A Life in Horticulture and Plant Breeding: The Extraordinary Contributions of Jules Janick

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ABSTRACT

This chapter discusses Jules Janick, whose career has been intertwined with enormous changes in horticultural science and plant breeding. More than any other person in the U.S. in the last 60 years, Jules Janick has doggedly brought horticulture into the scientific realm. Jules Janick was the editor of fourteen volumes of *HortScience* from 1970 to 1983, and eight volumes of the *Journal of the American Society for Horticultural Science* from 1976 to 1983. He has edited ten volumes of *Acta Horticulturae* for the International Science of Horticultural Science (ISHS), and two volumes of *Scripta Horticulturae*. He also founded and single-handedly edited forty volumes of *Plant Breeding Reviews* and 43 volumes of Horticultural Reviews, which stand as an extraordinary accomplishment in twentieth century horticulture. Many of his texts still form the foundation for introductory horticulture and crop science courses offered around the world. Janick is also the co-editor, with James Moore, of a number of volumes on fruit breeding, including *Advances in Fruit Breeding and Methods in Fruit Breeding*. Janick holds six utility patents and 23 plant patents, and one Plant Variety Protection (PVP) certificate. Professor Janick has been a faculty member at Purdue University for over sixty years.

KEYWORDS: Acta Horticulturae; Advances in Fruit Breeding; crop science; HortScience; Jules Janick; Methods in Fruit Breeding; plant breeding
OUTLINE

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ABBREVIATIONS

ASHS    American Society for Horticultural Science
ISHS    International Society for Horticultural Science
PRI     Purdue- Rutgers-Illinois Disease Resistant Apple Breeding Program
PVP     Plant Variety Protection

I. INTRODUCTION

The famous industrialist Francis Cabot Lowell (1775–1817) said, ‘One lifetime is never enough to accomplish one’s horticultural goals. If a garden is a site for the imagination, how can we be very far from the beginning?’ Lowell could have easily been speaking about Jules Janick, whose career has been intertwined with enormous changes in horticultural science and plant breeding.

At age 85, Janick seems driven to continue pursuing his goals nonetheless, leaving us with an embarrassment of riches, for which the disciplines of horticulture and plant breeding owe him an enormous debt. After 40 years of serving as the editor of Plant Breeding Reviews and Horticultural Reviews, Jules has turned over the editorship of these extraordinary publications, providing a perfect opportunity to reflect on his life and career, and on the work that is encompassed by
a prodigious intellectual output which is unlikely ever again to be equalled by a single individual.

Geneticist Chad Finn, in a letter of recommendation for Professor Jules Janick for a Morrill award at Purdue University, commented that the visionary 1862 Morrill act compelled ‘education in agriculture, without excluding classical studies’. This landmark piece of legislation signed by President Abraham Lincoln, which laid the groundwork for US land grant universities, could not have found a more adept practitioner than Jules Janick who, for more than 60 years, has exemplified the best spirit of the land grant university and its tripartite mission of teaching, research and service. Janick has combined his passion for agricultural science with history, fine arts, anthropology, geography, language and letters, to become, without question, among the most well-known horticulturists and plant breeders of modern times.

More than any other person in the last 60 years, Jules Janick has doggedly brought horticulture into the scientific realm. Through his own research and teaching but, even more significantly, through his voluminous editing, writing, speaking, and organizing, he has almost single-handedly collected and produced a repository for horticultural and plant breeding research, practice, and impacts. For many years, Janick served as the editor for both major US horticultural journals, Journal of the American Society for Horticultural Science and HortScience, as well as founding and editing Horticulture Reviews and Plant Breeding Reviews. Through these publications, and many others, Janick helped US horticulturists communicate and articulate the scientific advances that have come to define the field today.

Known for his demanding, yet inspiring, editorial style, Janick was able to coax, cajole, and motivate scientists from a wide variety of backgrounds, perspectives, and specialties to articulate their expertise in writing. His efforts leave our disciplines with a treasure trove of insight, and with information that would have otherwise been lost or simply never documented.

In addition to these pursuits, Janick has a deep interest in iconography, art and history, with special reference to fruits and vegetables, crop domestication and crop origins. Janick’s writings have explored Caravaggio’s fruits, the festoons by Giovanni Martini da Udine that decorate the residence of Agostino Chigi (now known as the Farnesina Palace in Rome), the Cupid and Psyche ceiling paintings of Raphael Sanzio and the vegetables and fruits of Juan Sánchez Cotán, the strange 16th century manuscript Histoire Naturelle des Indes (The Drake Manuscript), the unicorn tapestries, and the herbals based on Pedanius Dioscorides. Janick and colleague Arthur O. Tucker are in the process of unravelling the famous Voynich manuscript.
Though critically important to the development of the USA, horticulture was considered both a necessity and a hobby, but was not necessarily recognized as a scientific enterprise. US horticulture was not formally constituted in a professional society until 1903, but strong biases about the role of horticultural science in the context of modern scientific inquiry persisted (Janick and Goldman, 2003).

