of town] project (begun in 1995) is a long-term field study to look at alternatives to the conventional winter wheat cropping system in the semi-arid area of the [geographic area], where winter wheat is planted and harvested in one year and the following year the land is left fallow. This wheat-fallow cropping system involves tillage to maintain a weed free dust mulch, using mechanical tillage practices during the fallow year. Over the years, the wheat-fallow system has been responsible for leaving the soil exposed to environmental conditions, causing accelerated levels of wind and water erosion. Moreover, insect, disease, and weed pests have become inherent problems. In the [name of town] project a multi-discipline research team was formed and led by the appellant consisting of scientists from numerous and varied fields including agronomy, weed science, soil science, entomology, breeding and genetics, agricultural economics, plant pathology, and county extension. This project is experimenting with several cropping systems using spring wheat, barley, and safflower, with reduced or no-tilling, as alternatives to the traditional system where the ground is left fallow for a year. The project is being conducted on a 20 acre site in the semi-arid region where rainfall averages only 11½ inches per year and there is no supplemental irrigation. The research project hopes to show that continuous cropping of spring wheat, or rotating spring wheat with winter wheat or spring barley, will reduce the number of fallow fields, increase residue cover on fields in the summer and fall, increase general soil quality and moisture, and reduce soil erosion and the incidence of winter annual grass weeds and diseases. Some of the principal goals of the research are to develop an economically feasible and environmentally sound conservation spring crop production system that replaces highly erosive winter wheat-fallow systems, effectively controls insects and major grass and broadleaf weeds, and reduces wind erosion by decreasing the number of conventionally tilled fallow fields.

The appellant's second project, started in the fall of 1996, focuses on integrated jointed goatgrass management in the [geographic area]. He also functions as a team leader for this project, working with colleagues in weed science, extension specialists, and agricultural economists in three [names of states]. The purpose of this research is to apply techniques generated from many single component jointed goatgrass studies into a combined series of "best practices" used in this project including one-time burning, crop rotation, seeding size, rate and density, and time and placement of fertilizer, to determine their overall effectiveness in controlling jointed goatgrass.

Similar to Degree C, in both of the above research projects the appellant functions not only as a researcher in weed science and agronomy, but also as team leader. In that role he developed the broad concepts and plans for attacking the problems associated with winter wheat-fallow cropping systems, and alternative methods for control of jointed goatgrass. Given the broad scope of the problems associated with the traditional wheat-fallow cropping system particularly in the [name of town] project, like Degree C the appellant recognized that it must be approached through a series of coordinated and integrated research efforts to deal with soil erosion, weeds (jointed goatgrass, downy brome, Russian thistle), insects (Hessian fly, aphids), and plant diseases (plant root and foot rot). Therefore, many separate but related scientific disciplines and studies were incorporated into the project. These all focused on experimenting and testing alternatives to traditional cropping methods with different types of spring wheat and other grains, and using less conventional farming practices such as no-till, frequent crop rotation with

different grains, increased crop residue to maximize soil fertility and moisture, natural control of weeds to reduce application of herbicides, etc.

The complexity of the appellant's two current research projects is typical of Degree C. Like that level many of the problems in the [name of town] project associated with a traditional wheat-fallow cropping system are difficult to define and analyze, and require unconventional or novel approaches and sophisticated research techniques to achieve the goal of long term dry land conservation and environmentally "friendly" farming. As previously noted, problems found with the traditional cropping system include significant land erosion and rapid loss of soil moisture, reduction in the fertility of the soil, significant infestation in the fallow fields of grass and broadleaf weeds, an increase in the population of damaging insects, and creation of a great deal of harmful dust resulting from over tillage of dry fields. To identify and determine the extent of these problems, complex research was performed in a variety of specialized scientific fields, e.g., agronomy, plant pathology, entomology, agricultural economics. This effort included both field work and laboratory analysis by team members and, like Degree C, has resulted in a number of unconventional or novel approaches for the potential resolution of problems typical of wheat-fallow farming in the [geographic] area. As discussed earlier, these have included increased use of the land by elimination of the fallow period through crop rotation with other grains, leaving more plant stubble on the ground to conserve soil moisture and increase fertility, reducing or eliminating tillage, breaking up the life cycle of certain weeds through a three year rotation of spring wheat, planting seeds at different intervals and configurations along with deeper penetration of fertilizers, etc. Although some of these methods may have been used in the past, it is the combination of them and the integration of multi-disciplinary scientific research to address related problems that yields an unconventional and unusual approach. The appellant's work with the long term, multi-disciplinary integrated jointed goatgrass management project also presents similarly complex problems and unconventional approaches in the research and possible resolution to goatgrass infestations of cereal crops in the [name of geographic area].

Like Degree C, the appellant's research in the two major studies discussed above has resulted in several publications answering important questions on the value of using integrated spring cropping systems as opposed to traditional wheat-fallow crop management. Technical reports and summaries of inter-disciplinary findings on the [name of town] project issued so far suggest that the new methods tested can enhance crop profitability, decrease grass and broadleaf weeds, improve soil productivity, and reduce wind and water erosion in the low rainfall, semi-arid region of the [geographic area]. Findings indicate that further study, through more crop cycles in the coming years, is needed in certain multi-disciplinary areas to pursue new avenues of research and conclusively establish the benefits of the integrated no-till cropping system. Similar to Degree C, the appellant's research in weed science and agronomy demonstrates the validity of modifying the traditional cropping system and conventional farming methods in the wheat-fallow area, and has resulted in potentially important changes to current farming practices.

The appellant's position does not meet Degree E for applied research projects. Although he normally serves as a team leader for research projects, unlike Degree E we do not find that the problems addressed have been recognized as critical obstacles to progress or development in areas of exceptional interest. While some growers in the [geographic area] region have shown significant interest in the research and practices being tested in both of the appellant's current

projects, overall we do not find that the problems identified are critically impeding the progress of winter wheat production. Regarding the [name of town] project, many growers recognize that use of conventional tillage and the wheat-fallow crop management system generates several problems in terms of soil erosion, weed infestation, etc. However, despite those negative aspects, the traditional method of winter wheat farming in the region has and continues to yield highly productive crops, and thus growers are reluctant to adopt different farming procedures. Indeed, there are indications that spring wheat/barley/safflower crop rotation still does not result in greater harvest yields than the single crop method. Moreover, the financial costs to the grower of adopting a multi-crop rotation can be substantially higher than pursuing a single crop method because of the increased costs of buying large quantities of two or more different seeds, and the additional costs of planting and maintenance of the varied crops every year.

While the [name of town] project reflects the ARS objectives of promoting environmentally “friendly” farming including protecting the soil against erosion, reducing the use of herbicides, and considering the impact of various farming methods on the ecology, as yet the project has not yielded a final product or “best management scheme” that would clearly establish the validity of integrated spring crop management. Technical reports indicate that continuation of the study is needed over more years to help determine the economic viability of the cropping systems being studied. Concerning the appellant’s research on integrated jointed goatgrass management, many of the same grower perceptions apply. Traditionally, weeds are kept in control during the fallow year through heavy tilling; the downside being soil erosion and loss of soil moisture. Although farmers are concerned about the infestation of jointed goatgrass, it is not viewed as a critical obstacle to winter wheat production and, like the [name of town] project, further study is needed before the appellant’s team can recommend a “best management practice” for the long-term control of jointed goatgrass. Consequently, the various proposed solutions to the problems being studied in both projects are still under review, and at this point do not represent major advances opening the way for extensive related development typical of Degree E. A “major advance” would involve an advance significantly beyond that described at Degree C, which includes accounting for previously unexplained phenomena, opening significant new avenues for further study, or bringing about important changes in existing products, processes, techniques, or practices.

Degree C for Factor I is assigned to the appellant’s position and 6 points are credited.

#### Factor II: Supervision received

This factor deals with the supervisory guidance and control exercised over the researcher in the current job situation.

At Degree C (page 20) in applied research, the researcher is typically assigned a broad problem area. He/she is allowed substantial freedom in identifying, defining and selecting specific problems for study and being responsible for determining what appear to be the most fruitful investigations and approaches to the problem area. The researcher is responsible, with little or no supervisory assistance, for formulating hypotheses, for developing and carrying out the plan of attack, for coping with novel and difficult problems requiring modification of standard methods, for analyzing and interpreting results, and for preparing comprehensive reports of



findings. The supervisor is kept informed, through occasional discussions, of general plans and progress of work. The supervisor approves plans which call for considerable investments of time or equipment; and is responsible for final decisions concerning direction of work, and concerning changes in or discontinuance of important lines of investigation, particularly if they involve abandonment of what had been thought to be promising lines of investigation or of a substantial research investment. However, the researcher's professional judgment is relied on to such an extent that his/her recommendations are ordinarily followed. The researcher has full responsibility for decisions regarding use of available equipment and other resources. The researcher's completed work and reports are reviewed principally to evaluate overall results.