The renowned educator, plant breeder, and visionary Liberty Hyde Bailey said, upon the 50th year of the founding of the American Society for Horticultural Science: ‘This society was formed of necessity. There was no meeting ground within the framework of state or local horticultural societies for the scientists – no place for him and his colleagues to meet. That’s why the Society for Horticultural Science was born. To many botanists I was not a scientist. I didn’t talk just about the influence of light on plant growth. I talked about its influence on beans. I didn’t talk about factors involving plant breeding. I talked about the problems and results of breeding squashes. I talked about the need for scientific work on horticultural problems. But it was not considered a science. The botanist spoke of pure science as if some science was impure. Fifty years ago knowledge from the applied studies was not acceptable to the botanists because it was not botany. And in a sense they were right. It was horticulture, the opening of a door to a new dawn!’ (Howlett, 1953; cited in Janick and Goldman, 2003).

Janick became an active, professional horticulturist 51 years into the society’s formal founding, and has played a major role in its development ever since. Bailey, also a prodigious writer, speaker, and educator, would no doubt have been extremely proud of Janick, had the former had the chance to know the latter’s contributions. Interestingly, Janick listened to Bailey speak to his horticulture class while an undergraduate at Cornell. Bailey – who was born in 1851 and died in 1954 – and Janick, whose career as a faculty member began in 1954 and continues today at full steam, remarkably span the entire breadth of scientific horticulture and plant breeding in the US. They should be considered among the greatest educators and synthesizers of the modern era.

One of us (IG) has a personal connection with Jules Janick through an early horticultural experience. Long a fan of upper Midwestern US apples, IG have always sought an apple cultivar known as ‘Co-op 22’ or ‘Jonafree.’ This thick-skinned, tart, juicy, and crisp apple resulted from a pedigree that included Jonathan, Red Spy, Rome Beauty and Golden Delicious. It was developed in the 1960s at the University of Illinois Agricultural Experiment Station in Urbana, Illinois, through the co-operative apple breeding program at Purdue University, Rutgers University, and the University of Illinois. Jules Janick was the Purdue member of this apple breeding consortium.
IG first learned about this project while an undergraduate student at Illinois, taking an introductory horticulture course from Robert M. Skirvin, who had been a graduate student with Jules at Purdue. He first tasted the cultivar from orchards in Wisconsin, and loved it ever since; IG still picks a bushel of this cultivar every October in Wisconsin. Although IG didn’t fully appreciate it then, the variety is immune to apple scab and can, therefore, be sustainably grown in the upper Midwestern USA. Many years later, he met Jules Janick and was amazed by the sheer scope of his horticultural output, his encyclopaedic knowledge of the field, and the way he was able to effortlessly and captivatingly weave the arts and humanities into horticultural science. IG learned then that apple breeding was one of only many directions his career has taken.

Jules Janick (Figures 7.1, 7.2, 7.3) was born in 1931 in New York City and obtained his B.S. degree in agriculture from Cornell University in 1951. He married Shirley Reisner in 1952. Moving to Purdue University, Jules obtained his M.S. and Ph.D. degrees in 1952 and 1954, respectively,

Figure 7.1. Professor Jules Janick.
Figure 7.2. Jules Janick in 1945 at Victory Farm Corps, obtaining agricultural training to enter Cornell University.

Figure 7.3. Jules Janick with ‘GoldRush’ apple.
in genetics and breeding. He was an assistant professor of horticulture at Purdue from 1956–1959, an associate professor from 1959–1963, and a professor since 1963. In 1988, he became the James Troop Distinguished Professor of Horticulture, a title he holds to this day. Jules completed sabbatical leaves at University College, London in 1962 and in 1985–1986, University of Hawaii in 1969, and University of Pisa, Italy in 1985. He is among the most decorated horticulturists in the US, receiving numerous commendations, honours, and awards from a range of organizations.

II. HONORS AND COMMENDATIONS

Janick has received four honorary degrees: University of Bologna (1990), the Technical University of Lisbon (1994), the Hebrew University of Jerusalem (2007), and University of Agricultural Science and Veterinary Medicine Cruj-Napoca, Romania (2010) (Table 7.1). He served as the President of the American Society for Horticultural Science (ASHS) in 1986–87 and was inducted in the ASHS Hall of Fame in 2009. He is the recipient of the Wilder medal from the American Pomological Society (1996), the Milo Gibson award of the of the North American Fruit Explorers (2004), the career award from the American Association of Industrial Crops (2006), and the lifetime award of the National Association of Plant Breeders (2011). He is a Corresponding Member of the Italian Academy of Agriculture, and a Fellow of ASHS, International Society for Horticultural Science, the American Association for the Advancement of Science, and the Portuguese and Romanian Horticultural Societies.