At Degree E (page 21) technical supervision is nominal and consultative in nature. The researcher works under broad administrative supervision, which is generally limited to approval of staffing, funds, and facilities, and broad agency policies. Within the framework of management objectives, priorities, and pressures for results, the researcher is expected to locate and explore the most fruitful areas of research in relation to the agency's program and needs and the state of the science involved; to take complete responsibility for formulating research plans and hypotheses and for carrying them through to completion; and to take full technical responsibility for interpreting findings, including interpreting their applicability to activities and interests of the agency, and their broader applicability to basic scientific methodology. Within the agency these interpretations are accepted as technically authoritative, and become the basis for necessary administrative action.

The appellant's level of supervision received fully meets Degree C and exceeds it in some respects. As at Degree C, within the broad objectives of the research unit's mission, the appellant is free to select his specific areas of research, to determine the methodologies to be employed (including designating the other scientific disciplines for his research team), and to interpret and report the results of his research, including reviewing and editing the findings of team members for combined research technical reports and publications. However, he works with somewhat more independence than is expressed at Degree C regarding the direction of the research, and his work is accepted by the supervisor (a soil scientist) as technically accurate and is reviewed primarily through the peer review process.

The appellant's work approaches Degree E in that he works under broad administrative supervision, with considerable latitude to shift the emphasis of his research to pursue promising lines of investigation. Thus the development and focus of the appellant's two current research projects has been largely an evolutionary process built on the observations and findings of his earlier work, particularly the ten year Integrated Pest Management project. This exceeds Degree C in that these shifts in research direction, within the scope of the weed science area, are within the appellant's professional latitude, and do not require supervisory approval. However, the appellant's position falls short of Degree E in its description of only the broadest supervisory controls in locating and exploring research areas that satisfy the agency's program objectives and priorities. In contrast, the appellant's research must be tied to the base program objectives of the [name of appellant's work unit]. Any large scale proposed changes in the direction of his work that would alter the overall direction of the Unit's efforts, must be reviewed by the immediate supervisor, and if endorsed by the Research Leader, must be approved at higher supervisory levels, i.e., [name of higher supervisory level].

Like Degree E, the appellant takes complete responsibility for formulating research plans and carrying them through to completion, and takes full technical responsibility for interpreting findings. However, that degree level includes the additional criteria that the scientist has some recognition with the agency (ARS) as a technical authority within the research area, such that the scientist's work compels the agency to respond administratively to research conclusions or progress. For example, previous OPM decisions indicate that this may include the agency assigning significant additional resources to the scientist's work because of the critical nature of the research, redirecting broader agency efforts to support or complement the research, or appointing the scientist to head important committees or serve as a spokesperson or expert witness in external agency dealings. Although the appellant has achieved considerable recognition among his peers for his studies of certain weeds infesting wheat crops in the [geographic area], there is no evidence that he has garnered this degree of administrative support within his agency.

Because the appellant's position fully meets and to some extent exceeds Degree C, and some aspects of Degree E are met, the intermediate Degree D is credited for Factor II and 8 points are assigned.

### Factor III: Guidelines and originality

This factor deals with the creative thinking, analyses, syntheses, judgment, resourcefulness, and insight that characterize the work performed by the employee in the current job situation.

In applied research, Degree C (page 22) typically involves development and application of new techniques and original methods of attack to the solution of important problems presenting unprecedented or novel aspects. This includes application of a high degree of insight to isolate and define the critical features of the problems. It also requires application of a high degree of originality and ingenuity in adapting, extending, and synthesizing existing theory, principles, and techniques into original and non-obvious combinations or configurations, and in defining and conducting the specific research studies necessary for the solution of the problems dealt with.