III. STUDENTS AND TEACHING

In addition to teaching horticulture and fruit breeding to thousands of undergraduate and graduate students, Jules Janick’s textbooks on horticulture have had an enormous impact on the development of horticulture around the world. Janick has been on the faculty of the Department of Horticulture at Purdue since 1954, making him the longest-serving academic horticulturist in the modern era. Over 63 years, Janick has taught courses in Science and Communication, History of Horticulture, Literature of Horticulture, Genetics, Plant Breeding, Pomology, Tropical Horticulture, and Plant Propagation at Purdue University. In conjunction with his long-time colleague Anna L. Whipkey, Janick has developed two distance education courses, History of Horticulture and Tropical Horticulture, which now reach more than 500 students per year.
**Table 7.1.** Honours and Commendations of Professor Jules Janick.

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<thead>
<tr>
<th>Honorary Degrees</th>
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<tr>
<td>• D.S. Agr (Hon) University of Bologna - Agricultural Science, 1990</td>
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<td>• Doctor Honoris Causa, Technical University of Lisbon, 1994</td>
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<tr>
<td>• Doctor Philosophiae, Honoris Causa, Hebrew University of Jerusalem, 2007</td>
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<tr>
<td>• Doctor Honoris Causa, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania, 2010</td>
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<th>Honours, Awards, Commendations</th>
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<tr>
<td>• Sigma Xi – 1954</td>
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<tr>
<td>• Paul Howe Shepard Award, American Pomological Society, 1960 and 1970</td>
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<td>• Marion Meadows Award, American Society for Horticultural Science, 1971</td>
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<td>• Gamma Sigma Delta, 1973</td>
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<td>• Fellow of the American Society for Horticultural Science, 1976</td>
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<td>• Stark Award, American Society for Horticultural Science, 1978</td>
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<td>• Wilson Popeneoe Award, American Society for Horticultural Science, 1980</td>
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<td>• Kenneth Post Award, American Society for Horticultural Science, 1981</td>
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<tr>
<td>• Fellow, Portuguese Horticultural Association (Horticologio de Honra, Associacao Portuguesa de Horticultura), 1981</td>
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<tr>
<td>• Stark Award, American Society for Horticultural Science, 1982</td>
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<tr>
<td>• N. F. Childers Award (graduate teaching), American Society for Horticultural Science, 1982</td>
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<td>• Wilder Certificate of Recognition, American Pomological Society, 1984</td>
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<tr>
<td>• Vegetable Publication Award, American Society for Horticultural Science, 1986</td>
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<tr>
<td>• President, American Society for Horticultural Science, 1986-1987</td>
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<tr>
<td>• Fellow, American Association for the Advancement of Science, 1988</td>
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<tr>
<td>• James Troop Distinguished Professorship in Horticulture, 1988</td>
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<td>• Phi Kappa Phi, 1994</td>
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<td>• Wilder Silver Medal, American Pomological Society, 1996</td>
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<td>• Indiana Horticultural Society Recognition Award (Golden Apple), 1996</td>
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<td>• B.Y. Morrison Lecturer, United States Department of Agriculture, 1997</td>
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<td>• Commendation resolution, American Pomological Society, 1998</td>
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<td>• Spencer A. Beach Lecturer, Iowa State University, Ames, Iowa, 2000</td>
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<tr>
<td>• Horticultural Writing Award, American Horticultural Society, Alexandria, Virginia, 2001</td>
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<td>• Group Honor Award for Excellence, USDA, 2001</td>
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<td>• Certificate of Appreciation, CSREES, 2001</td>
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<td>• Fruit Cultivar Award (Prima), American Society for Horticultural Science, 2002</td>
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<tr>
<td>• Outstanding Service Award, American Pomological Society, 2002</td>
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<tr>
<td>• ASHS Distinguished International Horticulturist, Career Award, 2003</td>
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<td>• ASHS Tex Frazier Lecturer, 100th Anniversary of ASHS, 2004</td>
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<tr>
<td>• Fulbright Distinguished Lecturer, University of Pisa, 2004</td>
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<tr>
<td>• Corresponding Member, Academia Nazionale di Agricoltura (Italian National Academy of Agriculture), 2004</td>
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<tr>
<td>• Milo Gibson Award, North American Fruit Explorers, 2004</td>
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<td>• Distinguished Service Award. Indiana Horticultural Society, 2005</td>
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<tr>
<td>• Kermit A. Olson Memorial Lecturer. Department of Horticultural Science, University of Minnesota, St. Paul. March 23, 2005</td>
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<tr>
<td>• Dermot Coyne Memorial Lecturer. Lincoln, Nebraska, Sept. 29 and 30, 2005</td>
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<tr>
<td>• Fellow, International Society for Horticultural Science, 2006</td>
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</table>
In addition to his courses at Purdue, he lectured in Portuguese in plant breeding, advanced genetics and cytogenetics, and seed production during a two-year appointment at the Rural University of Minas Gerais, Brazil, and has taught history of horticulture at the Scoula Superiore Sant’Anna, University of Pisa, as a Fulbright Distinguished Lecturer. Janick has mentored 17 postdoctoral associates, 12 M.S. and 18 PhD students at Purdue, many of whom have gone on to teach, conduct research, and serve the horticultural profession in a wide variety of occupations and leadership roles (Table 7.2).