At Degree E (page 23), originality is represented by creative extension of existing theory or methodology, or significant contribution to the development of new theory or methodology which is of such scope as to supplant or add new dimensions to a previous framework of theory or methodology. Alternatively, Degree E originality (particularly in applied research) may be represented by responsibility for applying a very high degree of imagination and creativity in the solution of problems of marked importance (for example, to the scientific field, to national defense, to health, to major segments of the national economy, etc.), for which there is an almost complete absence of applicable guidelines, pertinent literature, and methodology.

The appellant's position fully meets but does not exceed Degree C. Like Degree C, in both of his current major projects he has developed and applied new techniques and original practices to deal with the important and widespread problem of infestation of weeds in winter wheat, and the negative effects of the wheat-fallow cropping system in the [geographic area]. For example, the development, testing and combining of a variety of methods to control jointed goatgrass in

winter wheat through application of a non-traditional cropping system that uses a one time field burn, a more competitive wheat variety, banded and starter fertilizer applied at planting, a more densely planted wheat stand, and longer periods of time between winter wheat crops, demonstrates the originality characteristic of Degree C. In his research study involving the development of a no-till integrated spring cropping system at [name of town and state], the appellant has exercised a significant degree of insight into defining the broad scope of the problems surrounding the traditional wheat-fallow cropping cycle, defining and isolating the key features of a variety of inter-disciplinary problems associated with the cycle, and bringing to bear the expertise of a number of different research scientists conducting individual but related studies to resolve the problems identified. While no-till cropping systems have been studied elsewhere in the mid-western United States (e.g., Kansas) dealing with spring crops like barley and soybeans, the appellant has adapted and/or extended some of the existing practices into original combinations, approaching problems from an inter-disciplinary standpoint, and applying them to the semi-arid winter wheat growing region of the [geographic area].

The appellant's position does not meet Degree E. In order to meet that degree, the research must have gone considerably beyond Degree C to extend or develop theory or methodology to the point that existing theory or methodology is replaced or significantly altered. The RGEG also reflects that at Degree E, applied researchers focus on problems of marked importance where applicable guidelines, pertinent literature, and methodology are almost completely absent. Unlike the first criterion, we do not find that in the appellant's two current principal research projects his research conclusions to date have replaced or significantly altered the traditional wheat-fallow cropping system, or conventional practices dealing with infestations of jointed goatgrass. While both studies have yielded some promising results, status reports indicate that more study is required to establish the overall value and feasibility of adopting the new approaches to crop and weed management. In contrast to the second criterion, we do not find that the appellant is dealing with problems of such "marked" scope and importance that they impact on an entire scientific field, to health, or a major segment of the United States economy, for which applicable guidelines, pertinent literature, and methodology are almost completely absent.

Factor III is evaluated at Degree C and 6 points are credited.

#### Factor IV: Qualifications and scientific contributions

This factor measures the total qualifications, professional standing and recognition, and scientific contributions of the researcher, insofar as these bear on the dimensions of the current research situation and work performance. It is given twice the weight of the other factors. The RGEG instructs that although the total history of accomplishment is to be considered under this factor, recent research which assures maintenance of research competence is essential to full credit for past accomplishments.

At Degree C (page 24), the researcher has demonstrated ability as a mature, competent, and productive worker and will typically have authored one or more publications of considerable interest and value to the field (as evidenced by favorable reviews, by citation in the work of others, by presentations of papers to professional societies, etc.), and/or will have contributed

inventions, new designs, or techniques which are of material significance in the solution of important applied problems. The researcher's contributions at Degree C involve leadership of a productive research team, or, leadership in the conception and formulation of productive research ideas (as evidenced by the fact that his/her ideas have been the basis for productive studies by others, within or outside the immediate organization), and/or highly productive (in terms of both quantity and quality) personal performance of research of such originality, soundness, and value as to have marked him/her as a significant contributor to his professional field. The researcher at Degree C is beginning to be sought out for consultation by colleagues who are, themselves, professionally mature researchers. Further evidence of the researcher's emerging recognition may be selection to serve in important committee assignments of professional groups. He/she is qualified to speak and deal responsibly concerning technical matters in his/her area of immediate specialization with researchers within and outside his/her own organization.

At Degree E (page 25), the researcher has demonstrated outstanding attainment in a broad, or in a narrow but intensely specialized field of research. The researcher will typically have authored a number of important publications, of which at least some have had a major impact on advancing the field, or are accepted as definitive of important areas of it, and/or the researcher will have contributed inventions, new designs or techniques which are regarded as major advances in basic or applied research, and which have opened the way for extensive further developments, or have solved problems of great importance to the scientific field, to the agency, or to the public.