IV. EDITORIAL WORK

Jules Janick was the editor of fourteen volumes of *HortScience* from 1970 to 1983, and eight volumes of the *Journal of the American Society for Horticultural Science* from 1976 to 1983 (Table 7.3). Note that, for seven years, Janick simultaneously edited *both* of these formidable journals, an accomplishment unlikely to be equalled. He is the founder and (for 40 years) editor of both *Horticultural Reviews* (43 volumes since 1979) and *Plant Breeding Reviews* (40 volumes since 1983). From 2002 to 2011 he served as the science editor for nine volumes of *Chronica Horticulturae*, and has helped make this publication into a widely recognized high-impact forum for world horticulture.
Table 7.2. Postdoctoral associates, graduate students, and theses supervision.

Postdoctoral Associates

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<th>Name</th>
<th>Start—End</th>
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<td>J. Ellis</td>
<td>1958–1959</td>
<td>Andrzei Kononowicz</td>
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<tr>
<td>Muneo Iizuka</td>
<td>1960–1962</td>
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Graduate Students

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<td>D. L. Mahoney</td>
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<td>Luis Mimbella Leyva</td>
<td>E. C. Tigchelaar</td>
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<td>J. Pelluzio de Campos</td>
<td>R. L. Fery</td>
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<td>E. C. Tigchelaar</td>
<td>C.W. Fowler</td>
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<td>R. L. Bell</td>
<td>H. G. Hughes</td>
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<td>Claire Sawyers</td>
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<td>Rebecca Goetz</td>
<td>Chi Won Lee</td>
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<td>Marcos Paiva</td>
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<td>Yi-Chang Wang</td>
<td>R. L. Bell</td>
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<td>James Quinn</td>
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<td>Christiane Cabral-Velho</td>
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<td>Les Frey</td>
<td>Sherry L. Kitto</td>
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<td>Antonio Figueira</td>
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<td></td>
<td>Jorge F.S. Ferreira</td>
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Theses Supervised

Janick has been a leader in the field of new crops, and edited six volumes of proceedings of new crop conferences since 1990 that have helped characterize and organize a trove of information on worldwide crops. The development of NewCrop, a website on world crops (www.hort.purdue.edu/newcrop), has become a major world resource for this information, with millions of page views and thousands of downloads annually. He has edited ten volumes of *Acta Horticulturae* for the International Science of Horticultural Science (ISHS), and two volumes of *Scripta Horticulturae*. He served as editor-in-chief for ASHS Press. Janick has coedited the CABI *Encyclopaedia of Fruit and Nuts* (2006) and has served on the editorial board of the award-winning three-volume *Food and Culture* (2003).

Without question, two of Janick’s greatest professional accomplishments are the founding of the two review journals mentioned above: *Horticultural Reviews* (in 1979) and *Plant Breeding Reviews* (in 1983).
Table 7.3. Journal volumes and reviews where Jules Janick has served as editor.

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<thead>
<tr>
<th>Journal</th>
<th>Vol</th>
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<td>Plant Breeding Reviews</td>
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<td>Chronica Horticulturae</td>
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Forty-four volumes of *Horticultural Reviews* have been published over the past 38 years, comprising 347 review articles and 18,936 pages (Warrington and Goldman, 2016). Over 700 contributors from around the world have participated in the production of these chapters, making this resource one of the most diverse and comprehensive ever produced in horticulture. Many of the major fruit, berry, nut, vegetable and ornamental species have been covered in significant review articles. Various aspects of horticultural crop management are well covered, with details on disease and pest management, plant nutrition, plant growth regulators, the influence of environment on crop growth, and many other subjects.

Forty volumes of *Plant Breeding Reviews* have been published over the past 33 years, featuring 316 review articles and 15,392 pages (Warrington and Goldman, 2016). Several volumes focus on a particular topic, such as the US National Plant Germplasm System (Volume 7), long-term selection (Vol. 24), and raspberry breeding (Vol. 32). Like *Horticultural Reviews*, some 700 scientists from around the world have contributed to the review articles in this series. The emphasis of the series is on plant breeding methodology and techniques, a fundamental understanding of crop genetics, and specific applications to major crops. Both publications include unique dedicatory chapters comprised of descriptive biographies of key individuals involved in horticultural science, plant breeding and genetics.

Both of these *Reviews* include extensive cumulative indices which makes it easy to search for specific topics. Taken together, these two *Reviews* form one of the most valuable repositories of state-of-the-art information in modern agricultural science.

**V. BOOKS AND PROCEEDINGS**

Many students are first introduced to horticulture and the plant sciences through the textbooks *Horticultural Science* and *Plant Science: An Introduction to World Crops*, first published in 1963, and 1969, respectively, with Jules Janick as the senior author (Table 7.4). *Horticultural Science* has gone through four editions and has been translated into Spanish, Portuguese, Arabic, and Hindi. *Plant Science: An Introduction to World Crops*, has gone through three editions.

These texts still form the foundation for many introductory horticulture and crop science courses offered around the world. Janick is also the co-editor, with James Moore, of a number of volumes on fruit breeding, including *Advances in Fruit Breeding* and *Methods in Fruit Breeding*. 
Table 7.4. Books and proceedings written and edited by Jules Janick.


Advances in Fruit Breeding has been translated into Chinese, Russian, and Spanish. Advances was updated with a three-volume work called Fruit Breeding. Janick is the editor and collector of Classic Papers in Horticultural Science and a volume of American Society for Horticultural Science Presidential Addresses.

VI. RESEARCH

Some of Jules Janick’s early scientific work concerned the genetics of sex determination in plants, including a study of heteromorphic sex chromosomes in spinach. Janick was an early investigator into somatic embryogenesis and plant propagation that results in seeds produced asexually. His work has included investigation of secondary metabolites, such as anthocyanins cucurbitacins and artemisinin. He has also investigated and bred several firelight resistant pear cultivars, a delayed-bolting arugula cultivar, new tomato varieties for Brazil, and a pelargonium cultivar developed via somaclonal variation. Working with others in the Purdue-Rutgers-Illinois (PRI) apple breeding consortium, Janick has been part of the release of 21 scab-resistant apple cultivars.

Table 7.5. Patents, plant patents, and plant variety protection certificates of Jules Janick.

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<tr>
<td>• 4,204,366 Method of non-agricultural production of cotyledons. 1980</td>
<td>• 2,434 Prima apple – 1975</td>
<td>• 200400143 arugula – 2011 (Adagio™)</td>
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<tr>
<td>• 4,301,619 Plant tissue produced by non-agricultural proliferation of cacao embryos. 1981</td>
<td>• 3,988 Sir Prize apple – 1976</td>
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<td>• 4,426,808 Method of non-agricultural production of jojoba wax. 1984</td>
<td>• 4,359 Co-op 12 apple – 1979</td>
<td>• 13,819 Co-op 29 apple – 2003 (Sundance™)</td>
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<td>• 4,545,147 Asexual embryogenesis of callus from Theobroma cacao L. 1985</td>
<td>• 4,320 Co-op 14 apple – 1978</td>
<td>• 13,871 Co-op 33 apple – 2003 (Pixie Crunch™)</td>
</tr>
<tr>
<td>• 4,615,141 Process for encapsulating asexual plant embryos. 1986</td>
<td>• 4,321 Co-op 10 apple – 1979</td>
<td>• 14,034 P448-2 pear – 2003 (Green Jade™)</td>
</tr>
<tr>
<td>• 4,359 Co-op 12 apple – 1979 (Redfree)</td>
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<td>• 16,759 H2-169 pear – 2006 (Ambrosia™)</td>
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<tr>
<td>• 4,379 Honeysweet pear – 1979</td>
<td></td>
<td>• 16,662 Co-op 39 apple – 2006 (CrimsonCrisp™)</td>
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<td>• 4,499 Co-op 16 apple – 1980</td>
<td></td>
<td>• 20,437 Co-op 31 apple – 2009 (Winecrisp™)</td>
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<tr>
<td>• 4,633 Co-op 22 apple – 1981 (Jonafree)</td>
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cultivars. He holds 23 plant patents, a plant variety protection certificate for the new arugula cultivar, and six US patents for work on somatic embryogenesis and related technologies.

A. Patents

Janick holds six utility patents and 23 plant patents, and one Plant Variety Protection (PVP) certificate (Table 7.5).

B. Book Chapters, Reviews and Introductions


C. Journal Publications  


### D. Popular and Extension Articles


H. A. Robitaille and Jules Janick (1979). Grower-made apple trees for high density plantings. *Purdue University Agricultural Experiment Station Bulletin* 220.


Jules Janick, Presidential Column (Reflections), *ASHS Newsletter*:

- October 1986 2(10): 3 83rd ASHS Annual Meeting XXII International Horticultural Congress (HC)
- November 1986 2(11): 3 The Financial Health of ASHS
- December 1986 2(12): 3 The ASHS Endowment Fund
- January 1987 3(1): 3 New Directions
- February 1987 3(2): 6–7 Expanding ASHS Publications
- March 1987 3(3): 3 Regional Meeting
- April 1987 3(4): 12–3 Declining Horticulture Enrollment
- May 1987 3(5): 3 Public Relations
- June 1987 3(6): 3 Horticulture and Health
- July 1987 3(7): 3–5 New ASHS Office
- August 1987 3(8): 3 Getting Involved
- September 1987 3(9): 3 Dues
- October 1987 3(10): 3 Headquarters Reorganization
- November 1987 3(11): 3 Post Hortum


**E. Book Reviews**


**F. Encyclopaedia Articles**


Horticulture, Tomato: Vegetable or Fruit? *Encyclopaedia of Food and Culture*. Charles Scribner's Sons, New York

VII. PUBLIC ADDRESSES, INVITED SEMINARS AND SPEECHES


114th Annual Meeting of the Indiana Horticultural Society.