Contributions at Degree E are of such importance and magnitude that they serve to move the art forward to the extent that other researchers must take note of the advance in order to keep abreast of development in the field. The researcher at this degree is sought as a consultant by colleagues who are themselves specialists in his/her field; the researcher speaks authoritatively regarding his field in contacts within and outside the Government. Invitations to address national and professional organizations, and recognition in the literature of his/her field through favorable reviews and numerous citations by others are further typical evidences of attainment.

The appellant's qualifications and scientific contributions fully meet, and to some extent exceed Degree C. Like Degree C, as an experienced weed scientist he has demonstrated over a period of many years that he is a highly professional, mature and competent researcher in his area of expertise. He has authored or co-authored numerous publications on proposed methods for controlling particular weeds in dry land wheat farming, and the application of an integrated pest management system to wheat crops in the [geographic area]. Many of these, particularly his research on the control of Russian Thistle and jointed goatgrass, and work on no-till cropping systems, have been characterized by new approaches and presentation of alternative wheat farming practices. These have shown to be of material significance in developing solutions to the important applied problems of weed infestation and soil erosion in winter wheat crops. Like Degree C, much of the appellant's research projects have involved leadership of productive interdisciplinary research teams, where he not only performed personal research on weed science and agronomy issues, but also provided overall direction and coordination to the other scientists, and reviewed and edited report findings for various publications stemming from the research project. In addition, his personal research on control of specific weeds infesting both winter and spring wheat crops have marked him as a significant contributor in his field.

At Degree C the RGEG notes that researchers are *beginning* to be sought out for consultation by colleagues who are, themselves, professionally mature researchers. The appellant's level of professional recognition exceeds that criterion and favorably compares to Degree E. He has an established reputation among other weed scientists for his significant and persuasive research on the principal weeds affecting wheat crops in the [geographic area]. In that regard, he has proposed various methods of control that would reduce farmer dependence on herbicides, conserve the soil and water, and contribute to the productivity and quality of crop plants. In addition, his ability and experience in organizing, coordinating and directing long term, multi-discipline, integrated team research for dry land cropping systems has led to his regularly acting as a consultant to other weed scientists. For instance, he has served as a "peer" reviewer of draft publications submitted by other weed scientists, been the featured speaker at various meetings of organizations devoted to weed science, was recently awarded status as a "Fellow" of the [name of society], and his proposals on jointed goatgrass management in winter wheat production systems have been applauded by the [name of scientific committee].

The appellant's work meets some aspects of Degree E, but does not fully meet that level in terms of the accomplishment and impact of the research. Although he has authored a number of publications over the years, we do not find that he has demonstrated outstanding attainment in his field in terms of the breadth, scope and impact of the research. While his research and related publications have certainly substantially added to the body of knowledge on particular weeds and cropping systems, our interviews with his peers disclosed that he is primarily known for his skill as a team leader (previously discussed under Degree C) in putting together large scale, integrated multi-discipline, long term field research projects. While significant, his contributions stemming from the projects are not of such magnitude and importance that they advance weed science forward to the extent described at Degree E. Indeed, his two current principal projects have yielded only preliminary findings and few publications. At this time they could not be characterized as having major impact on advancing the field, accepted as definitive of an important research area, nor could the techniques of weed control and farming practices be addressed so new as to be viewed as a major advance in applied research.

Because the appellant's work fully meets Degree C and approaches Degree E in regard to the level of professional recognition attained, the intermediate Degree D is credited for this factor and 16 points are assigned.

### *Summary*

Factor evaluations and points are assigned as follows:

I.	The research situation, or assignment	Degree C	6 points
II.	Supervision received	Degree D	8 points
III.	Guidelines and originality	Degree C	6 points
IV.	Qualifications and scientific contributions	Degree D	<u>16 points</u>
Total:			36 points

A total of 36 points falls within the GS-14 range (36-42). Therefore, by application of the Grade-Determination Chart on page 17 of the RGEG, the appellant's position is graded at the GS-14 level.

**Decision**

The appellant's position is properly classified as Research Agronomist, GS-471-14.