July 22, 1975. Fruit Quality and Fireblight Resistance in Pears. Address presented before Fruit Breeding Symposium, Beltsville, Maryland.


Nov. 11, 1980. Tissue Culture Research. Pioneer Research Laboratory, Campbell Institute for Agricultural Research, Cinnaminson, New Jersey.


Nov. 16, 1981. Embryogenics. Horticulture Seminar. The University of Maryland, University Park, Maryland.

Nov. 17, 1981 Embryogenics. Appalachian Fruit Research Station, Kearneysville, West Virginia.


Nov. 9, 1982. The Opportunities in Horticultural Writing and Editing. Virginia Polytechnic Institute and State University, Blacksburg, Virginia.


Nov. 12, 1982. Genetic Improvement in Fruit Crops. Opportunities in Plant Genetics and Breeding. Auburn University, Alabama.

Apr. 29, 1983. Embryogenics. Monsanto Corporation, St. Louis, Missouri.


Mar. 1, 1984. Applications of Genetic Engineering to Food Production. Indiana Section of the Institute of Food Technologists, Muncie, Indiana.


April 24, 1987. Embryogenics, Horticulture Seminar. Ohio State University, Columbus, Ohio.


December 17, 1987. Embryogenics. Department of Pomology, University of California, Davis.


January 22, 1990. Synthetic Seed Technology. Istituto di Coltivazioni Arboree, University degli Studi, Bologna, Italy.

January 25, 1990. Technological Change and the Future of Agriculture. Address at ceremonies for Dottore (ad honorum) Scienze Agrarie, University of Bologna, Cesena, Italy.


May 17, 1993. CO2 Enrichment for Propagation of Cacao. INRA, Angers, France.


August 1, 1994 PRI Apple Cultivars. Lensworth Horticultural Center, South Australia.
April 25, 1995. Horticultural Education in the United States, Disease Resistant Apple Breeding. Ege University, Izmir/Bornova, Turkey.
July 30, 1995. What’s hot, what’s not. Introduction to fads and fashions in horticultural science: Reality check. ASHS annual meeting, Montreal, Canada.


May 16, 1997. Future of Fruit Breeding, University of Naples, Portice, Italy.


October 10, 1997. Apple Breeding and Genetics (with S. Sansarini). II Symposium International on ‘State of the Art and Perspectives of World Genetic Improvement of Fruit Tree Species (apple, cherry, Japanese persimmon, chestnut)’. Faenza, Italy.


May 27, 1999. Programs in Apple Breeding, National Horticultural Research Institute, Suwon, Korea.


June 1, 1999. History of Horticultural Technology, Gyeon Gsang National University, Korea.


October 29, 2000. Ancient Egyptian Agriculture and the Origins of Horticulture. ISHS Symposium in Mediterranean Horticulture and also at the Center Laboratory for Agricultural Climate Agriculture Research Center, November 1, Cairo, Egypt.


March 5, 2001. The Potential for New Crops, Growing Global, Organic and New Crop Opportunities. 5th Annual Western Canada Medicinal and Aromatic Plants Conference, Edmonton, Alberta, Canada.


September 1, 2003. Genetic Alterations Associated with the origins of Fruit Culture. Eucarpia Symposium on Fruit Breeding and Genetics, Angers, France.


May 12, 2004. The Origins of Fruits, Fruit Culture, and Fruit Breeding. Scuola Superiore Sant’Anna, Pisa, Italy.


May 19, 2004. The Case for New Crops. Scuola Superiore Sant’Anna, Pisa, Italy.

May 21, 2004. The Origin of Fruit Tree Species. Facolta’ di Agraria, Universita’ Degli Studi di Bologna, Italy.


Sept. 9, 2005. Cupid and Psyche: Fables and Festoons. Keynote address, California Rare Fruit Growers (CRFG) & North American Fruit Explorers (NAFEX) annual meeting. Santa Cruz, California.
Nov. 12, 2005. History of the PRI apple breeding program. NEC 1099 and MAIA (Midwest Apple Breeding Improvement Program). Indianapolis, Indiana.
April 6, 2006. Cupid and Psyche: Renaissance Art and Horticulture; Putian University, Putian, China.


June 7, 2007. Art as a Source of Horticultural Information. Hebrew University of Jerusalem, Faculty of Agriculture, Rehovot, Israel.
March 27, 2008. Looking Backward, Looking Forward: A Career in Horticulture. Centre de Recherché en Horticulture, Laval University, Quebec City, Quebec.
March 11, 2009. Jonah, the whale and Gourd at Nineveh. Jewish Studies Program. Purdue University, West Lafayette.


September 23, 2009. Agriculture and Culture in Pre-Columbian America. Tippecanoe County Library.


March, 3, 2010. Amazon Adventure, Department of Horticulture, Purdue University, West Lafayette.

April, 28. 2010. Taj Mahal: Gardens the Imagination. Art History Association, Purdue University, West Lafayette.


May 4, 2010 Predictions for loquat improvement in the next decade (keynote address). II International Loquat symposium, Tarsus, Turkey.

August 2010. Taj Mahal,: Gardens of the imagination. ASHS annual meeting, Desert Springs, California (Delivered by Paul Sicliano).


August 26, 2010, Introduction to the Colloquium, Iberian Encounter with America and Asia: Exchange of Horticultural plants; Evidence for New World Plants in Europe and Asia for the Artistic Record. International Horticultural Congress, Lisbon, Portugal.

October 29, 2010. The Artistic Record: Art as a Source of Information on Agricultural Technology. Remarks upon receiving Honorus Causa, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania.


December 15, 2011. Remarks of the 50th Anniversary of the Graduate Program at UFV, Viçosa Brazil., Federal University of Viçosa, Brazil.


March 5, 2012. Festoons and Fables. Arnold Arboretum, Harvard University, Boston.

March 5, 2012. Art as a Source of Information on Horticultural Technology, Arnold Arboretum, Harvard University, Boston.


January 28, 2013. (with Anna Whipkey) Distance Education in Horticulture: A Ten Year Retrospective. Department of Agronomy, Purdue University, West Lafayette.


April 2, 2013. Apple breeding at Purdue University. INIA Field day on apple breeding, Chillan, Chile.

April 4, 2013. Past, Present, and Future of Fruit Breeding. Manejo de pre y pros cosecha en heurtos de manzano y seleccion de nuevas variedades in programs de mejoramiento genetica de manzanas: Casos de Exito. Santiago, Chile.


August 19, 2014. Dioscoridean Herbals: Comparison of Images Provides a Clue to their Relationships. 20th World Horticultural Congress, Brisbane, Australia.


September 21, 2016 A Kabbalah Sephirothic Tree, the New Jerusalem, and the Voynich Codex: Understanding a Bizarre 16th Century Manuscript of New Spain. Jewish Studies Noon Program, Purdue University, West Lafayette.
VIII. SERVICE CONTRIBUTIONS

Departmental Review Committee, University of New Hampshire (1971)
President, Pear Breeders’ Co-operative (1971–1973)
Consultant, World Bank Agricultural Research and Extension Development Mission to Indonesia (1973)
Consultant, Rodale Press (1978)
Editor, Horticultural Reviews, AVI, Timber Press, Wiley (1978–present)
Active Member, Campbell Soup Research Advisory Council (1978–1982)
Member, USDA/CR Review Team for the Department of Horticulture, University of Wisconsin, December 3–7, 1979
Member, USDA/CR Review Team for the Department of Horticulture, University of Mississippi, October 27–30, 1980
Advisor (Horticulturist) Purdue University Institute Development Program, Portugal, September 10 – October 10, 1981
Member, Scientific Advisory Board, DNA Plant Technology Corporation (1981–1986)
Member, USDA/CR Review/Team for the Department of Horticulture, Oregon State University, April 5–8, 1982
Visiting Scholar, Virginia Polytechnic Institute and State University, November 8–9, 1982
Associate Editor (Book Reviews), *HortScience* (1983–1987)
Advisor (Horticulturist), Purdue University Institute Development Program, Portugal, May 11–June 9, 1983
Advisor (Horticulturist), Graduate Program in Horticultural Science, University of Guelph, May 27–29, 1986
Chief of Party/Advisor (Horticulturist), USAID/OICD Portuguese Minister of Agriculture, June 8–28, 1986
Member CSRS Review Team for the Department of Plant Sciences, University of Delaware, November 18–21, 1986
Consultant, Weyerhaeuser Corporation, 1986–1987
Chairman, BARD panel review (Horticulture), 1986–1987
Member, CSRS Review Team for the Fruit Science Department, University of Florida, December 7–11, 1987
Member, Advisory Board, CRC Handbook of Plant Science in Agriculture, 1987
Consultant, Luso-American Development Foundation, Project Assessment, April 11–15, 1988
Participant, Workshop on International Horticulture, Rutgers University, May 29–31, 1988
Expert Witness, B. Hare vs. Stark Nursery, Greeneville, SC, August 3, 1988
Advisory Board, Superior Farming, Bakersfield, California, 1988
ASHS Representative to ISHS Council (International Society for Horticultural Science), 1990–2002
International Advisory Board, Third International Symposium on In Vitro Culture and Crop Breeding, 1994
Panel Member, Plant Production and Protection (Biology) of USDA Small Business Innovation Research, Feb. 16–17, 1994
International Advisory Committee for International Centre for Underutilized Crops, Southampton, England, 1996
Council Member of International Society for Horticultural Science (US Representative ASHS), 1994–2000
Audio Visual Presentation for Meijer Botanical Garden, Grand Rapids, MI, 1996
Chair, CAST Writing Group on New Crops, 1995/1996
Participant CAST Congressional Briefing (Diversifying US Agriculture with New Crops), Feb. 12, 1996
Associate Editor, Elizabethan Review, 1996–2000
Editorial Consultant, Sunset National Garden Books, 1996
Member, Rosati Prize Committee, ISHS, 1997
Policy member, Historic Horticulture Site, ASHS, 1997–2003
Member, Investment Committee, ISHS, 1998
Scientific Committee for ‘Fruits’, Cirad-Fehor, France
ISHS Publication Committee, 1999–2002
External PhD Examiner, University of Helsinki, Finland, 1999
Reviewer for Agricultural Research at Universities, Portuguese Minister of Science and Technology, 1999
Editorial Board for Agriculture, Encyclopaedia Britannica, 2000, Chicago
Consultant, DelMonte Corporation, 2000
External PhD Examiner, University of Sweden, Balsgaard, 2001
Board Member, ISHS, 2002–2010
Convener, Fruit Breeding Symposium, International Horticulture Congress, 2002
Science editor, Chronica Horticulturae (ISHS), 2002–2011
Member of Wolf Prize in Agriculture Selection Committee, The Wolf Foundation, Jerusalem, Israel, 2003, 2008
European Union panel evaluation (Integrated Project), 2005 Foundation of Science and Technology Review Board 2006, Lisbon, Portugal
We are hard pressed to identify another individual who has made contributions to the fields of horticulture and plant breeding during their lifetime that equal those of Jules Janick. In the span of a 63-year career at Purdue University, he has contributed to the education and edification of generations of students, scientists, and citizens. A prolific writer, editor, speaker, and organizer, Janick’s influence has been enormous, and his work continues through a prodigious output of students, cultivars, germplasm, proceedings, books, websites, review journals and symposia. As if all of this were not enough, in his spare time, Janick writes song lyrics and comic verse, draws and paints, and sculpts. It is, therefore, not surprising that the term ‘renaissance man’ has been used often to describe him.

Janick’s most long-lasting contributions may very well be in the way he has helped to archive and explain horticulture’s influence on human-kind and, likewise, humankind’s influence on horticulture. His efforts have opened a window on our own wellbeing and taught us how our lives are inextricably bound up with horticulture and the improvement of crops. A fitting end to this tribute to an editor extraordinaire is, in his own words, from his acceptance speech upon receiving the American Society for Horticultural Science Hall of Fame Award in 2009.

‘I am deeply honored to be inducted into the ASHS Hall of Fame. I was told that I was nominated last year but was turned down because I was neither retired nor dead. Since I chose to do neither, especially the latter, I am pleased the rule was changed.

Sixty years ago when I was a student at Cornell University, Liberty Hyde Bailey spoke to my class. He was born in 1858, 151 years ago and I still feel a powerful connection to him and our Society where he served as the first President. ASHS has been the lynchpin of my professional life.

We who labor in the Vineyard of Horticulture are fortunate. We have the joy of working with fruits vegetables and ornamentals, plants that are beloved by all and celebrated in art, poetry and song.
We horticulturists are different and we see things differently. My former Provost, a friend of mine, would often use the expression that ‘someone was too dumb to shovel rutabagas out of a truck.’ My immediate thought as a horticulturist was ... hmmm ... rutabaga, Brassica napa, 38 chromosomes, an allotetraploid between cabbage and turnip.

As a Mozart enthusiast when I seen the Marriage of Figaro, I may be the only one who feels a connection to Antonio, the gardener, the sole character to tell the complete truth in the entire opera.

Finally as Americans when we look at the Great Seal of the United States, we feel a kinship with the right claw of the bald eagle, the one holding the olive branch.

On this occasion I would like to express my thanks to my good friends, Charlie Hess and Don Maynard, who proposed me, ten of my supporters who wrote letters on my behalf, the Hall of Fame Committee, and most of all to my students who did a lot of the work to make this all possible. I thank my darling wife Shirley who has put up with me for 57 years and was forced to continually explain that her husband worked with fruits and nuts. Robin my daughter is here with her husband Alan and my grandson Noah. While she chose Law rather than horticulture – she serves as Chief Deputy Clerk of the 8th Circuit Court here in Saint Louis – she has seen the error of her ways and has just started a vineyard in her new house on the cliffs of the Mississippi in Alton Illinois. My son Peter who is cycling in Ithaca New York, home of Cornell, the alma mater of us both, chose radiology as a vocation but has become an orchidist as an avocation. I was extremely gratified to know that he worked with nitrate reductase from spinach for his PhD thesis, since my thesis was on sex determination in that same plant. I am forever hopeful my four grandsons may see the light. Number one grandson Noah assures me if he can’t get a job in finance, he will consider it.

It has occurred to me that there is a connection between our blood families and our professional families. Our students become our children, and their students our grandchildren. We grow to love them all and are honored by their successes. Our professional tribe is worldwide. Wherever we go throughout the world we find affection for horticultural science. We are fortunate indeed.

As Abraham Lincoln said in his second inaugural address, I am loath to close. I end with the theme I used when I served as President of Our Society 20 years ago. Our lives depend on horticulture. And the life of Horticultural Science depends on us. Thank you all very much.'
LITERATURE CITED
